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# Systematic Analysis of the Southwest Border

# Volume 1

Prepared for
the Immigration and Naturalization Service

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# Acronyms

## A

| | |
|---|---|
| A/D | Analog-to-Digital |
| ABS | Acrylonitrile/Butadiene/Styrene |
| AC | Alternating Current |
| ACPA | Assistant Chief Patrol Agent |
| ADNET | Anti-Drug Network |
| ADP | Automated Data Processing |
| ADSID | Air-Dropped Seismic Intrusion Detector |
| AEW | Airborne Early Warning |
| AFB | Air Force Base |
| AGC | Automatic Gain Control |
| AI | Artificial Intelligence |
| AIA | Acting Intelligence Agent |
| AID | Agency for International Development |
| AIS | Air Interdiction System |
| AM | Amplitude Modulation |
| AOB | Air Operations Branch (United States Customs Service) |
| APAIC | Assistant Patrol Agent in Charge |
| ASARS | Advanced Synthetic Aperture Radar System |
| ASR | Airport Surveillance Radar |
| ASSA | Anti-Smuggling Special Agent |
| ASU | Anti-Smuggling Unit |
| ATC | Air Traffic Control |

| | | |
|---|---|---|
| | ATF | Alcohol, Tobacco, and Firearms |
| | AWACS | Airborne Warning and Control System |
| **B** | BAG | Border Alliance Group |
| | BATF | Bureau of Alcohol, Tobacco, and Firearms |
| | BCD | Binary Coded Decimal |
| | BLM | Bureau of Land Management |
| | BMS | Balanced Magnetic Switch |
| | BORCAP | Border Patrol Criminal Alien Program |
| | BP | Border Patrol |
| | BPA | Border Patrol Agent |
| | BWSH | Break Wire Sensor Head |
| **C** | $C^2$ | Command and Control |
| | $C^3$ | Command, Control, and Communications |
| | $C^3I$ | Command, Control, Communications, and Intelligence |
| | CADRE | Computer-Assisted Display and Reporting Enhancement |
| | CB | Citizens Band |
| | CCA | Circuit Card Assembly |
| | CCD | Charge-Coupled Device |
| | CCTV | Closed Circuit Television |
| | CEO | Canine Enforcement Officers |
| | CIA | Central Intelligence Agency |
| | CINC | Commander in Chief |
| | CINCFOR | Commander in Chief, Forces Command |

| | |
|---|---|
| CINCSOUTHCOM | Commander in Chief, Southern Command |
| CIWG | Communications Interoperability Working Group |
| CLASSIC | Covert Local Area Sensor System for Intruder Classification |
| CMOS | Complementary Metal Oxide Semiconductor |
| CN | Counternarcotics |
| CNC | Counternarcotics Center |
| COMM(s) | Communication(s) |
| COMSEC | Communications Security |
| CONUS | Continental United States |
| COPS | Covert Observation Platform System (replacement for IIEV; presently known as TOPS) |
| CPA | Chief Patrol Agent |
| CSOC | Consolidated Space Operations Center |
| CW | Continuous Wave |
| CY | Calendar Year |
| **D** | |
| DARPA | Defense Advanced Research Projects Agency |
| DAVID | Digital Automatic Video Intrusion Detection |
| DB | Database |
| dB | Decibels |
| dBm | Decibel to 1 milliwatt |
| DC | Direct Current |
| DCA | Defense Communications Agency |

| | | |
|---|---|---|
| | DCPA | Deputy Chief Patrol Agent |
| | DEA | Drug Enforcement Administration |
| | DEMUX | Demultiplex |
| | DF | Direction Finder |
| | DI | Drug Interdiction |
| | DIA | Defense Intelligence Agency |
| | DLEA | Drug and Law Enforcement Agency |
| | DMA | Defense Mapping Agency |
| | DoD | Department of Defense |
| | DoJ | Department of Justice |
| | DOT | Department of Transportation |
| | DSB | Defense Science Board |
| **E** | EIDS | Eagle Intrusion Detection System |
| | ELR | Employer Labor Relations |
| | EPIC | El Paso Intelligence Center |
| | ESU | Employer Sanctions Unit |
| | ETU | Encoder Transmitter Unit |
| **F** | FAA | Federal Aviation Administration |
| | FBI | Federal Bureau of Investigation |
| | FDA | Food and Drug Administration |
| | FDIS | Fraudulent Document Index System |
| | FH | Frequency Hopping |
| | FLETC | Federal Law Enforcement Training Center |
| | FLIR | Forward-Looking Infrared (thermal imager) |

| | | |
|---|---|---|
| | FM | Frequency Modulation |
| | FOV | Field of View |
| | FRED | Fast Response Erection Device (also known as IIEV) |
| | FY | Fiscal Year |
| **G** | GAO | General Accounting Office |
| | GB | Ground-Based |
| | GCS | Ground Control Station |
| | GHz | Gigahertz (billion) |
| | GPS | Global Positioning System |
| **H** | HF | High Frequency |
| | HHS | Department of Health and Human Services |
| | HIDAD | High Density Array Development Program |
| | HUMINT | Human Intelligence |
| **I** | I/O | Input and Output |
| | $I^2CCD$ | Double Intensified Charge Coupled Device |
| | ICCD | Intensified Charge Coupled Device |
| | ICD | Information Control and Display |
| | ICW | Intercoastal Waterway |
| | ID | Identification |
| | IEC/DOT/RTCM | Industry Approved Test |
| | IEV | Image Enhancement Vehicle |
| | II | Image Intensifier |
| | IIEV | Improved Image Enhancement Vehicle |

| | | |
|---|---|---|
| | ILS | Integrated Logistics Support |
| | IMINT | Image Intelligence |
| | INMARSAT | International Maritime Satellite |
| | INS | Immigration and Naturalization Service |
| | INSCAP | Immigration and Naturalization Service Criminal Alien Program |
| | INSCOM | United States Army Intelligence and Security Command |
| | INTELSAT | International Telecom Satellite |
| | INTERPOL | International Criminal Police |
| | IR | Infrared |
| | IRCA | Immigration Reform and Control Act (1986) |
| | IREMBASS | Improved Remotely Monitored Battlefield Sensor System |
| | IRID | Infrared Intrusion Detector |
| | IRS | Internal Revenue Service |
| | IRST | Infrared Search and Track |
| **J** | JCS | Joint Chiefs of Staff |
| | JTF | Joint Task Force |
| | JTF-6 | Joint Task Force Six |
| **K** | KHz | Kilohertz (thousand) |
| **L** | LEA | Law Enforcement Agency |
| | LED | Light-Emitting Diode |
| | LINK | Communications Network |
| | LLLTV | Low-Light-Level Television |
| | LOCUSP | Low-Cost Uncooled Sensor Prototype |

| | | |
|---|---|---|
| | LORIS | Long-Range Infrared System |
| | LOS | Line of Sight |
| | LP | Listening Post |
| | LPI | Low Probability of Intercept |
| | LPI/D | Low Probability of Intercept or Detect |
| **M** | MAGID | Magnetic Intrusion Detector |
| | MAP | Mobile Aerostat Platform |
| | MATI | Modern Analysis of Traditional Intelligence |
| | MBBD | Mini Break Beam Detector |
| | MBCN | Mini Beacon |
| | MBWD | Mini Break Wire Detector |
| | MCV | Mobile Command Vehicle |
| | MGSH | Magnetic Sensor Head |
| | MHHP | Mini Hand-Held Plotter |
| | MHz | Megahertz (million) |
| | MIDS | Mini Intrusion Detection System |
| | MILSTAR | Military Strategic and Tactical Relay System |
| | MINIMAGID | Miniature Magnetic Intrusion Detector |
| | MLS | Multi-Level Security |
| | MMGD | Mini Magnetic Detector |
| | MOA | Memorandum of Agreement |
| | MOE | Measure of Effectiveness |
| | MOP | Measure of Performance |
| | MOU | Memorandum of Understanding |

| | |
|---|---|
| MPDM | Mini Portable Display Monitor |
| MSE | Mobile Subscriber Equipment |
| MSID | Mini Seismic Intrusion Detector |
| MUX | Multiplex |
| MXMT | Mini Transmitter |
| **N** | |
| NAS | Naval Air Station |
| NCIC | National Crime Information Center |
| NCNC | National Center for Narcotics Control |
| NDCS | National Drug Control Strategy |
| NDIC | National Drug Intelligence Center |
| NF | Noise Factor |
| NG | National Guard |
| NIDA | National Institute on Drug Abuse |
| NIIS | National Immigrant Information System |
| NNBIS | National Narcotics Border Interdiction System |
| NODLR | Night Observation Device, Long Range |
| NORAD | North American Air Defense |
| NPS | National Park Service |
| NSA | National Security Agency |
| NTIA | National Telecommunications and Information Administration |
| NTIC | Naval Technical Intelligence Center |
| NWS | National Weather Service |

| | | |
|---|---|---|
| **O** | OA | Operation Alliance |
| | OC | Operations Center |
| | OIC | Officer In Charge |
| | OMD | Omnidirectional Motion Detector |
| | ONDCP | Office of National Drug Control Policy |
| | OP | Observation Post |
| | OPFAC | Operational Facility |
| | OPR | Optical Pattern Recognition |
| | OPSEC | Operations Security |
| | OTAR | Over-the-Air Rekeying |
| | OTH | Over the Horizon |
| | OTM | Other Than Mexican |
| **P** | PA | Patrol Agent |
| | PAIC | Patrol Agent in Charge |
| | PC | Personal Computer |
| | PD | Probability of Detection |
| | PEP | Peak Envelope Power |
| | PEWS | Platoon Early Warning System |
| | PFA | Probability of False Alarm |
| | PIRH | Passive Infrared Head |
| | PL | Pulse Length |
| | PLRS | Position Location Reporting System |
| | PM | Portable Monitor |
| | POE | Port of Entry |
| | PRR | Pulse Repetition Rate |

| | | |
|---|---|---|
| | PSID | Portable Seismic Intrusion Detector |
| | PVC | Polyvinyl Chloride |
| | PVD | Portable Video Display |
| **Q** | QA | Quality Assurance |
| **R** | RAC | Regional Agent in Charge |
| | RAM | Random Access Memory |
| | RCS | Radar Cross Section |
| | REMBASS | Remotely Monitored Battlefield Sensor System |
| | RF | Radio Frequency |
| | RMSS | Remotely Monitored Security System |
| | RPV | Remotely Piloted Vehicle |
| | RSVP | Remote Sensor Video Pack |
| **S** | SADS | Surveillance and Detection System |
| | SAR | Synthetic Aperture Radar |
| | SASS | Small Aerostat Surveillance System |
| | SATC | Seismic/Acoustic Target Classifier |
| | SBPA | Supervisory Border Patrol Agent |
| | SBTD | Southwest Border Telecommunications Database |
| | SDC | Strategic Defense Command |
| | SDLS | Secure Data Link System |
| | SDR | Signal Data Recorder |
| | SEIWG | Security Equipment Integration Working Group |
| | SHF | Super-High Frequency |
| | SIA | Supervisory Intelligence Agent |

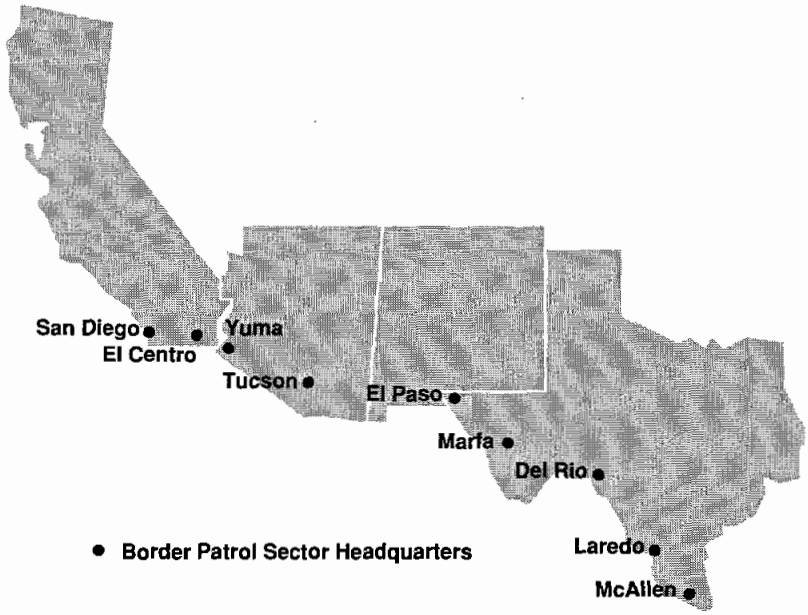
| | | |
|---|---|---|
| | SID | Seismic Intrusion Detector |
| | SIGINT | Signal Intelligence |
| | SINCGARS | Single-Channel Ground and Air Radio System |
| | SNL | Sandia National Laboratories |
| | SNR | Signal-to-Noise Ratio |
| | SPA | Senior Patrol Agent |
| | SSC | Surveillance Support Center |
| | SSPA | Station Senior Patrol Agent |
| | STC | Seismic Target Classifier |
| | STU | Secure Telephone Unit |
| **T** | TAC | Tactical Air Control Center |
| | TI | Texas Instruments |
| | TNC | A Type of Coaxial Connector |
| | TOPS | Transportable Observation Platform System (formerly known as COPS; replaced the IIEV) |
| | TRANSEC | Transmission Security |
| | TRITAC | Tri-Service Tactical Communication System |
| | TRSS | Tactical Remote Sensor System |
| | TV | Television |
| **U** | UAV | Unmanned Air Vehicle |
| | UGS | Unattended Ground Sensor |
| | UHF | Ultra-High Frequency |
| | UI | User Interface |
| | USA | United States Army |

| | |
|---|---|
| USAF | United States Air Force |
| USAMICOM | United States Army Missile Command |
| USASC | United States Army Signal Center |
| USBP | United States Border Patrol |
| USCG | United States Coast Guard |
| USCS | United States Customs Service |
| USFS | United States Forest Service |
| USIA | United States Information Agency |
| USMC | United States Marine Corps |
| USMS | United States Marshalls Service |
| USN | United States Navy |
| USPS | United States Park Service |
| UV | Ultraviolet |
| **V** | |
| VEH | Vehicle |
| VHF | Very High Frequency |
| VHF-FM | Very High Frequency-Frequency Modulation |
| VIDS | Visual Information Display System |
| VR | Voluntary Return (or Voluntary Departure) |
| VSWR | Voltage Standing Wave Ratio |

# Executive Summary

In September 1991 Sandia National Laboratories was tasked by the Office of National Drug Control Policy through the Immigration and Naturalization Service (INS) Research and Development Program to conduct a systematic analysis of the security along the United States/Mexico Border (Figure ES-1) between Ports of Entry (POEs) and to recommend measures by which control of the border could be improved. The recommendations and conclusions in this report are those of the Sandia National Laboratories staff associated with this project.

*Figure ES-1. Southwest Border Between the United States and Mexico*




The control of drug-related traffic across the US/Mexico Border involves the participation of some 41 agencies. These include federal agencies with charters and authority directed at drug and smuggling activities; federal agencies with only peripheral involvement, but wishing to share in both the budget and the asset forfeiture program; and state, county, and local law enforcement agencies directly concerned with illegal drug and smuggling activities in their jurisdictions. Most of these agencies participate in counternarcotics at a secondary level. The principal federal agencies with border control responsibilities are the following:

- INS/US Border Patrol
- Drug Enforcement Administration (DEA)
- US Customs Service
- Federal Bureau of Investigation (FBI)
- Operation Alliance

- US Coast Guard
- Joint Task Force Six (JTF-6)
- El Paso Intelligence Center (EPIC).

Recent congressional actions have also provided funds to support the National Guard in these interdiction operations. As a result of this action, the National Guard has become increasingly active in supporting the other agencies at the border and at "hot spots" within the US.

As the enforcement arm of the INS, the US Border Patrol is charged with the responsibility to detect and interdict all crossings of the US borders except at designated POEs.

The law requires that persons must report to POEs for entry into the US, and the Border Patrol enforces this law. The Border Patrol, therefore, has the most concentrated presence along the entire length of the Southwest Border of all of the agencies listed. The primary statutory mission of the agency is the apprehension of illegal aliens, and the agents have arrest and search authority within 100 miles of the border to enforce citizenship and entry requirements. The Border Patrol has been granted collateral authority to interdict drug traffic by the DEA because line patrol and highway checkpoints inevitably intercept drug smugglers as well as aliens. It is important to note that drug interdiction is a subset of the Border Patrol's activity and that the drug search and seizure authority is derived from the alien apprehension authority. Therefore, this study is heavily oriented toward the Border Patrol. Additional information about other agencies' responsibilities is given in Volume 2.

When this analysis was proposed, there was a belief that significant improvements in border control could be achieved by introducing new or improved technologies and that the application of these could lead to reduced manpower and significant control of the Southwest Border. During the first phase of the study, in which all of the Southwest sectors of the Border Patrol were visited, we realized that those beliefs were, in our opinion, incorrect. Our conclusions and recommendations about how to make significant improvements in border control are contained in Volume 1 of this study. A catalog of equipment that could be procured (Volume 3) has also been prepared. Additionally, to fulfill the contractual requirements of this study, we prepared Volume 2, which follows the outline of the original Sandia proposal and provides the detail for the budget suggested in Volume 1.

Our study consisted of characterizing the current border security environment, compiling a catalog of currently available or readily modifiable technologies, developing an implementation plan that provided optimal use of these technologies based on present staffing levels, and generating an implementation plan that allows a moderate increase in personnel.

Even though this study is limited to the Southwest Border between POEs, we have approached the study from an integrated system point of view. Over a 3-month period, we visited all nine sectors of the Southwest Border where we analyzed the problem by questionnaire and discussions with field and headquarters personnel. In addition, time was spent flying over many of the border areas and driving along the border to examine the terrain surrounding the area, touring all of the facilities (including the electrical maintenance and vehicle maintenance facilities), observing the agents work in the field (including several apprehensions), and meeting with the agents to discuss the problems they face and the ways in which their work could be made easier. We also reviewed many of the available reports on this topic (see Bibliography, Volume 2).

As of May 1, 1992, the portion of the El Paso sector east of a line through Cornudas and Hilltop, Texas, became part of the Marfa sector. Also, the responsibilities and personnel count of some of the stations within a few sectors have changed. The conclusions of this report are not affected by these changes, but the text, maps, and spreadsheet within this report reflect the information that was available before May 1 when the sector visits were made.

Most of the recommendations made in this report are not new; the basic problems have remained unchanged for years and have been individually studied by many qualified people with appropriate expertise. This report views the entire Southwest Border as a system and combines our observations with many of the previous recommendations in a systematic way.

We make suggestions within the report regarding sensor procurement; those suggestions represent less than 15% of the total cost for implementing all of the recommendations. The sensors we suggest will simply augment existing capabilities but, more importantly, will serve to replace a dilapidated inventory. A conclusion of this study is that the Southwest Border is being overrun, and the use of more sensors will only identify more targets that can be neither apprehended using current manpower

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nor accommodated within existing facilities. In some rural areas verification techniques (*e.g.,* slow-scan closed circuit television [CCTV]) to reduce Border Patrol agents' responses to sensor alarms caused by legal activity have been effective. Additional research into making verification techniques consume less power, be easy to install, and be more covert are needed.

Our recommended strategy for improved control of the border is based on two tactics:

- **Border Enforcement:** the use of heavily patrolled multiple barriers on the border to control the large number of illegal aliens and drugs crossing in the urban areas of the border

- **Containment:** additional 24-hour highway checkpoints to minimize the number of illegal aliens and quantity of drugs leaving the border region if they get into the country.

Gaining control of the situation in large urban areas is important not only for purposes of border law enforcement, but because the uncontrolled situation puts the illegal aliens and US residents living near the border very much at risk. The containment strategy, reinforced by efficient deployment of sensor and surveillance technology and effective use of intelligence resources, will reduce the risks that illegal aliens face when dealing with alien smuggling organizations and will enhance the safety of enforcement agents by providing them with needed tactical advantages and eventually reducing the volume of illegal trafficking.

An important fact observed is that 66% of all illegal alien apprehensions occur in 4.7% of the border. That portion is totally contained in two sectors, San Diego and El Paso. Because of the huge numbers of illegal aliens involved, these two sectors also put a heavy demand on the alien transport and detention activities and the logistics that go along with the processing of large numbers of illegals. Many of these resources could be redirected to controlling drug and illegal alien traffic in other sectors if the illegal alien traffic in these sectors were controlled. The mat fence in the San Diego sector was nearly completed in late CY 1992; we expect that its existence may cause a shift in illegal alien activity to other sectors. The illegal aliens who attempt to cross rugged, uninhabited terrain (mountains, desert, *etc.*) will experience higher risks. Because many of these persons are expected to be uninformed, desperate, or criminal, the risk to Border Patrol agents may also be higher. Other urban areas on the border have similar problems, but to a much smaller extent.

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The way to control the influx of illegal aliens, in our opinion, is by imposing effective barriers on the free flow of traffic. This is a technological solution that allows the immediate implementation of available technology to modify the situation at the border and reduce the number of persons who will cross only if they can do so easily. The solution is to channel and direct a significantly reduced level of traffic to places where the Border Patrol agents can adequately deal with it. We understand that the combination of budget, procurement, and installation may not allow immediate adaptation of the available technology, but all recommendations should be implemented as soon as possible.

(b) (7)(E) [redacted] What is required to enforce the laws prohibiting illegal entry into the US is significantly increased discouragement that requires the use of multiple tools and substantial time and tires the violators to the point that they can be consistently apprehended or turned back.

*Figure ES-2* (b) (7)(E) [redacted]

(b) (7)(E) [redacted]

(b) (7)(E) [redacted]

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(b) (7)(E)

[redacted]

[redacted]

[redacted]

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(ALL)

*Figure ES-3.* (b) (7)(E) [redacted]

(b) (7)(E) [redacted]

OUO-7 (ALL)

(b) (7)(E) [redacted]

*Figure ES-5.* (b) (7)(E) [redacted]

[redacted] It should also be noted that as illegal aliens find ways to defeat the obstacles placed in their path, new technology will need to be developed.

The conclusions reached in our study are listed below:

- The illegal alien traffic must first be brought under control in the urban areas of the Southwest Border, especially in

1. *Ten Steps to Securing America's Border,* Federation for American Immigration Reform, January 1989.

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(ALL)

San Diego and El Paso, so that existing resources can be reallocated to control the drug and illegal alien traffic in other sectors. We believe that control must be gained as soon as possible and that it can be accomplished with existing technology for less than 3% of the $11.7 billion National Drug Control budget for FY 1992.

- Control of the illegal alien and drug traffic can be gained by

  - (b) (7)(E) [redacted]

- The Immigration Reform and Control Act (IRCA) of 1986[2] included provisions to increase the number of Border Patrol agents. Congress has ordered increases in Border Patrol personnel twice since then, but neglected to provide any additional funding. We believe that with presently authorized levels of Border Patrol personnel, in conjunction with the issues addressed above, control of the Southwest Border can be gained. The redistribution of personnel now required in the urban areas and the elimination of Border Patrol agents performing nonagent jobs (clerical, auto and facilities maintenance, transportation of deportees, *etc.*) will also increase enforcement effectiveness. It is very likely that future improvements in sensors and sensor fusion programs and other advanced enforcement technology will allow the number of Border Patrol personnel to decrease through normal attrition to some lower level after control is firmly gained.

- There are an adequate number of organizations and structure available on the Southwest Border to produce an

2. *Immigration Reform and Control Act (IRCA) of 1986,* Public Law 99-603, November 6, 1986.

effective security environment. The personnel and equipment of each of the individual organizations need to be better coordinated in order to better enforce the existing US laws.

- The integrated system can become more effective by strengthened policy and procedures, such as positive personnel identification of all apprehended illegal aliens, graded penalties for repeat offenders, adequate incarceration facilities for criminal aliens and those who refuse voluntary return, deep deportation, and fast judicial actions.

- Because the Nation's drug control program is an integrated system, emphasis applied to one part of the system increases pressure on the other parts. For example, if the percentage of total illegal alien apprehensions increases without a corresponding decrease in total illegal traffic, then problems in the processing, transportation, detention, and deportation of illegal aliens are intensified. The approach of significantly reducing the number of illegal aliens entering the country will reduce pressure on all of the other parts of the system except the POEs themselves. Additional and more sophisticated technology must then be applied at the POE to assist in handling this increased pressure.

It is imperative that control of the border be gained as soon as possible because of the problems caused by the uncontrolled illegal alien and drug traffic in our border communities and large inland population centers. It is also clear that we must be concerned about the inhumane treatment of these illegal aliens by alien and drug smugglers who are determined to profit from the plight of the illegal aliens. If we stop the illegal alien traffic, crimes (such as rape, robbery, and murder) being committed against illegal aliens crossing the border will also stop. If the reason to assemble on the Mexico side is eliminated, the crimes being committed there should also decrease.

The role of intelligence gathering, processing, and assessment will become even more important to help determine where to deploy Border Patrol assets as persons who are determined to cross the border are forced to make their attempts in more remote areas.

A good public relations program is also recommended—one which emphasizes the fact that the barriers are not an act of unfriendliness, but an act of control in order to allow more deserving immigrants and fewer of the criminal aliens, drug traffickers, or other undesirable persons to enter the US.

OUO-7

# Introduction

This report presents recommendations that will allow the US Border Patrol to more effectively estimate their future resource needs. The program is based on a general strategy that will control the illegal alien and drug traffic by installing multiple barriers in urban areas and regularly patrolling these barriers, providing additional 24-hour, all-weather checkpoints on roads known to be used to transport drugs and aliens inland from the border, installing additional sensors in the nonurban areas, providing improved data and voice communications to all points along the border, and supplying personnel and facilities to perform these tasks.

The results of this study are presented in three volumes. This volume contains a brief overview of the recommendations. Volume 2 provides detailed information about each sector, the terrain, the threat, and the rationale for the recommendations. Volume 3 is a catalog of physical protection equipment. The Executive Summary is included in all three volumes.

When this analysis was proposed, we believed that significant improvements in border control could be achieved by introducing new or improved technologies and that the application of these could lead to reduced manpower and significant control of the Southwest Border. During the first part of the study, in which in-depth visits were made to all nine Southwest Border sectors, we realized that, in our opinion, those beliefs were incorrect. In addition to making these visits, we reviewed background documents and analyzed the results of questionnaires sent to the agents in each sector. Our conclusions and recommendations about how to make significant improvements in border control are contained in this volume. A brief discussion of each sector and the rationale for recommending resources for each sector are also presented. A spreadsheet that gives preliminary budget estimates on a sector-by-sector basis has been included along with brief descriptions of the background and assumptions used to arrive at the spreadsheet entries. Volume 2 follows the outline of the original Sandia National Laboratories proposal and provides the detailed discussion for the budget numbers given in this volume. Volume 3 is a catalog of equipment that could be procured. This catalog lists conventional physical protection equipment and technologies that are currently available or readily modifiable, which could be used to provide or enhance border security at the priority level suggested in Volume 2.

The numbers and types of sensors in the list are based on responses to questionnaires and recent surveys.[1] In late FY 1992 enough unattended ground sensors were supplied to each sector to replace those that were obsolete. The physical security equipment recommended will further augment each sector's inventory.

This study was done based on the time spent at each border sector gathering information and questionnaires. We concentrated our efforts on understanding the border environment and developing a general strategy. By this process, we have arrived at general equipment recommendations. Each sector received a compilation of the information obtained in their questionnaires and a draft version of the border control strategy that applies to their sector to review before publication of this final document. Their suggestions were incorporated as appropriate.

## Sources of Information

Our information was obtained from briefings and discussions with personnel from Immigration and Naturalization Service (INS)/Border Patrol Headquarters in Washington, DC, from the Southern Regional Office/Dallas, and from our interactions with Border Patrol agents in the field. Additional information was obtained from the US Customs Service, the El Paso Intelligence Center, Operation Alliance, Joint Task Force Six (JTF-6), and numerous documents, most of which are listed in the bibliography in Volume 2.

## Threat

Possible DHS review

There are 150-200 Mexico-based groups involved in smuggling the majority of drugs into the US. Historically, these Mexican organizations, composed to a large extent of close-knit family members, have run well-established and extensive operations involving the cultivation, processing, and smuggling of marijuana and opium. In recent years, Colombian organizations have expanded the distribution of their cocaine through these well-established Mexican networks. Recent intelligence indicates that the Colombians are now becoming more personally involved at all levels of operations in Mexico and along the border. These major organizations are supplemented by thousands of freelancers and smaller groups.

It appears that the primary threat to the Southwest Border is smuggling by land, both through and between the Ports of Entry

1. *Survey of Border Patrol Surveillance Equipment,* Immigration and Naturalization Service, Fort Huachuca, Arizona, and Washington, DC, November 1990.

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(POEs). The focus of this study is a systematic analysis of security along the US/Mexico Border between POEs and a recommendation of measures by which control of the border could be improved. Smugglers appear to be employing what is termed a [redacted], in that they are [redacted]

The Border Patrol regularly seizes "abandoned" loads of marijuana and cocaine, indicating that these drugs were smuggled between and not through the POEs. This is probably attributable to the [redacted] by returning to Mexico.

## Types of Adversaries Faced

The threat to be protected against is *illegal traffic across the US / Mexico Border between designated POEs*.

### Adversaries

Because the US/Mexico Border can only be legally crossed, in either direction, at designated Class A and Class B POEs, any person crossing at any other point, for whatever reason, is defined as *the adversary*. This study is primarily concerned with those persons or organizations engaged in moving drugs and illegal aliens into the US and transporting of goods or currency in either direction in support of drug trafficking. Because it is difficult to impossible to discriminate between drug-related and non-drug-related border crossings, control of the border for drug traffic requires control of all border crossings. Adversaries, then, fall into the following major categories:

- **Drug Smugglers:** Individuals and organizations whose specific mission is the introduction of controlled substances into the US by way of Mexico.
- **Alien Smugglers:** Individuals and organizations engaged in the organized movement of Mexican and Other-Than-Mexican (OTM) aliens into the US.
- **Smugglers:** Individuals and organizations that move contraband other than drugs in either direction across the border. Some of this activity can be in support of drug trafficking.

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- **Illegal Aliens:** Individuals who cross the border from Mexico with the intention of migrating into the interior of the US.

- **Commuter Aliens:** Individuals who cross the border from Mexico, usually in the vicinity of population centers along the border, with the intention of returning to Mexico in a very short time. The purposes for such crossings range from illegal employment on the US side, to shopping for US services or goods, to robbery or burglary of US property.

Any of these persons can also be engaged in drug smuggling. At the very least, the diversity of the traffic serves to complicate the border control problem, which makes the identification of drug-related activity more difficult.

## Threat Posed

The actual threat posed by the adversary categories varies in severity and consequence. The countermeasures appropriate for use against these categories vary accordingly. It is necessary to understand these differences in order to judge the applicability of technology or procedures and to assign priority to proposed solutions.

The drug smugglers, for example, are engaged in the movement of a highly valuable commodity that poses a severe threat to the health and social structure of the citizens of the US. Because the drugs are injurious and disruptive to society in the US, the threat they pose and the need to stop the traffic is clear. But because the commodity has very high monetary incentives attached to the activity, the sophistication and violence of the practitioners also poses a clear threat to the life and safety of the enforcement agents charged with stopping the traffic. Candidate countermeasures must account for the danger to the enforcement agents and must impose a commensurate penalty on the adversary. The smugglers of other types of commodities usually do not threaten society with their cargo, but the value of the smuggled goods may be high enough that they may be willing to engage the agents to prevent or evade interdiction.

The smuggling of illegal aliens has grown into a lucrative business for smuggling rings along the border, but those engaged in this traffic normally do not represent the threat to the safety of the enforcement agents and US residents that the drug traffickers do. Because people are being smuggled, the conveyance and

Possible DHS review all text on this page

concealment options are more limited and the consequences of interdiction of the cargo are minimized by the fact that the aliens are simply returned to Mexico to try again. The alien smugglers provide their services on the basis that organized smuggling rings can improve the chances of successful entry. Existing laws specifically prohibit illegal entry into this country, and the need to control this traffic in defense of US interests is becoming more clear as the traffic increases.

Individual illegal aliens normally do not pose a significant threat to the US security or safety of the agents, again because the penalty for apprehension is of little consequence and provides the opportunity to try again and again until success is achieved. Although the likelihood of individual violent confrontations is small, the sheer number of individual aliens constitutes a threat and a source of frustration to the enforcement agencies.

Commuter aliens pose the lowest level of threat to the agents on the line. If the aliens are illegally employed in the US, they are not likely to be paid enough to live well on the US side, but can do reasonably well in Mexico. Their willingness to work for very low pay makes them an economic threat to US citizens and documented immigrants engaged in similar work and compounds the injustice of their continued illegal activity. The commuter aliens also tend to know their border territory well enough to avoid confrontation with Border Patrol agents. Those who cross the border to engage in local criminal activity do, however, become a problem for local police forces on the US side.

## Capabilities of the Adversaries

Drug smugglers will attempt any means possible to introduce drugs into the US. They will readily adapt to law enforcement successes, priorities, and perceived abilities to minimize potential losses. Therefore, they will choose the method with the greatest likelihood of success. Smugglers are well organized and often compartmentalize responsibilities on a need-to-know basis. Persons who actually move the drugs across the border are often given only enough information to complete that specific task.

The drug traffickers are often armed with fully automatic weapons and employ sophisticated communications equipment, airplanes, and specially equipped four-wheel-drive vehicles. They have been known to employ techniques for moving drugs across the border ranging from tunnels to model airplanes.

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(b) (7)(E)

## Expected Developments in the Threat

It is expected that the threat will continue to grow for a number of reasons, including the following:

- The border communities along the Mexico side of the border are continuing to grow in population, and if the Mexican economy does not drastically improve, the opportunity to hire persons willing to risk taking drugs across the border into the US will increase.
- The profits in the drug trade are very, very large and greed is a big motivator.
- Because of the huge profits and the need for technology to find markets, the latest technology can be expected to be available to the large smuggling operations.
- Demand for drugs will remain high unless the supply is interrupted.

Heavy smuggling occurs on the land routes. Specific routes are identified for each of the sectors in the section, "Border Control Strategy by Sector," later in this volume. The "(b) (7)(E)

[2]

2. *Southwest Border Drug Control Strategy,* Operation Alliance, El Paso, Texas, July 1990.

OUO-7
(ALL)

This study is focused on the land-based threat between the POEs. We do, however, recognize that smuggling also occurs through the POEs, by air, and by water.

## Border Control Strategy

Our recommended strategy for improved border control is based on two tactics:

- the use of heavily patrolled multiple barriers to control the large number of aliens and drugs crossing in the urban areas of the border
- additional 24-hour, all-weather highway checkpoints to minimize the quantity of illegal aliens and drugs leaving the border region if they get into the country (Figure 1).

Electronic technology, including sensors, will be an important element of a system to count the number of illegal crossings and, more importantly, to feed information into "intelligent" information control and display systems to alert agents to changes in border traffic patterns and to provide data to more effectively deploy interdiction resources. Some of the sensors requested by the sectors may have been planned for portions of the border where we are recommending the multiple barriers. If this is the case, additional analysis may result in a decrease in the number of sensors needed. A conclusion of this study is that the Southwest Border is being overrun, and the use of more sensors will only identify more targets that cannot be apprehended using current manpower or accommodated within existing facilities.

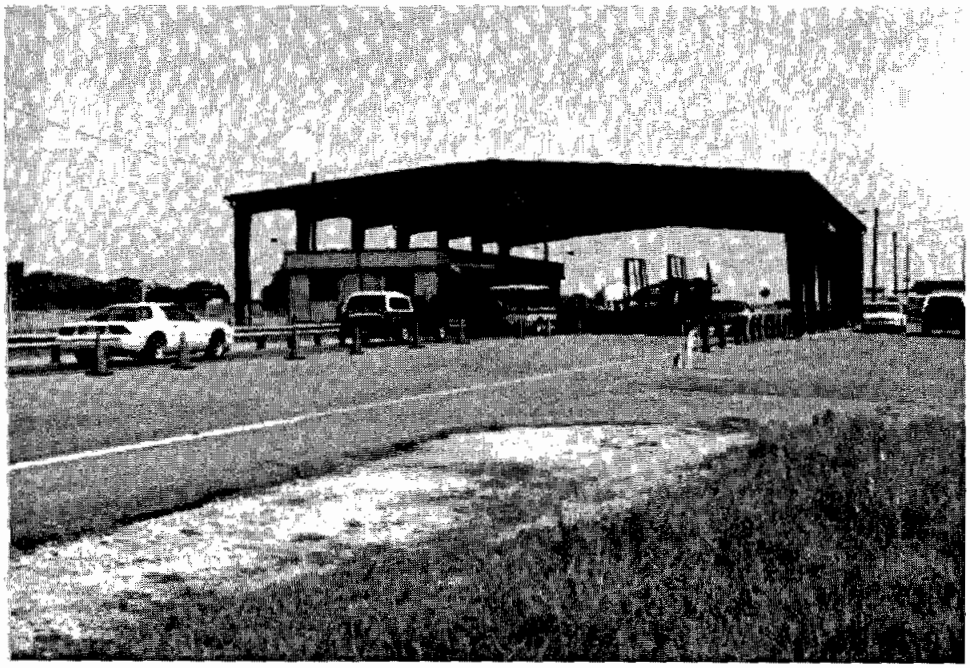

*Figure 1. All-Weather Checkpoint at Falfurrias, Texas*

## Border Control Concepts

OUO-7 (ALL)

The concept of control of the border can be more clearly defined in terms of enforcement of existing laws that apply to the traffic at the border. If existing laws could be fully enforced, and if all inbound traffic could be thoroughly searched by US Customs and INS inspection teams, and, if citizenship could be positively verified at the POEs, there would be no illegal alien traffic or smuggling of contraband, including drugs, into the US. In reality, the laws can only be enforced to the extent that resources are allocated to the mission.

Our study of the operational environment of the Southwest Border has led to an observation that reveals a great deal about not only the border but also about the nature of the problem. The single most important fact observed is that 66% of all illegal alien apprehensions occur in 4.7% of the border. That portion is totally contained in two sectors, San Diego and El Paso.

This observation, at first glance, appears to be related to control of illegal aliens, as opposed to control of narcotics. The US Border Patrol is the main federal enforcement agency that has a consistent presence along the entire border. Their primary mission is to apprehend illegal aliens, but they are also a primary agency for drug interdiction between POEs and are, in fact, a major factor in drug interception. This very effective counternarcotics agency has a very large percentage of its resources dedicated to the control of alien traffic in these two sectors. Because of the huge numbers of aliens involved in this traffic, these two sectors also put a huge demand on the illegal alien transport and detention activities and the logistics that go along with processing large numbers of illegals.

## Control of Illegal Alien Traffic

The central issue in the solution to the border control problem is to (b) (7)(E) [redacted]. After the illegal alien traffic is controlled in these sectors, existing resources can be reallocated to control the drug traffic and illegal aliens in other sectors. Our recommendation is (b) (7)(E) [redacted]

OUO-7

(b) (7)(E)

[redacted]

[redacted]

[redacted]

(Figure ES-4).

OUO-7

(b) (7)(E)

[redacted]

[redacted]

[redacted]

[redacted]

If this approach is implemented, we believe that the total number of apprehensions will decrease because the number of attempted illegal entries will diminish. This will reduce the overload conditions that presently exist at the processing, detention, and deportation facilities. Control of the border will then be demonstrably improved; the large numbers of illegal aliens that are overtaxing the present system will be reduced, and it will be

possible to get an accurate count of total traffic to compare to known apprehensions. But more importantly, a properly designed and executed system could enable an actual reduction of forces in the two most heavily staffed sectors. Some agents could then be relocated to other sectors where the drug traffic is higher, and the counternarcotics benefits would begin to accrue.

## Containment of Illegal Traffic

There are many segments of the Southwest Border that cannot be controlled at the line. The terrain and environmental features that favor illegal activity work against the ability of enforcement resources to respond at the point of intrusion. The alternative to control in these regions is containment.

The goal of organized illegal traffic is to reap profits from the activity. If the alien and drug smugglers choose to cross where the border cannot be defended and thereby succeed in gaining access to the US, they still must remove their contraband from the border region in order to access inland profit centers. The containment strategy must be aimed at preventing inland access. OUO-7

Full-time and all-weather highway checkpoints have served the containment purpose very well in the past. The continuous presence of enforcement agents on selected highways and their ability to identify and isolate violators pose significant threats to smuggling activities. (b) (7)(E) [redacted]

[redacted]

[redacted]

## Border Control

Regardless of the best efforts for control and containment, it will still be necessary for enforcement agencies to continue to detect and apprehend the participants in illegal border activity in the immediate vicinity of the border. Pressure must be continued to prevent a distribution pattern from evolving to bypass containment measures.

Electronic technology, including sensors and video surveillance, must be improved to support not only control of the border, but also to assess the total traffic volume and changes in patterns that may assist in measuring the effectiveness and increasing the efficiency of the deployed resources.

## Research and Development

In applying the strategy for controlling the border to the specific sectors of the Southwest Border, we have identified many areas in which technology could be advanced to improve control in the future, particularly after initial control of illegal traffic in the urban areas is established.

We recommend that the following areas be funded for research and development:

- (b) (7)(E) [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

- (b) (7)(E) [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

# Terrain Categories and Enforcement Strategies

We have established the following terrain categories and enforcement strategies and used them as the bases for application to the Southwest Border sectors.

| *Terrain* | *Strategy* |
|---|---|
| Flat Desert | (b) (7)(E) [redacted] |
| Sand Dunes | (b) (7)(E) [redacted] |
| Farmland | (b) (7)(E) [redacted] |
| Rolling Brushland | (b) (7)(E) [redacted] |
| Mountains | (b) (7)(E) [redacted] |
| Forests | (b) (7)(E) [redacted] |
| Canyons | (b) (7)(E) [redacted] |
| Reservoirs | (b) (7)(E) [redacted] |
| Urban Flat | (b) (7)(E) [redacted] |
| Urban Hilly | (b) (7)(E) [redacted] |

OUO-7

## Recommendations

As a part of the Sandia study, we were tasked to make recommendations for more effectively protecting the border without increasing Border Patrol personnel. Our final implementation plan suggests an optimum personnel increase. The barriers and checkpoints should be implemented in both cases; however, the additional personnel necessary to man the proposed checkpoints should come off the line and any decreases that can be realized from using the barriers in the urban areas. The additional checkpoint personnel indicated on the spreadsheet should be used so that the line can still be manned in an efficient manner.

# Border Control Strategy by Sector

General information concerning border control strategy by sector is given in the following sections. The first sector to be discussed is McAllen. For each of the sectors a brief introduction is given followed by the sector operational environment (terrain, threat definition, and available resources), a sector map and brief recommendations. Additional information about each sector is given in Volume 2.

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## McAllen Sector

The McAllen sector includes 9.4% (153.5 miles) of the total Southwest Border. The McAllen sector has averaged about 100,000 apprehensions per year for the last 2 years and 10% of those are from countries other than Mexico. These persons are often referred to as "Other Than Mexican" (OTM). The sector is credited, however, with 30% of the narcotics that are apprehended by the Border Patrol coming into the US. During FY 1989, 1,100 narcotics seizures occurred with a value of $304,000,000. FY 1990 seizures dropped to a value of $158,000,000, but the FY 1991 seizures had already reached the FY 1990 value by July.

### Operational Environment

#### *Terrain*

The western edge of the McAllen sector is the line dividing Zapata and Starr Counties. All of Starr lies within the McAllen sector, which includes Falcon Dam and about 1 mile of Falcon Reservoir. Anzalduas Dam is about 12 miles upstream from Hidalgo and forms a reservoir approximately 600 yards wide, which is used for irrigation. The southern boundary follows the Rio Grande River through Brownsville and terminates in the Gulf of Mexico. There are numerous small Mexican settlements along the Rio Grande River with large populations concentrated near Hidalgo, McAllen, and Brownsville, Texas.

There are 153.5 linear miles of border in the McAllen sector. Those miles are composed of

| | |
|---|---|
| 123.0 | miles of farmland |
| 16.0 | miles of rolling brushland |
| 12.5 | miles of urban flat |
| 2.0 | miles of forests. |

Figure 2 shows the distribution of the different types of terrain.

#### *Threat Definition*

OUO-7

All of the types of threat mentioned earlier in this report exist in this sector. We believe that drug smuggling, relative to the others, is this sector's biggest threat. Additional information about the threat is given in Volume 2.

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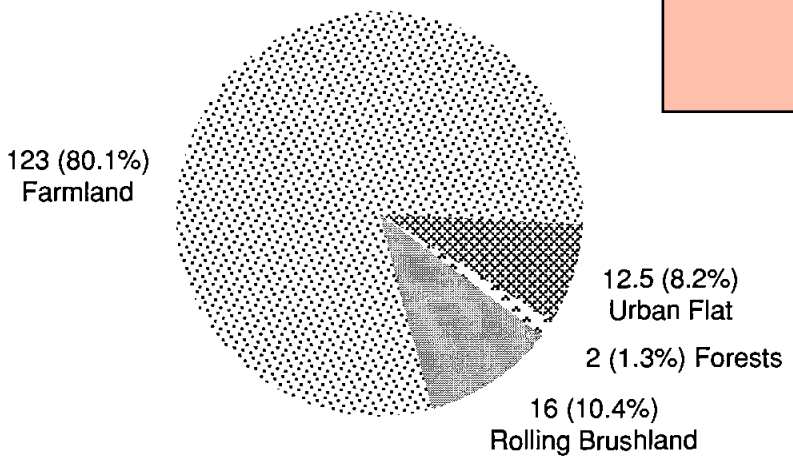
***Figure 2. Distribution of McAllen Sector Terrain Types***




The operations brief of the McAllen sector indicates that the principal movement of aliens and/or contraband out of the sector is by the following routes:

- (b) (7)(E) [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

A map showing the major highways and railroads in the sector is included as Figure 3.

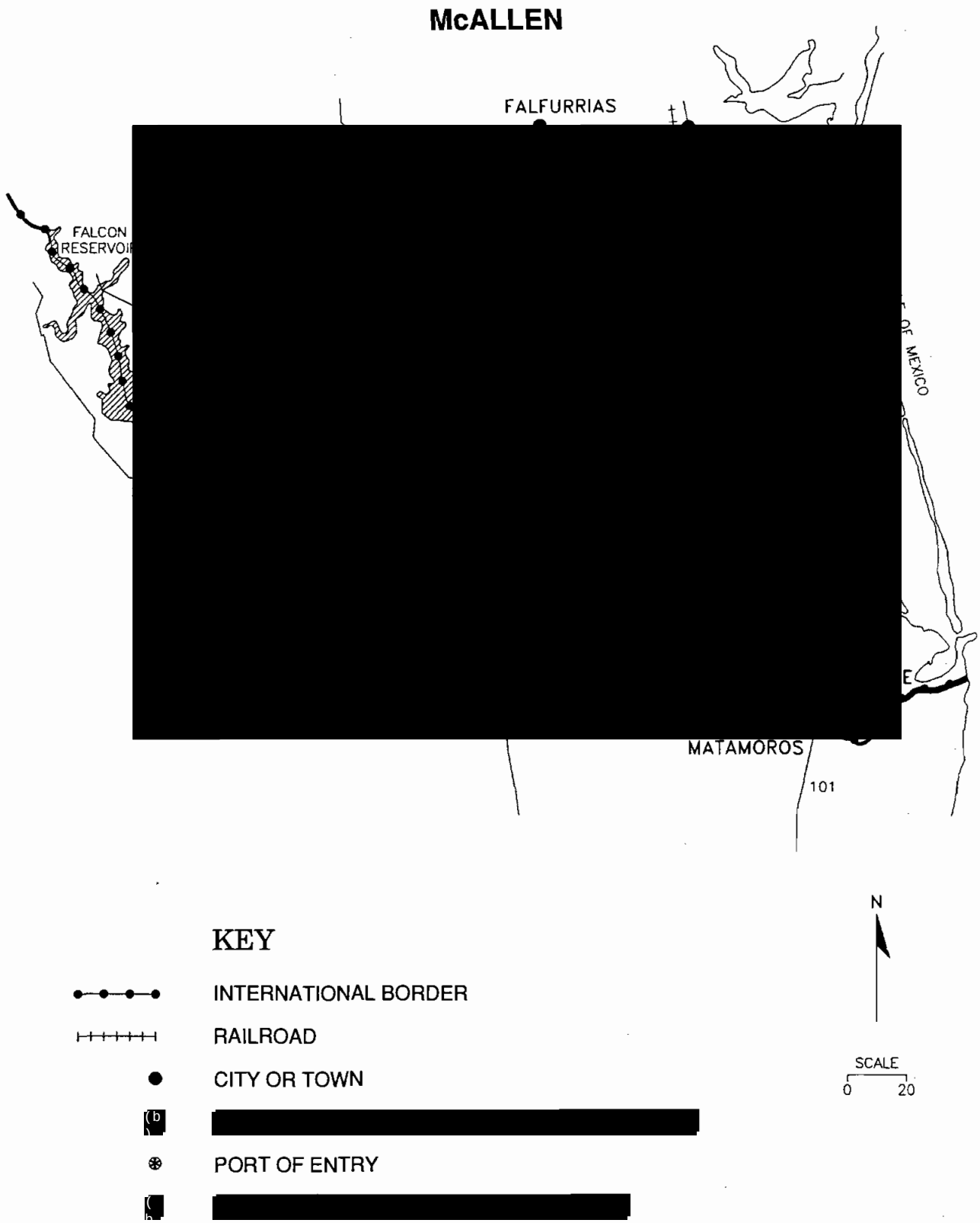



*Figure 3. Map of the McAllen Sector*

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### *Available Resources*

The McAllen sector currently has 331 agents and 54 nonagent support personnel assigned to nine Border Patrol stations. The sector also possesses intrusion detection, communications, information control and display, and assessment equipment (some for day and some for night use). Some of the obsolete equipment has recently been replaced. The new equipment recommended will augment and upgrade the sector's existing physical protection equipment inventory. More details are given in Volume 2.

### *Recommendations*

The POEs at Hidalgo and Brownsville should have (b) (7)(E) [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

(b) (7)(E) [redacted]

OUO-7

(b) (7)(E) [redacted]

(b) (7)(E) [redacted].

(b) (7)(E) [redacted] (b) (7)(E) [redacted]

The numbers and types of sensors and other supporting electronic equipment listed for the McAllen sector are based on responses to questionnaires and recent surveys. The sector has been very successful in the use of (b) (7)(E) [redacted] The recommendations include increased maintenance capability for this equipment.

## Laredo Sector

The Laredo sector includes 10.6% (172.5 miles) of the total Southwest Border. The Laredo sector has averaged about 75,000 apprehensions per year for the last 2 years. During FY 1990, 498 narcotics seizures occurred with a value of $120,300,000. FY 1991 seizures had already reached 345 by July.

### Operational Environment

#### *Terrain*

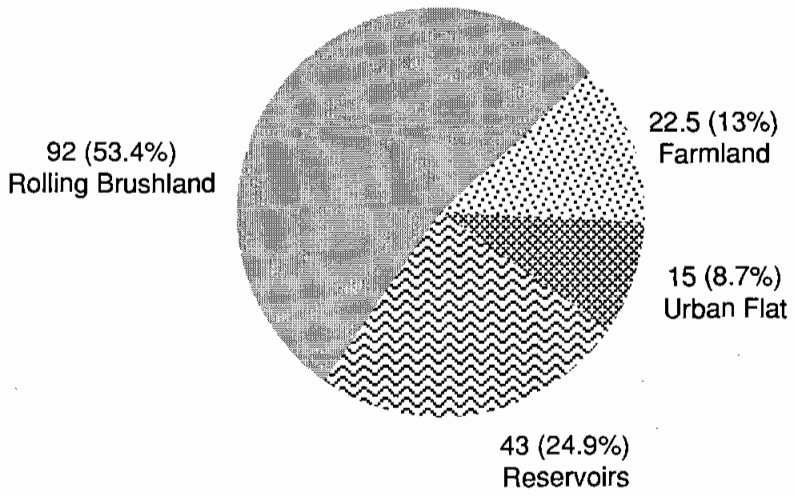
The western edge of the Laredo sector is the line dividing Webb and Dimmit Counties. All of Webb County lies within the Laredo sector. The southern boundary follows the Rio Grande River through Webb and Zapata Counties. Laredo also includes the majority of Falcon Reservoir in the lower two-thirds of Zapata County. There are numerous small Mexican settlements along the Rio Grande River with a large population concentrated near Laredo, Texas. The Laredo sector includes a total of 116 Texas counties extending north to the Oklahoma border.

There are 172.5 linear miles of border in the Laredo sector. Those miles are composed of

92.0 miles of rolling brushland
43.0 miles of reservoirs
22.5 miles of farmland
15.0 miles of urban flat.

Figure 4 depicts the distribution of the different types of terrain.

***Figure 4. Distribution of Laredo Sector Terrain Types***



### *Threat Definition*

All of the types of threat mentioned earlier in this report exist in this sector. The threats appear to be balanced among the types of threats mentioned.

The operations brief of the Laredo sector indicates that the principal movement of aliens and/or contraband out of the sector is by the following routes:

- (b) (7)(E) [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

A map showing the major highways and railroads in the region is included as Figure 5.

### *Available Resources*

The Laredo sector has 330 agents and 40 nonagent support personnel assigned to eight Border Patrol stations within the sector. The sector also possesses intrusion detection, communications, information control and display, and assessment equipment (some for day and some for night use). Some of the obsolete equipment has recently been replaced. The new equipment recommended will augment and upgrade the sector's existing physical protection equipment inventory. More details are given in Volume 2.

# LAREDO

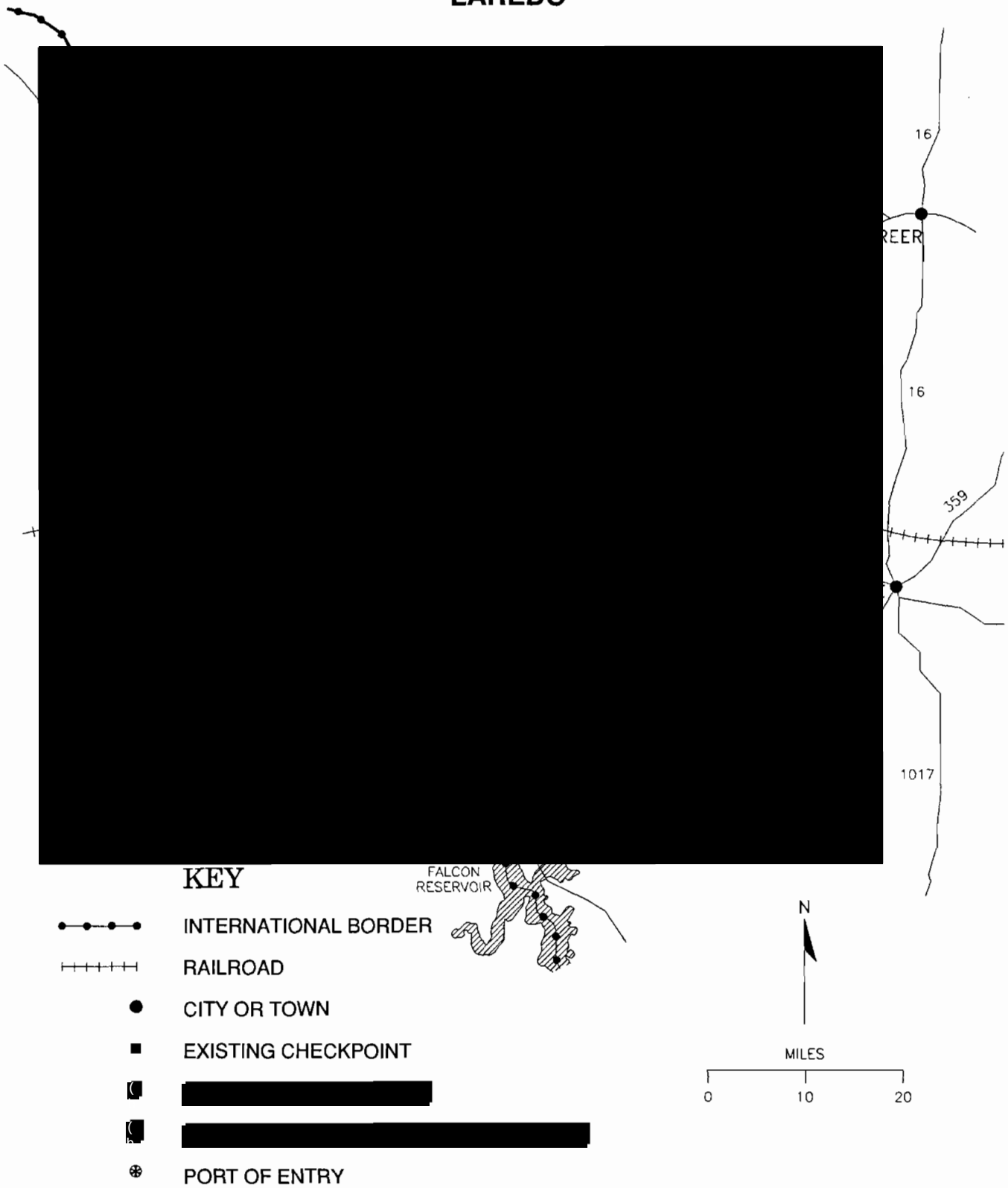



***Figure 5. Map of the Laredo Sector***

### *Recommendations*

The Laredo sector currently operates five highway checkpoints. These should be full-time, all-weather checkpoints and may require additional personnel and facility modifications to be operable at all times:

- North of Laredo on northbound Interstate Highway 35
- Southwest of Freer on US Highway 59 east of County Road 2050
- West of Bruni on State Highway 359
- South of Hebbronville on State Highway 16
- South of Laredo on US Highway 83.

OUO-7

(b) (7)(E)

Additional encrypted radios are required as well as updated information control and display equipment. ) are required to replace outdated units or provide more capabilities and to enhance territorial control near the border during and after barrier installation.

The numbers and types of sensors and other supporting electronic equipment listed for the Laredo sector were determined based on responses to questionnaires and recent surveys.

## Del Rio Sector

The Del Rio sector includes 9.4% (154 linear miles) of the total Southwest Border. The Del Rio sector has averaged about 39,000 apprehensions per year for the last 2 years. During FY 1990, 50 narcotics seizures occurred at a value of $100,400,000. FY 1991 seizures had already reached 70 at a value of $66,000,000 by July.

### Operational Environment

#### *Terrain*

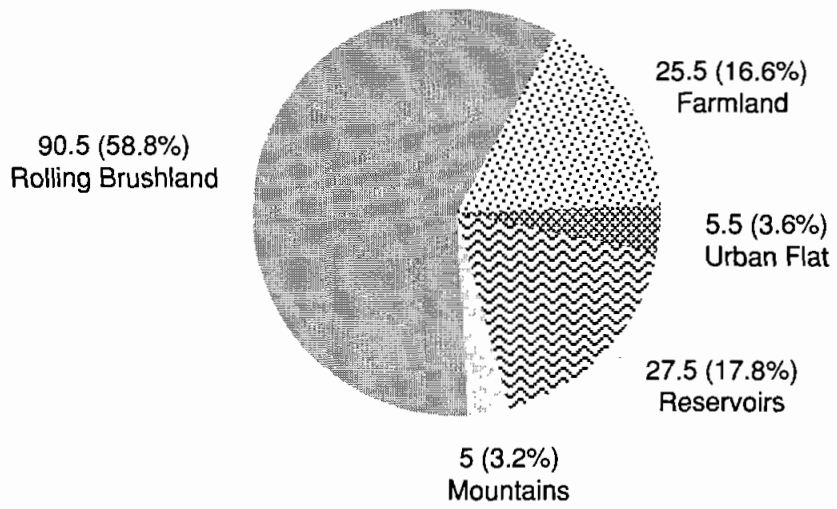
The [redacted]. There are a few Mexican settlements along the Rio Grande River and large populations concentrated near the Texas cities of Del Rio and Eagle Pass.

There are 154 linear miles (river frontage 205 miles) of border in the Del Rio sector. Those miles are composed of

- 90.5 miles of rolling brushland
- 27.5 miles of reservoirs
- 25.5 miles of farmland
- 5.5 miles of urban flat
- 5.0 miles of mountains.

Figure 6 shows the distribution of these different types of terrain.

***Figure 6. Distribution of Del Rio Sector Terrain Types***



### *Threat Definition*

All of the types of threat mentioned earlier in this report exist in this sector. The threats appear to be balanced among the types of threats mentioned.

The principal movement of illegal aliens and/or contraband out of the Del Rio sector is by the (b) (7)(E) [redacted]

A map showing the major highways and railroads in this sector is included as Figure 7. (b) (7)(E) [redacted].

### *Available Resources*

The Del Rio sector currently has 337 agents and 54 nonagent support personnel assigned. The sector also possesses intrusion detection, communications, information control and display, and assessment equipment (some for day and some for night use). Some of the obsolete equipment has recently been replaced. The new equipment recommended will augment and upgrade the sector's existing physical protection equipment inventory. More details are given in Volume 2.

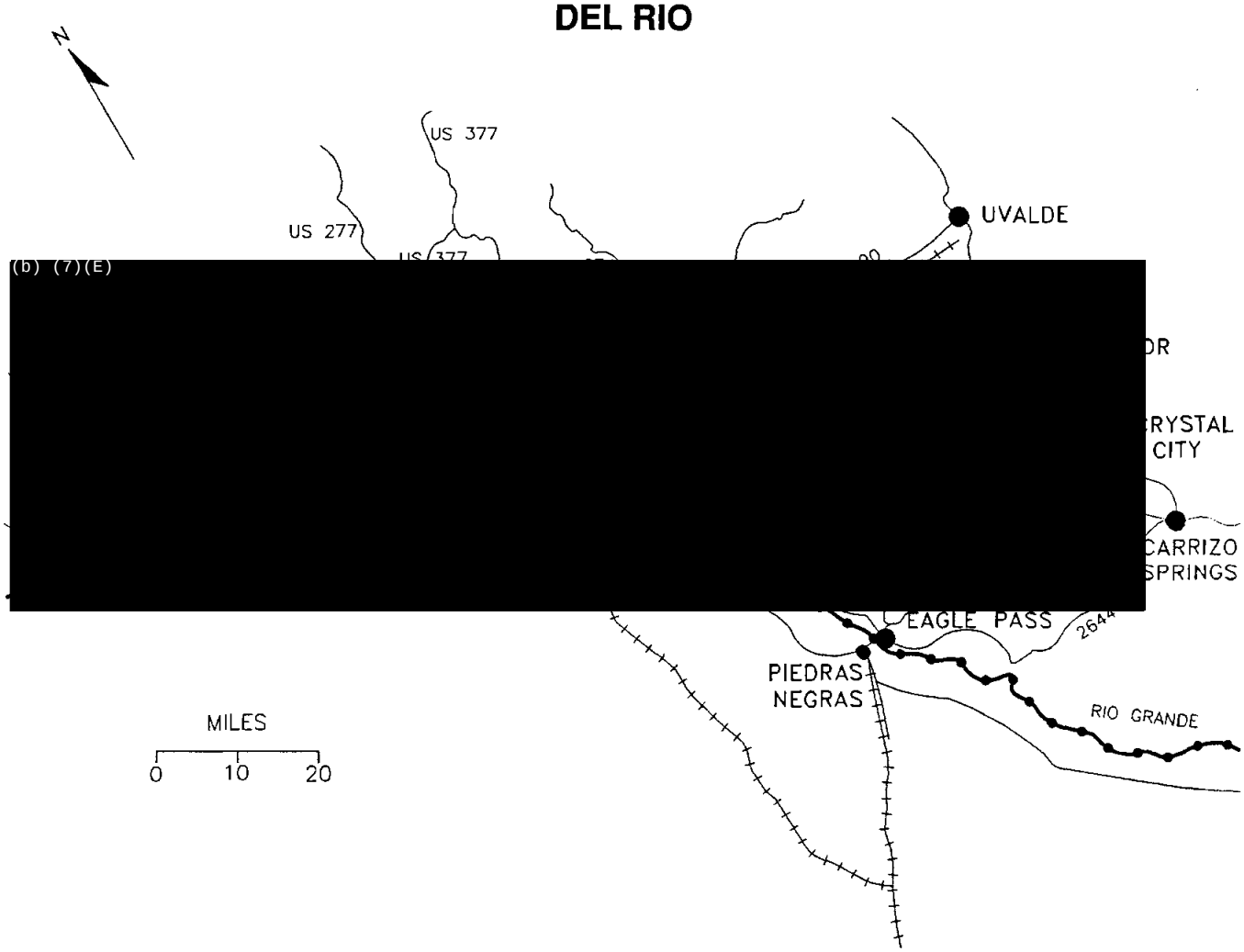
### *Recommendations*

Del Rio currently operates three full-time checkpoints:

- North of Del Rio on US Highway 277-377, south of the Y Intersection
- East of Eagle Pass on US Highway 57
- West of Uvalde on US Highway 90, east of County Road 1572.

These checkpoints are operated full-time except in very bad weather. Modifications may be required to attain all-weather

# DEL RIO




## KEY

INTERNATIONAL BORDER

RAILROAD

CITY OR TOWN

EXISTING CHECKPOINT

(b) (7)(E)

[redacted]

*Figure 7. Map of the Del Rio Sector*

OUO-7

status. (b) (7)(E) [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Additional encrypted radios are required as well as updated information control and display equipment. [redacted] are required to replace outdated units or provide more capabilities and to enhance territorial control near the border during and after barrier installation.

The numbers and types of sensors and other supporting electronic equipment listed for the Del Rio sector were determined based on responses to our questionnaire and survey. The sector expressed the need for new computer-aided dispatch and sensor tracking equipment for Del Rio Headquarters and Eagle Pass station. These new consoles should include hardware and software capable of displaying sensor locations and local terrain on a map of the area.

## Marfa Sector

The Marfa sector includes 20.3% (332.5 miles) of the total Southwest Border. The Marfa sector has averaged about 10,000 apprehensions per year for the last 2 years. That figure is the lowest for all Border Patrol sectors despite the fact that Marfa has the largest number of miles of border of all sectors. (b)(7)(E) [redacted]

During FY 1990, 89 narcotics seizures occurred at a value of $9,970,000. FY 1991 seizures had already reached 40 at a value of $16,700,000 by July.

### Operational Environment

#### *Terrain*

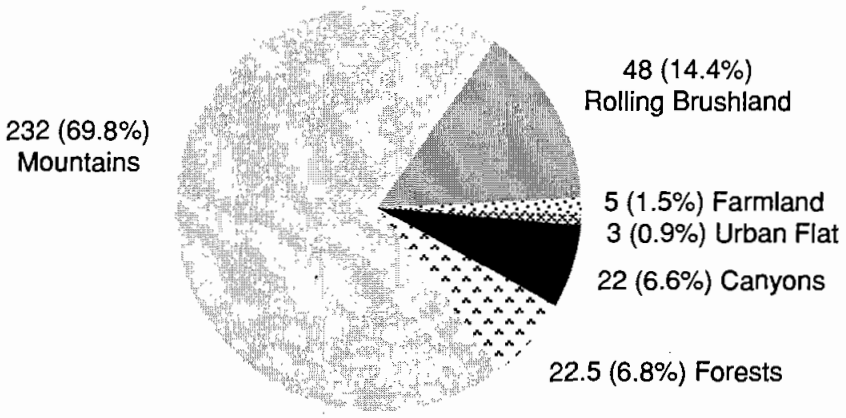
The western edge of the Marfa sector includes the intersection of Jeff Davis and Presidio Counties. The southern boundary follows the Rio Grande River and includes all of Big Bend National Park. The eastern edge of the sector is the Terrell and Val Verde County Line. There are numerous small Mexican settlements along the Rio Grande River with a large population concentrated near the Texas city of Presidio.

There are 332.5 linear miles of border in the Marfa sector. Those miles are composed of

| | |
|---|---|
| 232.0 | miles of mountains |
| 48.0 | miles of rolling brushland |
| 22.5 | miles of forests |
| 22.0 | miles of canyons |
| 5.0 | miles of farmland |
| 3.0 | miles of urban flat. |

Figure 8 shows the distribution of the different types of terrain. The actual river frontage is 420 miles.

*Figure 8. Distribution of Marfa Sector Terrain Types*




### *Threat Definition*

All of the types of threat mentioned earlier in this report exist in this sector. The threats appear to be balanced among the types of threats mentioned.

The principal movement of illegal aliens and/or contraband out of the sector is by (b) (7)(E) [redacted]

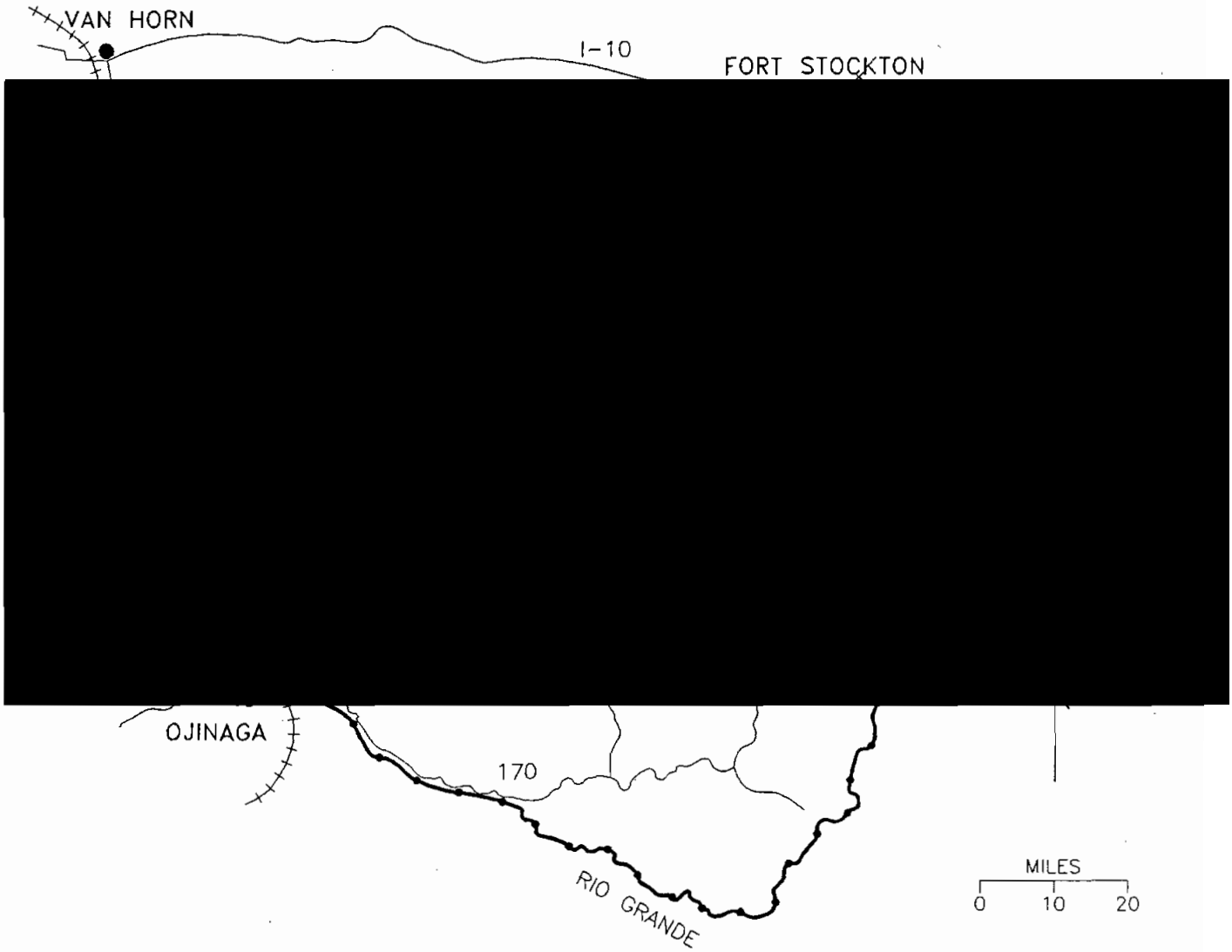
[redacted]

A map showing the major highways and railroads in the area is included as Figure 9.

### *Available Resources*

The Marfa sector currently has 116 agents and 19 nonagent support personnel. The sector also possesses intrusion detection, communications, information control and display, and assessment equipment (some for day and some for night use). Some of the obsolete equipment has recently been replaced. The new equipment recommended will augment and upgrade the sector's existing physical protection equipment inventory. More details are given in Volume 2.

# MARFA




## KEY

INTERNATIONAL BORDER

RAILROAD

CITY OR TOWN

EXISTING CHECKPOINT

(b) (7)(E)

PORT OF ENTRY

***Figure 9. Map of the Marfa Sector***

### *Recommendations*

OUO-7 (ALL)

Because of the exceedingly harsh nature of the terrain and the absence of large cities on the border, not as much lighted barrier is needed in this sector. In fact, only one POE exists in the sector. (b) (7)(E) [redacted]

Marfa currently operates three highway checkpoints:

- South of Marfa on US Highway 67
- South of Alpine on State Highway 118
- South of Marathon on US Highway 385.

(b) (7)(E) [redacted]

[redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

[redacted]

[redacted]

- [redacted]
- [redacted]

[redacted]

OUO-7

Additional encrypted radios are required as well as updated information control and display equipment. [redacted] are required to replace outdated units or provide more capabilities and to enhance territorial control near the border during and after barrier installation.

The numbers and types of sensors and other supporting electronic equipment listed for the Marfa sector are based on responses to our questionnaire and survey.

## El Paso Sector

The El Paso sector includes 18.5% (299.2 miles) of the total Southwest Border. Most of the illegal aliens are apprehended in the [redacted] These apprehensions account for about 20% (231,000) of the national total, making the El Paso sector second only to the San Diego sector in total numbers of illegal aliens. A maximum effort to gain control of the flow of illegal aliens should be applied here.

### Operational Environment

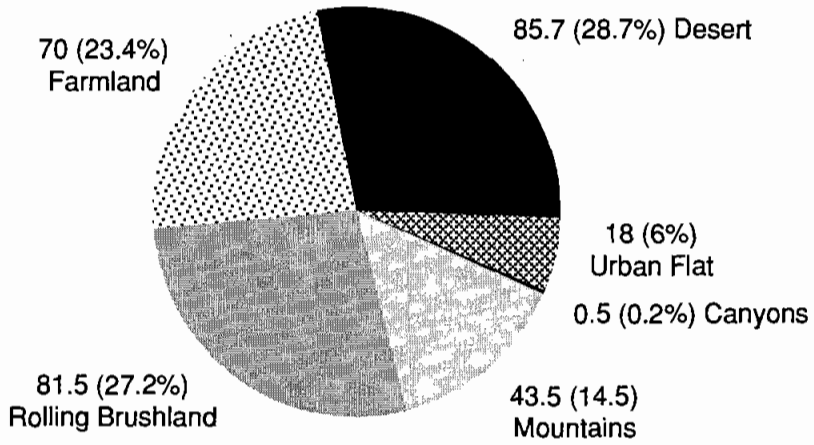
#### *Terrain*

The El Paso sector [redacted] There are 299.2 linear miles of border in the El Paso sector. Those miles are composed of

85.7 miles of flat desert
81.5 miles of rolling brushland
70.0 miles of farmland
43.5 miles of mountains
18.0 miles of urban flat
0.5 miles of canyons.

Figure 10 shows the distribution of the different types of terrain.

***Figure 10. Distribution of El Paso Sector Terrain Types***



OUO-7 (ALL)

### *Threat Definition*

This sector has all of the threat types mentioned earlier in this report, however, (b) (7)(E) [redacted]

For the western 85 miles of this sector, Mexico Highway 2 parallels the international border and lies 5 to 8 miles to the south. This highway provides relatively easy access to the border in this region. (b) (7)(E) [redacted]

The major routes for illegal aliens and drugs out of the region are those listed below, which can be monitored using the existing and recommended new checkpoints.

### *Available Resources*

The El Paso sector currently has 590 agents and 80 nonagent support personnel assigned. The sector also possesses intrusion detection, communications, information control and display, and assessment equipment (some for day and some for night use). Some of the obsolete equipment has recently been replaced. The new equipment recommended will augment and upgrade the sector's existing physical protection equipment inventory. More details are given in Volume 2.

### *Recommendations*

(b) (7)(E) [redacted]. Existing features and patrol roads must be considered in the actual design.

Figure 11 shows the major highways in the area. El Paso currently operates seven highway checkpoints:

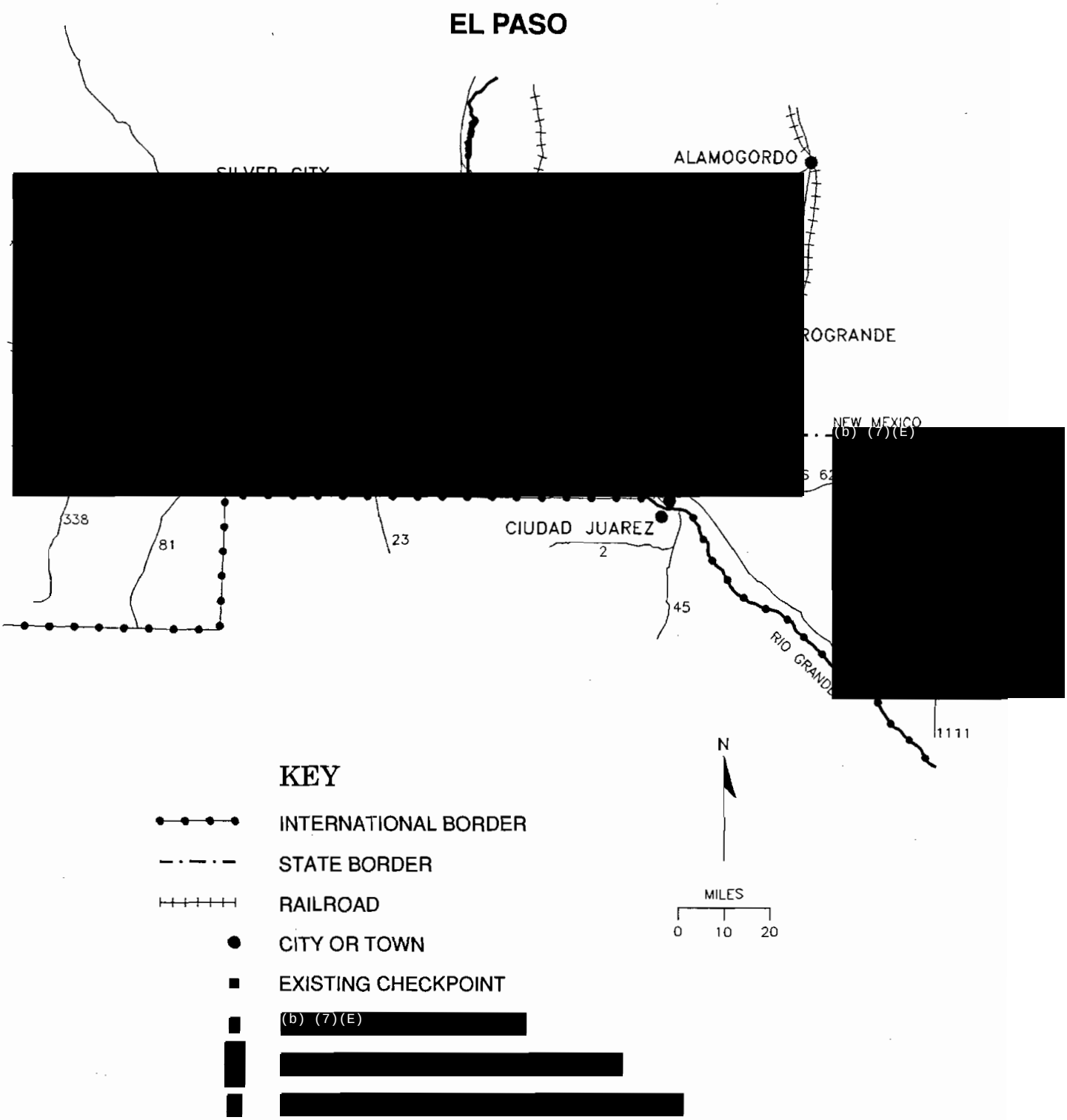



*Figure 11. Map of the El Paso Sector*

- West of Las Cruces on westbound Interstate Highway 10
- North of Las Cruces on northbound Interstate Highway 25
- North of Las Cruces on US Highway 185 at Radium Springs
- West of Alamogordo on eastbound US Highway 70
- South of Alamogordo on US Highway 54 at Orogrande
- East of El Paso on US Highway 62/180
- West of Sierra Blanca on eastbound Interstate Highway 10.

OUO-7

(b) (7)(E)

[redacted]

[redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

---

[redacted]

OUO-7

- (b) (7)(E) [redacted]

- [redacted]

Additional encrypted radios are required as well as updated information control and display equipment. [redacted] are required to replace outdated units or provide more capabilities and to enhance territorial control near the border during and after barrier installation.

Other recommendations for the El Paso sector are given in the spreadsheet. The numbers and types of sensors and other supporting electronic equipment listed for the El Paso sector were determined based on responses to questionnaires and surveys. The numbers and types of video cameras included reflect the upgrade currently under way to restore the video surveillance capability.

## Tucson Sector

The Tucson sector includes 16.5% (268.9 miles) of the Southwest Border but accounts for a large fraction of all illicit drugs seized on the border. Since January 1988, this sector accounted for 200,000 alien apprehensions, 350,000 pounds of marijuana, 20,000 pounds of cocaine, and $8.7 million in currency. In FY 1991 alone, the Tucson sector listed 60,500 illegal alien apprehensions (2,000 criminal aliens), 10,000 pounds of cocaine, 91,000 pounds of marijuana, $2.3 million in currency, and 1,250 vehicles seized.

### Operational Environment

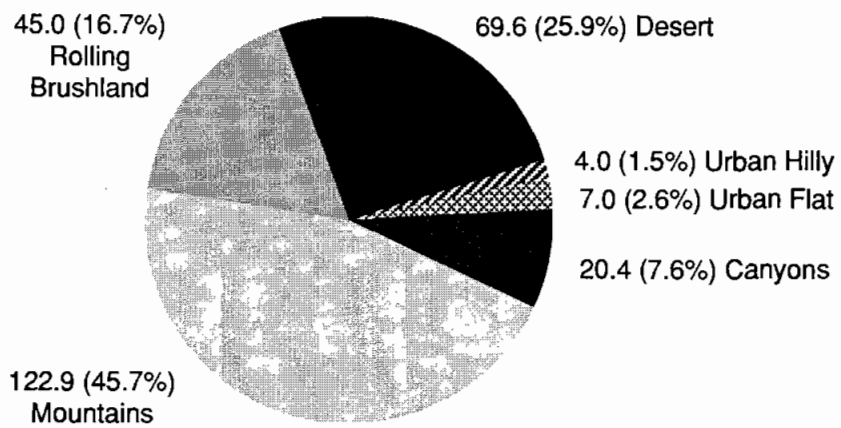
#### *Terrain*

There are 268.9 linear miles of border within the Tucson sector. Those miles are composed of

122.9 miles of mountains
69.6 miles of flat desert
45.0 miles of rolling brushland
20.4 miles of canyons
7.0 miles of urban flat
4.0 miles of urban hilly.

Figure 12 shows the distribution of the different types of terrain.

***Figure 12. Distribution of Tucson Sector Terrain Types***



### *Threat Definition*

All of the types of threat mentioned earlier in this report exist in this sector. The threats appear to be balanced among the types of threats mentioned, however, the drug threat is increasing (see the Tucson Sector, Volume 2, for detailed information).

The sector includes six POEs located at Nogales, Mariposa (Nogales West), Douglas, Naco, Sasabe, and Lukeville. The majority of the Tucson border is either mountainous or rugged terrain characterized as north/south canyons. The total of these two classifications can be considered natural barrier or traffic channelizer. The remainder of the sparsely populated area is composed of desert and brushland that represent only minimal barriers to illegal crossing. The remaining 11 miles are the heavily populated hilly urban area at Nogales and flat urban area at Douglas and Naco. The locations of recommended checkpoints listed below cover the major routes for illegal aliens and drugs.

### *Available Resources*

The Tucson sector has 243 agents and 46 nonagent support personnel assigned. Additional encrypted radios are required as well as updated information control and display equipment. [redacted] are required to replace outdated units or provide more capabilities and to enhance territorial control near the border during and after barrier installation.

### *Recommendations*

OUO-7

We recommend a total of (b) (7)(E) [redacted] crossing areas.

Figure 13 is a map showing the major highways in the area. The following permanent full-time, all-weather highway checkpoints are recommended to enforce a containment strategy:

- (b) (7)(E) [redacted]
- [redacted]
- [redacted]
- [redacted]

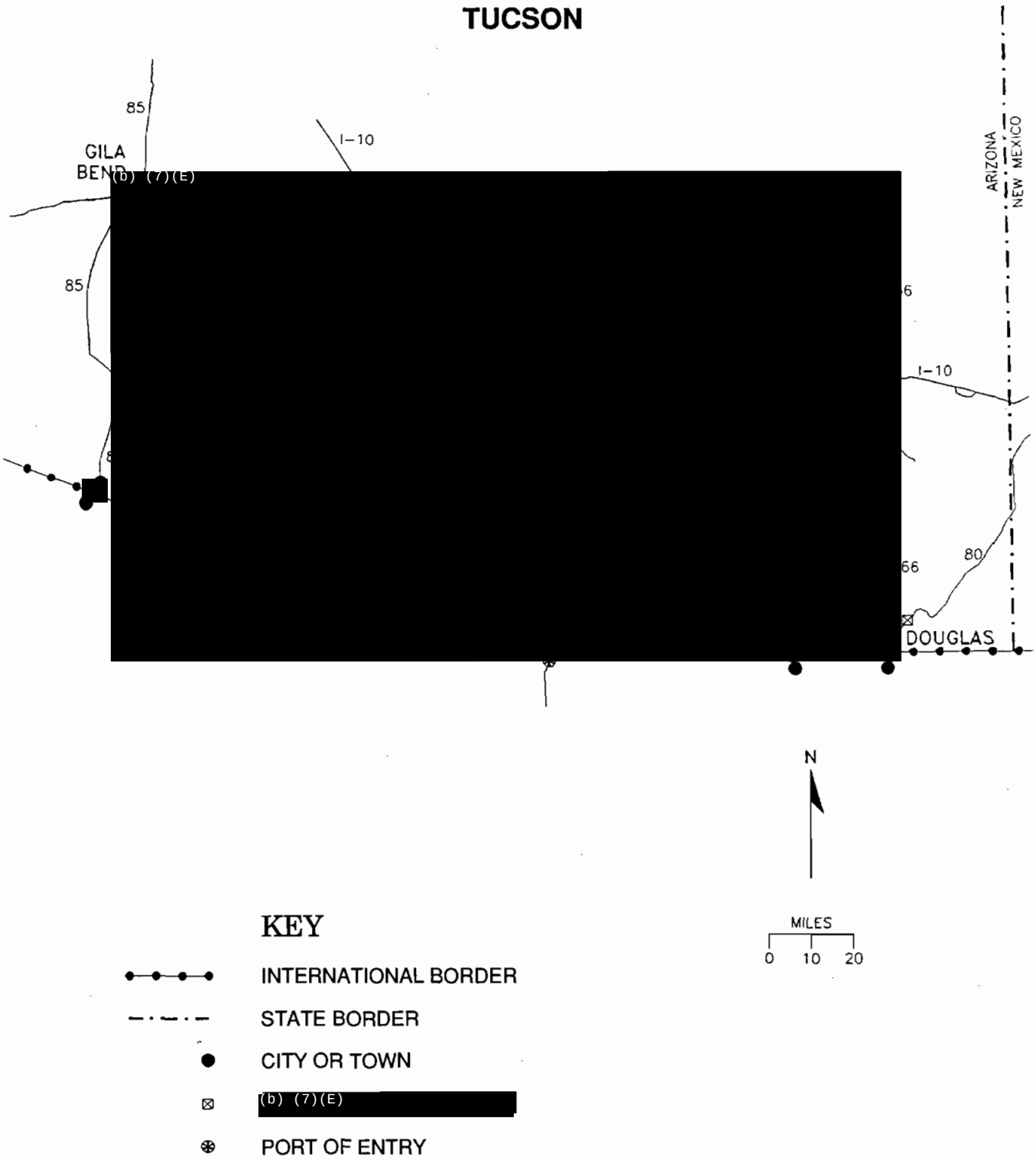



*Figure 13. Map of the Tucson Sector*

OUO-7 (ALL)

- (b) (7)(E) [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted].

We estimate that 165 agents will be required to maintain full-time operation of these checkpoints.

Checkpoints (especially large ones) that impede the free flow of local traffic are unpopular with residents of the area. The checkpoints should be designed and operated to minimize this inconvenience, yet still be able to detect smuggling operations.

The sector also possesses intrusion detection, communications, information control and display, and assessment equipment (some for day and some for night use). Some of the obsolete equipment has recently been replaced. The new equipment recommended will augment and upgrade the sector's existing physical protection equipment inventory. More details are given in Volume 2.

Additional encrypted radios are required as well as updated information control and display equipment. [redacted] are required to replace outdated units or provide more capabilities and to enhance territorial control near the border during and after barrier installation.

The numbers and types of sensors and other supporting electronic equipment listed on the spreadsheet for the Tucson sector were determined based on responses to questionnaires and recent surveys.

## Yuma Sector

The Yuma sector includes 7.2% (118.2 miles) of the total Southwest Border and accounts for 6% (67,000 in 1987) of the total apprehensions of illegal aliens per year. Eighty-nine percent of the apprehensions are made in the [redacted]. In the same zone, the Yuma sector personnel make 90% of their drug arrests. This is quite understandable because nearly 80% of the sector is composed of rugged mountains, sand dunes, and flat desert, which includes the Luke Air Force Base bombing range.

### Operational Environment

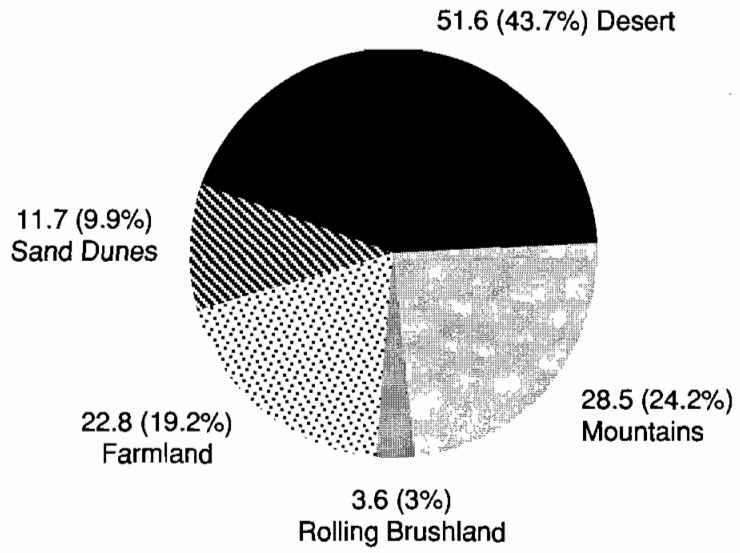
#### *Terrain*

This sector has extremely hostile natural geographical features. There are 118.2 linear miles of border within the Yuma sector. Those miles are composed of

51.6 miles of flat desert
28.5 miles of mountains
22.8 miles of farmland
11.7 miles of sand dunes
3.6 miles of rolling brushland.

Figure 14 shows the distribution of the different types of terrain.

***Figure 14. Distribution of Yuma Sector Terrain Types***



### *Threat Definition*

OUO-7 (ALL)

All of the types of threat mentioned earlier in this report exist in this sector.

Illegal aliens (heavily migrant farm workers) constitute the major threat in this sector but drug traffic is not insignificant. The populated area of the sector follows the [redacted] This zone is approximately 24 miles in length (20% of the Yuma sector) and within it occurs approximately 90% of the drug arrests and 89% of the apprehensions. The locations of recommended new and existing checkpoints listed below cover the major routes for illegal aliens and drugs.

### *Available Resources*

The Yuma sector currently has 184 agents and 36 nonagent support personnel assigned. Additional encrypted radios are required as well as updated information control and display equipment. [redacted] are required to replace outdated units or provide more capabilities and to enhance territorial control near the border during and after barrier installation.

### *Recommendations*

We recommend (b) (7)(E) [redacted]

Figure 15 is a map showing the major highways and railroads in the sector. In addition, the existing highway checkpoints should be upgraded to full-time, all-weather operation:

- (b) (7)(E) [redacted]
- [redacted]
- [redacted].

We agree with the results of the Ironhorse II study as stated in the July 26, 1991, Ironhorse II memo, "El Centro demonstrated during Ironhorse that it can serve both our [the Yuma sector's] and their needs very effectively by [redacted] in their sector."

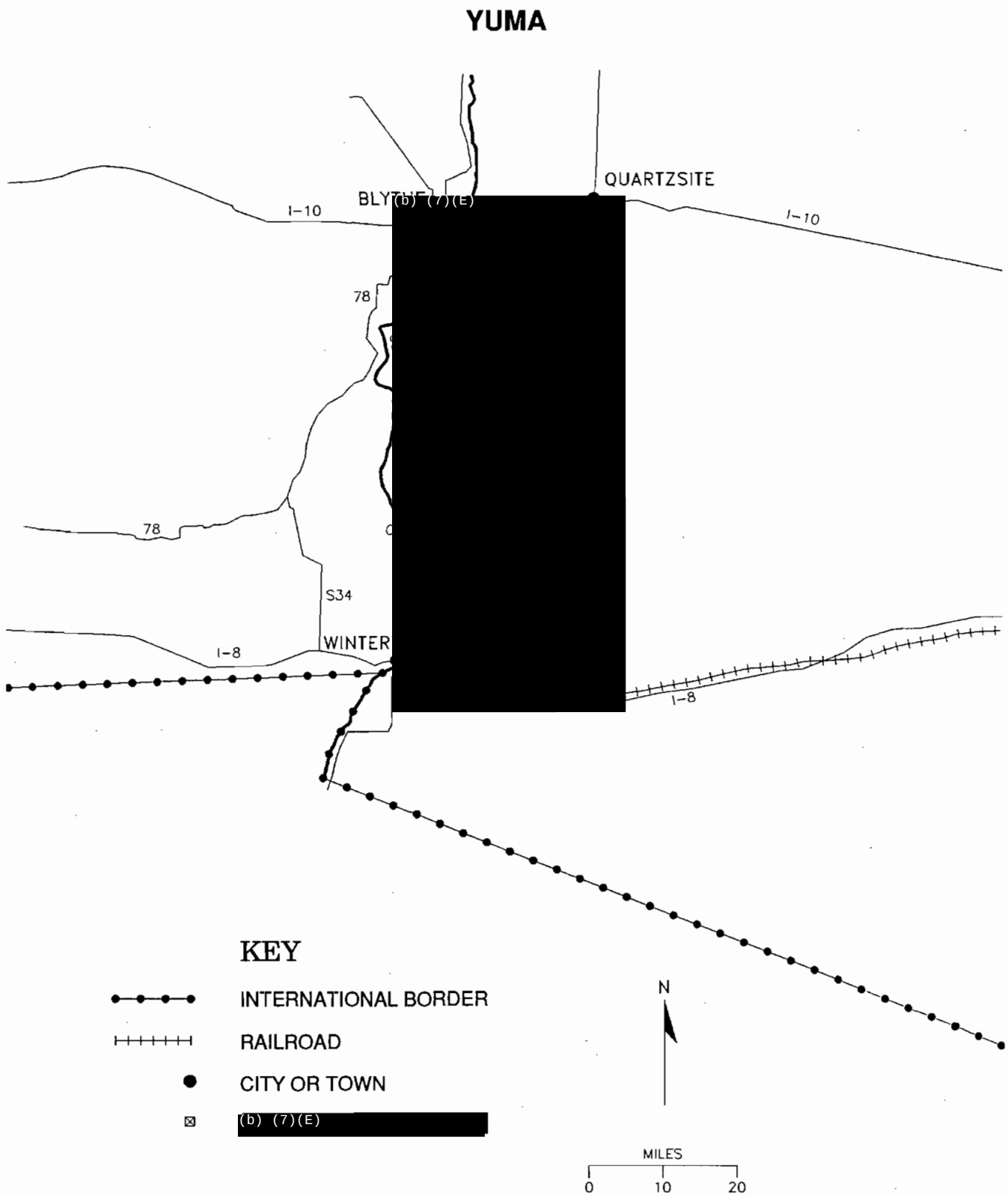



*Figure 15. Map of the Yuma Sector*

OUO-7
(ALL)

The numbers and types of sensors and other supporting electronic equipment listed on the spreadsheet for the Yuma sector were determined based on responses to questionnaires and surveys. Many of the sensors requested will replace sensors that are old and in need of replacement. All new sensor equipment should be totally compatible with the old equipment unless the complete system is replaced or enough operable old equipment is available for a separate system.

The Yuma sector has implemented a strategy of highway checkpoints and railway checks to control illegal alien and drug traffic out of the Yuma area. Existing checkpoints are operated nearly full-time. To be totally effective they should also have all-weather capability.

The Yuma Sector Technology Committee has developed a comprehensive plan for an enhanced video surveillance system. This system, when used in conjunction with other intrusion detection systems, will result in the sector exerting a much greater degree of control over the border itself. [redacted] Presently, video signals are monitored by agents at the Yuma station and sensors are monitored by radio operators at Sector Headquarters. Consolidating these two systems will increase efficiency and yield the immediate result of returning five agents to field work. The (b) (7)(E) [redacted].

Additional encrypted radios are required as well as updated information control and display equipment. [redacted]) are required to replace outdated units or provide more capabilities and to enhance territorial control near the border during and after barrier installation. [redacted]s should also be completed.

## El Centro Sector

The El Centro sector includes 4.3% (69.6 miles) of the total Southwest Border and accounts for 4.9% (55,000 in 1987) of the illegal alien apprehensions. The urban area consisting of Calexico on the US side and Mexicali on the Mexico side accounts for most of the illegal aliens as seems typical along the entire border. East and west of the urban centers of Calexico and Mexicali are mountains, desert, sand dunes, and farms.

### Operational Environment

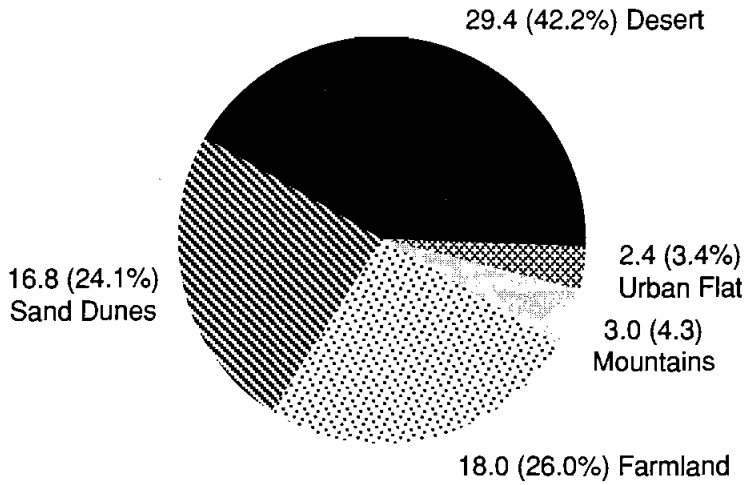
#### *Terrain*

There are 69.6 miles of border within the El Centro sector. Those miles are composed of

29.4 miles of flat desert
18.0 miles of farmland
16.8 miles of sand dunes
3.0 miles of mountains
2.4 miles of urban flat.

Figure 16 shows the distribution of the different types of terrain.

***Figure 16. Distribution of El Centro Sector Terrain Types***



OUO-7 (ALL)

## Threat Definition

All of the types of threat mentioned earlier in this report exist in this sector.

State Highway 98 and Mexico Highway 2 parallel the border west of Calexico/Mexicali and lie approximately 2 miles north and approximately 4 miles south, respectively. To the east the same holds true, but Mexico Highway 2 drops further to the south (up to 10 miles). [redacted]

### *Available Resources*

The El Centro sector has 213 agents and 48 nonagent support personnel. The sector also possesses intrusion detection, communications, information control and display, and assessment equipment (some for day and some for night use). Some of the obsolete equipment has recently been replaced. The new equipment recommended will augment and upgrade the sector's existing physical protection equipment inventory. More details are given in Volume 2.

### *Recommendations*

(b) (7)(E) [redacted]

There are two existing highway checkpoints northwest of Westmorland on State Highway 86 and north of Niland on State Highway 111 and a temporary traffic check operation that is sometimes operated on Interstate 8 west of Ocotillo. In addition, (b) (7)(E) [redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted].

# EL CENTRO

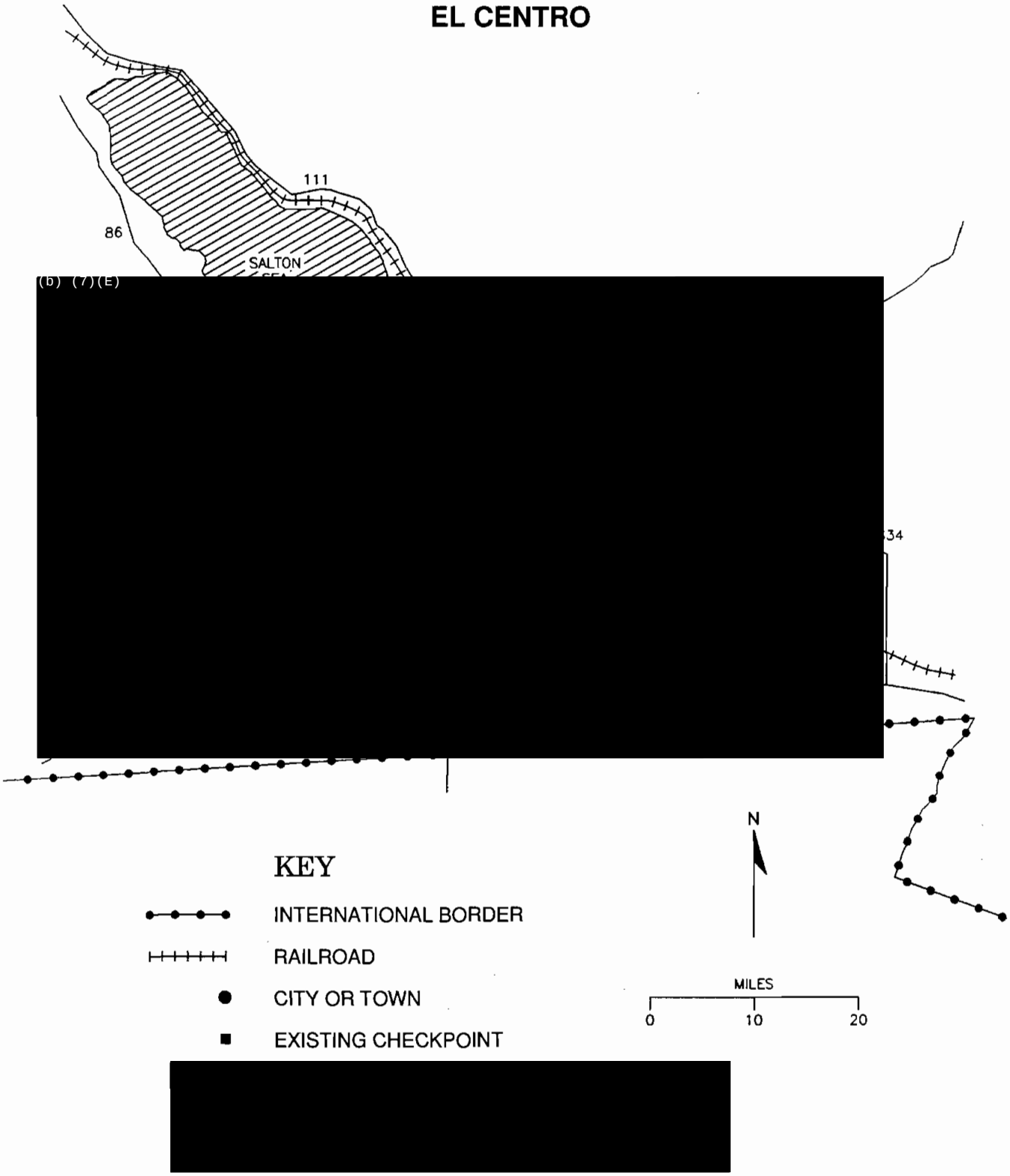



*Figure 17. Map of the El Centro Sector*

OUO-7

(b) (7)(E) [redacted], should be capable of full-time, all-weather operation.

Additional encrypted radios are required as well as updated information control and display equipment. [redacted] are required to replace outdated units or provide more capabilities and to enhance territorial control near the border during and after barrier installation.

The numbers and types of sensors and other supporting electronic equipment listed on the spreadsheet for the El Centro sector were determined based on responses to questionnaires and recent surveys. Many of the sensors requested will replace sensors that are old and in need of replacement.

## San Diego Sector

The San Diego sector includes 4.0% (65.7 miles) of the total Southwest Border but accounts for 45% (473,000 in 1990) of the illegal alien apprehensions per year. Ninety percent of the aliens are apprehended in the first 13 miles, 20% of the total length, east of the coast. There is drug-related drive-through traffic in the 5.5 miles of relatively rural area between the Tijuana Airport and the foothills of the San Ysidro mountains to the east of the Brownfield station.

### Operational Environment

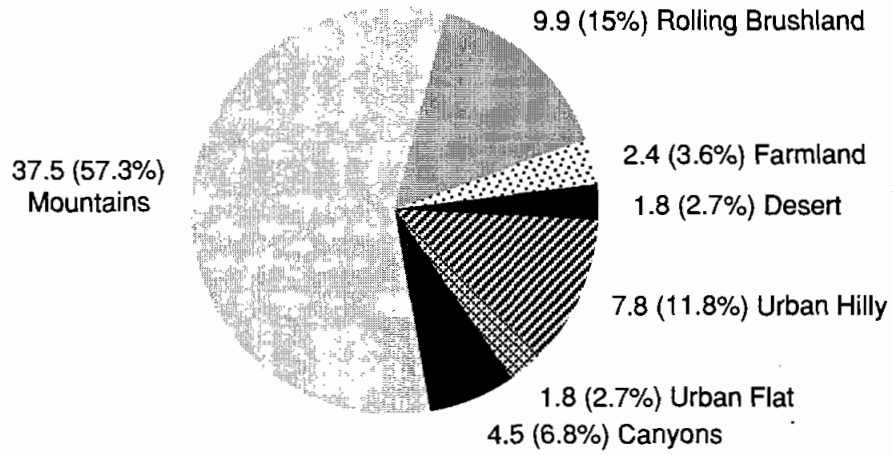
#### *Terrain*

There are 65.7 linear miles of border within the San Diego sector. Those miles are composed of

37.5 miles of mountains
9.9 miles of rolling brushland
7.8 miles of urban hilly
4.5 miles of canyons
2.4 miles of farmland
1.8 miles of flat desert
1.8 miles of urban flat.

Figure 18 shows the distribution of the different types of terrain.

***Figure 18. Distribution of San Diego Sector Terrain Types***



### *Threat Definition*

Illegal and commuter aliens are the principal enforcement problem in this sector, however, all of the types of threat mentioned earlier in this report exist in this sector. It has been estimated that as many as 6,000 aliens attempt to enter the US illegally every night in the 7.5 miles of border between the coast and the Tijuana Airport that is covered by the Imperial Beach and Chula Vista stations (Figure 19).

The 13 miles of border east from the coast to the foothills of the San Ysidro Mountains are the most concentrated area of illegal entry on the Southwest Border. Almost this entire length is heavily urbanized on the Mexico side, with buildings and roads running right up to the border.

The remaining [redacted] east to the El Centro sector boundary includes the 37.5 miles of mountainous terrain that makes up 57% of the San Diego sector. There are 4.5 miles of parallel north/ south mountain canyons, 7.5 miles of rolling brushland, and 1.8 miles of desert scattered along this length and two small populated areas at Tecate and Jacumba, which total about 5 miles.

The locations of the existing checkpoints, together with the recommended checkpoints listed below, cover the major routes for illegal aliens and drugs. Because of the size of the greater San Diego population, many illegal aliens and drugs do not leave the region.

### *Available Resources*

The San Diego sector has 820 agents and 115 nonagent support personnel assigned. The sector also possesses intrusion detection, communications, information control and display, and assessment equipment (some for day and some for night use). Some of the obsolete equipment has recently been replaced. The new equipment recommended will augment and upgrade the sector's existing physical protection equipment inventory. More details are given in Volume 2.

### *Recommendations*

OUO-7

(b) (7)(E) [redacted]. The detailed design will have to consider the areas where it may not be possible to

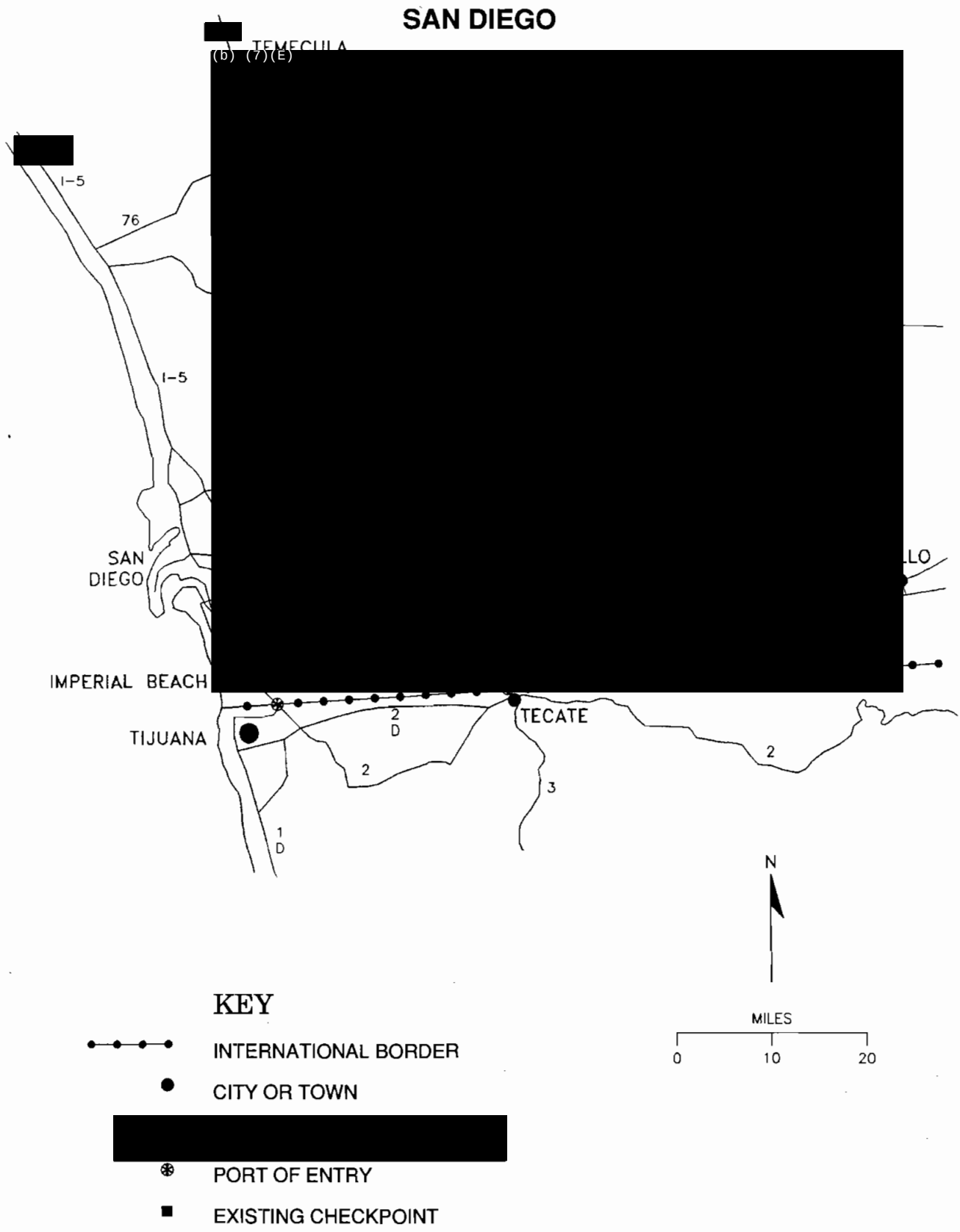



*Figure 19. Map of the San Diego Sector*

OUO-7

construct barriers. In those areas, a method is required of channeling any aliens that cross into an area where a concentration of agents can be in control.

Additional encrypted radios are required as well as updated information control and display equipment. [redacted] are required to replace outdated units or provide more capabilities and to enhance territorial control near the border during and after barrier installation.

Additional highway checkpoints are needed:

- (b) (7)(E) [redacted]
- [redacted]
- [redacted].

The $30 million expansion of the San Clemente highway checkpoint is not included in the spreadsheet.

The budget recommendations for the San Diego sector are given in the spreadsheets.

## Budget Spreadsheet Description

At the end of this document we have included a set of spreadsheets that includes the categories of detection, assessment, communication, information control and display, barriers and highway checkpoints, and Integrated Logistic Support (ILS) for each of the nine sectors. The numbers on the first spreadsheet represent the funding needed for procurement and operation for 1 year. We have also included a spreadsheet showing an estimate of the recurring costs.

For each border sector, a number of units is recommended and the estimated cost for the recommended number is given. In the far right-hand column is the unit cost used. In some cases this unit cost applies to a particular manufacturer. This is not meant to be a recommendation of that manufacturer but a typical cost used only to arrive at a realistic estimate. A total estimated cost for each border sector is given at the bottom of each column. The bottom line gives the grand total for all sectors, a contingency factor of 25%, and the recommended budget amount. Many items that are hard to budget or that may be site-specific, such as cost of environmental impact statements, land acquisition, power line extensions, camera mounting details, *etc.*, are intended to be covered by part of the contingency funding. Two different grand totals are given. The first is based upon the optimal use of technologies and current staffing levels. The second grand total increases the staffing levels and is based on a plan that allows additional personnel. It should be recognized that the first plan will require reassignment of some personnel away from the line in order to fill the most critical positions.

The sensors recommended for each sector are mainly conventional [redacted] sensors. We have recommended both [redacted] and [redacted] sensors with the [redacted] sensors planned for use around [redacted] and actual [redacted] If the [redacted] sensors communication channels are not overloaded, it may be possible to use [redacted] sensors at the [redacted] with only local annunciation. OUO-7

[redacted] sensors are harder to deploy than [redacted] sensors; therefore, their usefulness is limited. A few of them are recommended here for tactical operations. A few special applications may be found for the [redacted] sensors, but these are also more difficult to deploy.

Our experience with classifying [redacted] sensors has yielded many incorrect classifications in all except the most benign conditions.

Because they are a more expensive, more complicated, and higher maintenance item, a few should be carefully evaluated before large numbers are purchased. OUO-7

[redacted] sensors usually require [redacted], making them more difficult to deploy, more expensive, and more in need of maintenance. Newer units may be available with [redacted]. If the costs are comparable and the [redacted] is of importance (and will not be determined by the [redacted] that may be present), the [redacted] sensors are recommended.

Only some of the unattended [redacted] sensors have [redacted]. The independent [redacted] recommended are for those that do not. The [redacted] are used in installing the [redacted] sensors [redacted]) and in verifying their integrity while deployed.

Most of the recommended surveillance devices will replace obsolete units already in the field. In a few cases, they will allow increased capabilities. As discussed in Volume 3, many of the closed circuit television (CCTV) cameras will be solid state. As [redacted] become less expensive, they should be deployed in both temporary and permanent applications. An [redacted] known as [redacted], has a goal of a production cost of $10,000 each. The INS Research and Development Group is already evaluating the [redacted]. [redacted] have been effectively used on helicopters in several of the sectors. To our knowledge, these are still being maintained and are operational. As additional helicopters for these types of operations are added, new [redacted] may be required.

As the illegal aliens move their routes for crossing into the more remote areas, the ground-based surveillance platforms (an early version was [redacted] which is now being replaced by [redacted] will become more useful.

The funds recommended for short-range (tactical) and long-range (sector-wide) coverage are intended only to supplement the communications upgrades being performed by the Communications Integration Working Group (CIWG). In some sectors, these funds may not be needed. We considered both private and commercial satellite communications (SATCOM), however, have deferred the recommendations about SATCOM to the CIWG. Likewise, for cellular telephones in the areas with cellular coverage, this may be an effective but expensive alternative means of communication.

The funding of information control and display equipment and software is intended to upgrade existing capabilities.

Sandia National Laboratories is a pioneer in the development of unmanned ground and airborne vehicles and would welcome more practical applications for them; however, we believe more development work is required before we could recommend their use to the border patrol. OUO-7

In a few sectors in which additional barriers are recommended, we have recommended only a fractional welder operator. In those cases, the fractional welder will have to be supplied on contract or that person will have to have other duties within the Border Patrol. Because it is not known how often the barriers will be cut, we have estimated that one welder can keep them repaired. It is our hope that the rate of having new holes cut by illegal aliens will be low enough that this person can also assume other duties.

The other items in the table are self-explanatory or have been discussed in detail elsewhere in this study.

## Sources of Information

The following sources of information were used to arrive at the recommendations:

- a 1989 report, *Ten Steps to Securing America's Borders,* issued by the Federation for American Immigration Reform (FAIR)
- a 1990 survey, *Survey of Border Patrol Surveillance Equipment,* prepared by the Immigration and Naturalization Service, Fort Huachuca, Arizona, and Washington, DC, November 1990
- a questionnaire prepared by Sandia National Laboratories, December 1991, in which all of the border sectors participated
- our own analysis of each sector based on actual visits to each sector, talks with headquarters and sector personnel, and studies of US Geological Survey (USGS) and other maps
- Additional references given in Volume 2.

## Spreadsheet Background and Assumptions

OUO-7 (ALL)

It is necessary to understand the background and assumptions used to generate the spreadsheet entries and to justify the numbers for budget purposes because

- there is reasonably good agreement among the three actual surveys about the total number of sensors in use
- the agents in the field are better qualified to know where sensors need to be placed.

This section lists this information as it applies to the various categories included in the spreadsheets.

### Sensors

There are several types of seismic sensors listed in the spreadsheet. The differentiating features are listed below.

#### *Classifier*

The classifier mode includes circuits to identify the intruder as vehicular or pedestrian.

#### *Strategic*

The main designation is for strategic sensors. These are defined as those that [redacted].

#### *Tactical*

Under many of the sensor types is a "tactical" listing. Tactical sensors are for [redacted], and the [redacted] sensors are intended for use on the [redacted]. Other [redacted] deployment on the line is accompanied by agents who can observe, verify, and apprehend traffic crossing the sensors.

## Highway Checkpoints

Highway checkpoints have been located to intercept all significant northbound routes by which drugs and aliens can be transported away from the border. Highway maps produced by Rand McNally and sectional aeronautical charts were used to select the locations.

Two classes of checkpoint facilities, large and small, were considered to arrive at staff levels and physical facilities needed to support full-time, all-weather operations. The smaller facilities apply to checkpoints on two-lane highways at which all traffic is checked in one direction. The large facilities would be located on multi-lane and divided highways.

## Vehicle Barriers

OUO-7

Vehicle barrier budget numbers are based on [redacted] properly anchored to stop all vehicles up to about [redacted]

## Information Control and Display

The required software will perform the functions of the Computer-Assisted Display and Reporting Enhancement (CADRE) software but will make the information even more useful to the operators. It is expected that this may require the acquisition of some additional off-the-shelf software, some of which may provide video graphics display capability.

## Operational Spares

Twelve to fifteen percent more sensors, communication links, and CCTV equipment should be ordered than the installation requires. Even with quality control, about one out of eight units shipped will be dead on arrival, and the excess equipment ordered will allow the installation to be completed. [redacted]. Essential items available only in limited numbers at a facility may require as much as 100% extra to ensure continuous operation.

## Personnel

### *Console Operators*

A single control system console operator can monitor up to [redacted] CCTV monitors. If more monitors are added in a control station, an additional control station and operator will be required.

### *Video Technicians*

A single CCTV technician can effectively maintain a system of [redacted] cameras and their associated transmission links and monitors. If a system is expanded beyond this number, additional technicians will be required.

### *Clerical Support*

A clerical person can support 10 individuals. We have accounted for this and for the approximately 150 square feet required for each new person. The 150 square feet is about one-half office space and one-half change-out, training, exercise, restroom, and other facilities. These charges are included in our tables as loaded salary. If, for example, an agent earns $35,000 per year, the loaded salary will be about $85,000 per year.

## Integrated Logistic Support

One of the spreadsheet items listed is ILS, which includes all of those items required to install and keep equipment operational throughout its life: test and evaluation, installation, technical manuals, training, additional personnel required to operate and maintain the equipment, spare parts, human factors, quality assurance, reliability, and configuration control through drawings and documentation.

### *Vehicles*

Accurate estimates of vehicle ILS are best obtained from past records. In subsequent analyses, these data will be more carefully examined. However, some reasonable estimates for planning purposes are as follows:

- An additional vehicle will be required for each two patrol agents added to a sector.
- The cost of ownership for a two-wheel-drive vehicle driven mostly on hard surface roads is about $0.30 per mile based

on 40,000 miles per year and depreciated to zero after 120,000 miles. This figure of $12,000 per year includes all gasoline, routine maintenance, repairs, oil and lubrication, tires, brakes, depreciation, and reserve for insurance. We have not included the cost for vehicles directly in the spreadsheets, but the cost can be considered to be part of the loaded salary.

- The cost of ownership for a four-wheel-drive vehicle driven over all types of terrain is about $0.40 per mile based on 40,000 miles per year and depreciated to zero after 120,000 miles. This figure includes all of the items listed above for the two-wheel-drive vehicle.

### *Electronic Equipment*

About 15% of the purchase price of electronic equipment (sensors, assessment, and communication) should be allocated every year for parts and labor.

About 50% of the purchase price of computer equipment should be allocated every year for an all-inclusive maintenance contract and for changes to the software.

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| Equipment Type | McAllen | | Laredo | | Del Rio | | Marfa | | El Paso | | Tucson | | Yuma | | El Centro | | San Diego | | Unit | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rcmd | Ext. Cost | Rcmd | Ext.Cost | Rcmd | Ext. Cost | Rcmd | Ext. Cost | Rcmd | Ext.Cost | Rcmd | Ext. Cost | Rcmd | Ext. Cost | Rcmd | Ext. Cost | Rcmd | Ext. Cost | Cost | Ext. Cost |
| [redacted] (Classifier) | 160 | 132,000 | 100 | 82,500 | 50 | 41,250 | 80 | 66,000 | 200 | 165,000 | 180 | 148,500 | 110 | 90,750 | 110 | 90,750 | 210 | 173,250 | $825 | $990,000 |
| [redacted] | 192 | 49,920 | 312 | 81,120 | 568 | 147,680 | 432 | 112,320 | 760 | 197,600 | 528 | 137,280 | 180 | 41,600 | 304 | 79,040 | 272 | 70,720 | $260 | $917,280 |
| [redacted] | 20 | 19,900 | 50 | 49,750 | 20 | 19,900 | 100 | 99,500 | 120 | 119,400 | 55 | 54,725 | 55 | 54,725 | 25 | 24,875 | 20 | 19,900 | $995 | $462,675 |
| [redacted] | 21 | 9,345 | 24 | 10,680 | 43 | 19,135 | 36 | 16,020 | 55 | 24,475 | 42 | 18,690 | 13 | 5,785 | 22 | 9,790 | 23 | 10,235 | $445 | $124,155 |
| [redacted] | 10 | 16,750 | 25 | 41,875 | 5 | 8,375 | 5 | 8,375 | 35 | 58,625 | 15 | 25,125 | 5 | 8,375 | 5 | 8,375 | 5 | 8,375 | $1,675 | $184,250 |
| [redacted] | 21 | 8,400 | 24 | 9,600 | 43 | 17,200 | 36 | 14,400 | 55 | 22,000 | 42 | 16,800 | 13 | 5,200 | 22 | 8,800 | 23 | 9,200 | $400 | $111,800 |
| [redacted] | 10 | 14,950 | 0 | 0 | 5 | 7,475 | 5 | 7,475 | 10 | 14,950 | 10 | 14,950 | 15 | 22,425 | 25 | 37,375 | 40 | 59,800 | $1,495 | $179,400 |
| [redacted] | 21 | 7,350 | 24 | 8,400 | 43 | 15,050 | 36 | 12,600 | 55 | 19,250 | 42 | 14,700 | 13 | 4,550 | 22 | 7,700 | 23 | 8,050 | $350 | $97,650 |
| [redacted] | 21 | 6,720 | 24 | 7,680 | 43 | 13,760 | 36 | 11,520 | 55 | 17,600 | 42 | 13,440 | 13 | 4,160 | 22 | 7,040 | 23 | 7,360 | $320 | $89,280 |
| [redacted] | 180 | 179,100 | 100 | 99,500 | 100 | 99,500 | 80 | 79,600 | 100 | 99,500 | 200 | 199,000 | 175 | 174,125 | 150 | 149,250 | 150 | 149,250 | $995 | $1,228,825 |
| [redacted] | 9 | 2,340 | 9 | 2,340 | 16 | 4,160 | 14 | 3,640 | 20 | 5,200 | 0 | 0 | 0 | 0 | 8 | 2,080 | 9 | 2,340 | $260 | $22,100 |
| [redacted] | 5 | 24,975 | 1 | 4,995 | 5 | 24,975 | 2 | 9,990 | 4 | 19,980 | 5 | 24,975 | 2 | 9,990 | 3 | 14,985 | 2 | 9,990 | $4,995 | $144,855 |
| [redacted] | 10 | 24,950 | 7 | 17,465 | 5 | 12,475 | 10 | 24,950 | 4 | 9,980 | 10 | 24,950 | 12 | 29,940 | 5 | 12,475 | 5 | 12,475 | $2,495 | $189,660 |
| [redacted] | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16,800 | 5 | 5,250 | 3 | 3,150 | 2 | 2,100 | $1,050 | $27,300 |
| [redacted] | 0 | 0 | 6 | 90,000 | 6 | 90,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | $15,000 | $180,000 |
| [redacted] | 2 | 9,990 | 1 | 4,995 | 1 | 4,995 | 1 | 4,995 | 1 | 4,995 | 4 | 19,980 | 2 | 9,990 | 2 | 9,990 | 1 | 4,995 | $4,995 | $74,925 |
| Receiver, Portable | 5 | 14,975 | 5 | 14,975 | 5 | 14,975 | 4 | 11,960 | 10 | 29,950 | 20 | 59,900 | 5 | 14,975 | 4 | 11,980 | 10 | 29,950 | $2,995 | $203,660 |
| [redacted] | 9 | 4,230 | 9 | 4,230 | 16 | 7,520 | 14 | 6,580 | 20 | 9,400 | 16 | 7,520 | 5 | 2,350 | 8 | 3,760 | 9 | 4,230 | $470 | $49,820 |
| **Subtotal, Detectors** | | **$525,895** | | **$530,105** | | **$548,425** | | **$489,945** | | **$817,905** | | **$797,335** | | **$484,190** | | **$481,415** | | **$582,220** | | |
| Regular Light CCTV | 15 | 24,000 | 0 | 0 | 10 | 16,000 | 3 | 4,800 | 12 | 19,200 | 15 | 24,000 | 5 | 8,000 | 10 | 16,000 | 5 | 6,000 | $1,800 | $120,000 |
| LLTV - Intensified | 7 | 59,500 | 15 | 127,500 | 2 | 17,000 | 1 | 8,500 | 12 | 102,000 | 12 | 102,000 | 7 | 59,500 | 6 | 51,000 | 3 | 25,500 | $8,500 | $552,500 |
| [redacted] | 20 | 115,120 | 20 | 115,120 | 20 | 115,120 | 5 | 28,780 | 20 | 115,120 | 10 | 57,560 | 20 | 115,120 | 10 | 57,560 | 3 | 17,268 | $5,756 | $736,768 |
| [redacted] | 10 | 50,000 | 10 | 50,000 | 15 | 75,000 | 10 | 50,000 | 0 | 0 | 2 | 10,000 | 15 | 75,000 | 20 | 100,000 | 2 | 10,000 | $5,000 | $420,000 |
| [redacted] | 10 | 3,000 | 40 | 12,000 | 10 | 3,000 | 10 | 3,000 | 10 | 3,000 | 10 | 3,000 | 10 | 3,000 | 20 | 6,000 | 10 | 3,000 | $300 | $39,000 |
| [redacted] | 10 | 560,000 | 2 | 112,000 | 7 | 392,000 | 7 | 392,000 | 3 | 168,000 | 8 | 448,000 | 10 | 560,000 | 10 | 560,000 | 9 | 504,000 | $56,000 | $3,696,000 |
| [redacted] | 1 | 200,000 | 0 | 0 | 1 | 200,000 | 1 | 200,000 | 3 | 600,000 | 1 | 200,000 | 2 | 400,000 | 2 | 400,000 | 2 | 400,000 | $200,000 | $2,600,000 |
| Video & Sensor Cable | 1000 | 15,000 | 1000 | 15,000 | 1000 | 15000 | 1000 | 15,000 | 1000 | 15,000 | 1000 | 15,000 | 1000 | 15,000 | 1000 | 15,000 | 1000 | 15,000 | $15 | $135,000 |
| **Subtotal, Assessment** | | **$1,026,620** | | **$431,620** | | **$633,120** | | **$702,080** | | **$1,022,320** | | **$859,560** | | **$1,235,620** | | **$1,205,560** | | **$982,768** | | |



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| Equipment Type | McAllen | | Laredo | | Del Rio | | Marfa | | El Paso | | Tucson | | Yuma | | El Centro | | San Diego | | Unit Cost | Total Ext. Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rcmd | Ext. Cost | Rcmd | Ext.Cost | Rcmd | Ext. Cost | Rcmd | Ext. Cost | Rcmd | Ext.Cost | Rcmd | Ext. Cost | Rcmd | Ext. Cost | Rcmd | Ext. Cost | Rcmd | Ext. Cost | | |
| Voice Comm, Short Range | 100 | 200,000 | 75 | 150,000 | 100 | 200,000 | 20 | 40,000 | 100 | 200,000 | 75 | 150,000 | 100 | 200,000 | 100 | 200,000 | 33 | 66,000 | $2,000 | $1,406,000 |
| Voice Comm, Long Range | 1 | 150,000 | 0 | 0 | 1 | 150,000 | 1 | 150,000 | 0 | 0 | 1 | 150,000 | 1 | 150,000 | 1 | 150,000 | 1 | 150,000 | $150,000 | $1,050,000 |
| **Subtotal, Communication** | | $350,000 | | $150,000 | | $350,000 | | $190,000 | | $200,000 | | $300,000 | | $350,000 | | $350,000 | | $216,000 | | |
| Info Control & Display | 2 | 10,000 | 1 | 5,000 | 2 | 10,000 | 1 | 5,000 | 1 | 5,000 | 1 | 5,000 | 1 | 5,000 | 1 | 5,000 | 1 | 5,000 | $5,000 | $55,000 |
| [redacted] | 2 | 10,000 | 1 | 5,000 | 2 | 10,000 | 1 | 5,000 | 1 | 5,000 | 1 | 5,000 | 1 | 5,000 | 1 | 5,000 | 1 | 5,000 | $5,000 | $55,000 |
| **Subtotal, Cntrl & Disp** | | $20,000 | | $10,000 | | $20,000 | | $10,000 | | $10,000 | | $10,000 | | $10,000 | | $10,000 | | $10,000 | | $110,000 |
| Checkpoint Shelter, Large | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 300,000 | 0 | 0 | 0 | 0 | 1.5 | 450,000 | $300,000 | |
| Checkpoint Shelter, Small | 1 | 200,000 | 1 | 200,000 | 8 | 1,600,000 | 5 | 1,000,000 | 8 | 1,600,000 | 9 | 1,800,000 | 0 | 0 | 3 | 600,000 | 2 | 400,000 | $200,000 | |
| Checkpoint Personnel | 15 | 1,275,000 | 15 | 1,275,000 | 120 | 10,200,000 | 75 | 6,375,000 | 120 | 10,200,000 | 165 | 14,025,000 | 15 | 1,275,000 | 45 | 3,825,000 | 75 | 6,375,000 | $85,000 | |
| Drug Dogs (Procurement) | 6 | 24,000 | 6 | 24,000 | 48 | 192,000 | 30 | 120,000 | 48 | 192,000 | 60 | 240,000 | 0 | 0 | 18 | 72,000 | 18 | 72,000 | $4,000 | |
| Dog Support (Food & Vet) | 6 | 8,000 | 6 | 6,000 | 48 | 48,000 | 30 | 30,000 | 48 | 48,000 | 60 | 60,000 | 0 | 0 | 18 | 18,000 | 18 | 18,000 | $1,000 | |
| [redacted] | 1E+05 | 3,326,400 | 63360 | 1,900,800 | 58080 | 1,742,400 | 52800 | 1,584,000 | 126720 | 3,801,600 | 73920 | 2,217,600 | 26400 | 792,000 | 31680 | 950,400 | 79200 | 2,376,000 | $30 | $18,691,200 |
| [redacted] | 95040 | 6,652,800 | 31680 | 2,217,600 | 42240 | 2,956,800 | 21120 | 1,478,400 | 95040 | 6,652,800 | 73920 | 5,174,400 | 26400 | 1,848,000 | 31680 | 2,217,600 | 79200 | 5,544,000 | $70 | $34,742,400 |
| [redacted] | 95040 | 5,702,400 | 31680 | 1,900,800 | 42240 | 2,534,400 | 32960 | 1,977,600 | 95040 | 5,702,400 | 73920 | 4,435,200 | 26400 | 1,584,000 | 31680 | 1,900,800 | 36960 | 2,217,600 | $60 | $27,955,200 |
| Vehicle Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1E+05 | 3,696,000 | 10560 | 369,600 | 10560 | 369,600 | 0 | 0 | $35 | $4,435,200 |
| Lighting | 1E+05 | 2,574,000 | 47520 | 1,188,000 | 50160 | 1,254,000 | 31680 | 792,000 | 110880 | 2,772,000 | 73920 | 1,848,000 | 26400 | 660,000 | 31680 | 792,000 | 79200 | 1,980,000 | $25 | $13,860,000 |
| Patrol Roads | 95040 | 4,752,000 | 31680 | 1,584,000 | 42240 | 2,112,000 | 21120 | 1,056,000 | 95040 | 4,752,000 | 73920 | 3,696,000 | 26400 | 1,320,000 | 31680 | 1,584,000 | 79200 | 3,960,000 | $50 | $24,816,000 |
| Mobile Welder | 1 | 25,000 | 0 | 0 | 1 | 25,000 | 1 | 25,000 | 1 | 25,000 | 1 | 25,000 | 0.5 | 12,500 | 0.5 | 12,500 | 1 | 25,000 | $25,000 | $175,000 |
| Welder Operator | 1 | 85,000 | 0 | 0 | 1 | 85,000 | 1 | 85,000 | 1 | 85,000 | 1 | 85,000 | 0.5 | 42,500 | 0.5 | 42,500 | 1 | 85,000 | $85,000 | $595,000 |
| **Subtotal, Barriers, Etc.** | | $24,622,800 | | $10,298,200 | | $22,749,600 | | $14,523,000 | | $35,830,600 | | $37,602,200 | | $7,903,600 | | $12,384,400 | | $23,502,600 | | |
| Test Equipment | 1 | 100,000 | 1 | 100,000 | 1 | 100,000 | 1 | 100,000 | 1 | 100,000 | 1 | 100,000 | 1 | 100,000 | 1 | 100,000 | 1 | 100,000 | $100,000 | $900,000 |
| ILS, New Equipment | 1 | 100,000 | 1 | 100,000 | 1 | 100,000 | 1 | 100,000 | 1 | 100,000 | 1 | 100,000 | 1 | 100,000 | 1 | 100,000 | 1 | 100,000 | $100,000 | $900,000 |
| ILS, Old Equipment | 1 | 100,000 | 1 | 100,000 | 1 | 100,000 | 1 | 100,000 | 1 | 100,000 | 1 | 100,000 | 1 | 100,000 | 1 | 100,000 | 1 | 100,000 | $100,000 | $900,000 |
| **Subtotal, Support** | | $300,000 | | $300,000 | | $300,000 | | $300,000 | | $300,000 | | $300,000 | | $300,000 | | $300,000 | | $300,000 | | |
| **Sector Total** | | $26,846,115 | | $11,717,925 | | $24,801,145 | | $16,215,025 | | $38,181,025 | | $39,869,095 | | $10,283,410 | | $14,731,375 | | $25,593,588 | | |
| **Present Staffing Levels - Grand Total for All Sectors** | | | | | | $153,412,703 | **Contigency 25% of Grand Total** | | | | | $38,353,176 | **Recommended Amount for Budget Purposes** | | | | | $191,765,879 | | |
| **Increased Staffing Levels - Grand Total for All Sectors** | | | | | | $208,237,703 | **Contigency 25% of Grand Total** | | | | | $52,059,426 | **Recommended Amount for Budget Purposes** | | | | | $260,297,129 | | |



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| Recurring Costs | McAllen Ext. Cost | Laredo Ext. Cost | Del Rio Ext. Cost | Marfa Ext. Cost | El Paso Ext. Cost | Tucson Ext. Cost | Yuma Ext. Cost | El Centro Ext. Cost | San Diego Ext. Cost | Unit Cost |
|---|---|---|---|---|---|---|---|---|---|---|
| 15% of all Detection Assessment and Communications Equipment | $285,377 | $166,759 | $259,732 | $207,304 | $306,034 | $293,534 | $310,472 | $305,546 | $267,148 | 15.0% |
| 50% of Info Control and Display Equipment | $5,000 | $2,500 | $5,000 | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 | $2,500 | 50.0% |
| 10% of the Construction Cost of Check Points for Maintenance & Utilities | $20,000 | $20,000 | $160,000 | $100,000 | $160,000 | $210,000 | $0 | $60,000 | $85,000 | 10.0% |
| 100% of Checkpont Personnel Cost and Dog Support | $1,281,000 | $1,281,000 | $10,248,000 | $6,405,000 | $10,248,000 | $14,085,000 | $1,275,000 | $3,843,000 | $6,393,000 | 100.0% |
| 5% of Barrier Cost for Maintenance | $1,021,680 | $380,160 | $467,280 | $304,800 | $1,045,440 | $960,960 | $295,680 | $351,120 | $704,880 | 5.0% |
| 15% of Lighting Cost for Maintenance & Electricity | $386,100 | $178,200 | $188,100 | $118,800 | $415,800 | $277,200 | $99,000 | $118,800 | $297,000 | 15.0% |
| 100% of Welder Operator | $85,000 | $0 | $85,000 | $85,000 | $85,000 | $85,000 | $42,500 | $42,500 | $85,000 | 100.0% |
| 25% of Test Equipment for Calibration, Repair and Upgrading of Equipment | $25,000 | $25,000 | $25,000 | $25,000 | $25,000 | $25,000 | $25,000 | $25,000 | $25,000 | 25.0% |
| 100% of ILS Costs | $200,000 | $200,000 | $200,000 | $200,000 | $200,000 | $200,000 | $200,000 | $200,000 | $200,000 | 100.0% |
| *Total Recurring Cost* for Each Sector | $3,309,157 | $2,253,619 | $11,638,112 | $7,448,404 | $12,487,774 | $16,139,194 | $2,250,152 | $4,948,466 | $8,059,528 | |
| Existing Staffing Levels - Grand Total of Recurring Cost for All Sectors | | | | | | | | | $13,709,405 | |
| Increased Staffing Levels - Grand Total of Recurring Cost for All Sectors | | | | | | | | | $68,534,405 | |

2

# Systematic Analysis of the Southwest Border

# Volume 2

Prepared for
the Immigration and Naturalization Service

Funded by
the Office of National Drug Control Policy

Prepared by
Advanced Systems Integration Department 9561
Sandia National Laboratories
Albuquerque, New Mexico 87185

RS-9561/93/1

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Department of Energy review required before public release.
Name/Org.:Bruce D. Green / SNL-NM Date:July 7, 2015

**January 1993**

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# Acronyms

## A

| | |
|---|---|
| A/D | Analog-to-Digital |
| ABS | Acrylonitrile/Butadiene/Styrene |
| AC | Alternating Current |
| ACPA | Assistant Chief Patrol Agent |
| ADNET | Anti-Drug Network |
| ADP | Automated Data Processing |
| ADSID | Air-Dropped Seismic Intrusion Detector |
| AEW | Airborne Early Warning |
| AFB | Air Force Base |
| AGC | Automatic Gain Control |
| AI | Artificial Intelligence |
| AIA | Acting Intelligence Agent |
| AID | Agency for International Development |
| AIS | Air Interdiction System |
| AM | Amplitude Modulation |
| AOB | Air Operations Branch (United States Customs Service) |
| APAIC | Assistant Patrol Agent in Charge |
| ASARS | Advanced Synthetic Aperture Radar System |
| ASR | Airport Surveillance Radar |
| ASSA | Anti-Smuggling Special Agent |
| ASU | Anti-Smuggling Unit |
| ATC | Air Traffic Control |

| | | |
|---|---|---|
| | ATF | Alcohol, Tobacco, and Firearms |
| | AWACS | Airborne Warning and Control System |
| **B** | BAG | Border Alliance Group |
| | BATF | Bureau of Alcohol, Tobacco, and Firearms |
| | BCD | Binary Coded Decimal |
| | BLM | Bureau of Land Management |
| | BMS | Balanced Magnetic Switch |
| | BORCAP | Border Patrol Criminal Alien Program |
| | BP | Border Patrol |
| | BPA | Border Patrol Agent |
| | BWSH | Break Wire Sensor Head |
| **C** | $C^2$ | Command and Control |
| | $C^3$ | Command, Control, and Communications |
| | $C^3I$ | Command, Control, Communications, and Intelligence |
| | CADRE | Computer-Assisted Display and Reporting Enhancement |
| | CB | Citizens Band |
| | CCA | Circuit Card Assembly |
| | CCD | Charge-Coupled Device |
| | CCTV | Closed Circuit Television |
| | CEO | Canine Enforcement Officers |
| | CIA | Central Intelligence Agency |
| | CINC | Commander in Chief |
| | CINCFOR | Commander in Chief, Forces Command |

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|---|---|
| CINCSOUTHCOM | Commander in Chief, Southern Command |
| CIWG | Communications Interoperability Working Group |
| CLASSIC | Covert Local Area Sensor System for Intruder Classification |
| CMOS | Complementary Metal Oxide Semiconductor |
| CN | Counternarcotics |
| CNC | Counternarcotics Center |
| COMM(s) | Communication(s) |
| COMSEC | Communications Security |
| CONUS | Continental United States |
| COPS | Covert Observation Platform System (replacement for IIEV; presently known as TOPS) |
| CPA | Chief Patrol Agent |
| CSOC | Consolidated Space Operations Center |
| CW | Continuous Wave |
| CY | Calendar Year |
| **D** | |
| DARPA | Defense Advanced Research Projects Agency |
| DAVID | Digital Automatic Video Intrusion Detection |
| DB | Database |
| dB | Decibels |
| dBm | Decibel to 1 milliwatt |
| DC | Direct Current |
| DCA | Defense Communications Agency |

| | | |
|---|---|---|
| | DCPA | Deputy Chief Patrol Agent |
| | DEA | Drug Enforcement Administration |
| | DEMUX | Demultiplex |
| | DF | Direction Finder |
| | DI | Drug Interdiction |
| | DIA | Defense Intelligence Agency |
| | DLEA | Drug and Law Enforcement Agency |
| | DMA | Defense Mapping Agency |
| | DoD | Department of Defense |
| | DoJ | Department of Justice |
| | DOT | Department of Transportation |
| | DSB | Defense Science Board |
| **E** | EIDS | [redacted] Intrusion Detection System |
| | ELR | Employer Labor Relations |
| | EPIC | El Paso Intelligence Center |
| | ESU | Employer Sanctions Unit |
| | ETU | Encoder Transmitter Unit |
| **F** | FAA | Federal Aviation Administration |
| | FBI | Federal Bureau of Investigation |
| | FDA | Food and Drug Administration |
| | FDIS | Fraudulent Document Index System |
| | FH | Frequency Hopping |
| | FLETC | Federal Law Enforcement Training Center |
| | FLIR | Forward-Looking Infrared (thermal imager) |

| | | |
|---|---|---|
| | FM | Frequency Modulation |
| | FOV | Field of View |
| | FRED | Fast Response Erection Device (also known as IIEV) |
| | FY | Fiscal Year |
| **G** | GAO | General Accounting Office |
| | GB | Ground-Based |
| | GCS | Ground Control Station |
| | GHz | Gigahertz (billion) |
| | GPS | Global Positioning System |
| **H** | HF | High Frequency |
| | HHS | Department of Health and Human Services |
| | HIDAD | High Density Array Development Program |
| | HUMINT | Human Intelligence |
| **I** | I/O | Input and Output |
| | $I^2CCD$ | Double Intensified Charge Coupled Device |
| | ICCD | Intensified Charge Coupled Device |
| | ICD | Information Control and Display |
| | ICW | Intercoastal Waterway |
| | ID | Identification |
| | IEC/DOT/RTCM | Industry Approved Test |
| | IEV | Image Enhancement Vehicle |
| | II | Image Intensifier |
| | IIEV | Improved Image Enhancement Vehicle |

| | | |
|---|---|---|
| | ILS | Integrated Logistics Support |
| | IMINT | Image Intelligence |
| | INMARSAT | International Maritime Satellite |
| | INS | Immigration and Naturalization Service |
| | INSCAP | Immigration and Naturalization Service Criminal Alien Program |
| | INSCOM | United States Army Intelligence and Security Command |
| | INTELSAT | International Telecom Satellite |
| | INTERPOL | International Criminal Police |
| | IR | Infrared |
| | IRCA | Immigration Reform and Control Act (1986) |
| | IREMBASS | Improved Remotely Monitored Battlefield Sensor System |
| | IRID | Infrared Intrusion Detector |
| | IRS | Internal Revenue Service |
| | IRST | Infrared Search and Track |
| **J** | JCS | Joint Chiefs of Staff |
| | JTF | Joint Task Force |
| | JTF-6 | Joint Task Force Six |
| **K** | KHz | Kilohertz (thousand) |
| **L** | LEA | Law Enforcement Agency |
| | LED | Light-Emitting Diode |
| | LINK | Communications Network |
| | LLLTV | Low-Light-Level Television |
| | LOCUSP | Low-Cost Uncooled Sensor Prototype |

| | | |
|---|---|---|
| | LORIS | Long-Range Infrared System |
| | LOS | Line of Sight |
| | LP | Listening Post |
| | LPI | Low Probability of Intercept |
| | LPI/D | Low Probability of Intercept or Detect |
| **M** | MAGID | Magnetic Intrusion Detector |
| | MAP | Mobile Aerostat Platform |
| | MATI | Modern Analysis of Traditional Intelligence |
| | MBBD | Mini Break Beam Detector |
| | MBCN | Mini Beacon |
| | MBWD | Mini Break Wire Detector |
| | MCV | Mobile Command Vehicle |
| | MGSH | Magnetic Sensor Head |
| | MHHP | Mini Hand-Held Plotter |
| | MHz | Megahertz (million) |
| | MIDS | Mini Intrusion Detection System |
| | MILSTAR | Military Strategic and Tactical Relay System |
| | MINIMAGID | Miniature Magnetic Intrusion Detector |
| | MLS | Multi-Level Security |
| | MMGD | Mini Magnetic Detector |
| | MOA | Memorandum of Agreement |
| | MOE | Measure of Effectiveness |
| | MOP | Measure of Performance |
| | MOU | Memorandum of Understanding |

| | | |
|---|---|---|
| | MPDM | Mini Portable Display Monitor |
| | MSE | Mobile Subscriber Equipment |
| | MSID | Mini Seismic Intrusion Detector |
| | MUX | Multiplex |
| | MXMT | Mini Transmitter |
| **N** | NAS | Naval Air Station |
| | NCIC | National Crime Information Center |
| | NCNC | National Center for Narcotics Control |
| | NDCS | National Drug Control Strategy |
| | NDIC | National Drug Intelligence Center |
| | NF | Noise Factor |
| | NG | National Guard |
| | NIDA | National Institute on Drug Abuse |
| | NIIS | National Immigrant Information System |
| | NNBIS | National Narcotics Border Interdiction System |
| | NODLR | Night Observation Device, Long Range |
| | NORAD | North American Air Defense |
| | NPS | National Park Service |
| | NSA | National Security Agency |
| | NTIA | National Telecommunications and Information Administration |
| | NTIC | Naval Technical Intelligence Center |
| | NWS | National Weather Service |

| | | |
|---|---|---|
| **O** | OA | Operation Alliance |
| | OC | Operations Center |
| | OIC | Officer In Charge |
| | OMD | Omnidirectional Motion Detector |
| | ONDCP | Office of National Drug Control Policy |
| | OP | Observation Post |
| | OPFAC | Operational Facility |
| | OPR | Optical Pattern Recognition |
| | OPSEC | Operations Security |
| | OTAR | Over-the-Air Rekeying |
| | OTH | Over the Horizon |
| | OTM | Other Than Mexican |
| **P** | PA | Patrol Agent |
| | PAIC | Patrol Agent in Charge |
| | PC | Personal Computer |
| | PD | Probability of Detection |
| | PEP | Peak Envelope Power |
| | PEWS | Platoon Early Warning System |
| | PFA | Probability of False Alarm |
| | PIRH | Passive Infrared Head |
| | PL | Pulse Length |
| | PLRS | Position Location Reporting System |
| | PM | Portable Monitor |
| | POE | Port of Entry |
| | PRR | Pulse Repetition Rate |

| | | |
|---|---|---|
| | PSID | Portable Seismic Intrusion Detector |
| | PVC | Polyvinyl Chloride |
| | PVD | Portable Video Display |
| **Q** | QA | Quality Assurance |
| **R** | RAC | Regional Agent in Charge |
| | RAM | Random Access Memory |
| | RCS | Radar Cross Section |
| | REMBASS | Remotely Monitored Battlefield Sensor System |
| | RF | Radio Frequency |
| | RMSS | Remotely Monitored Security System |
| | RPV | Remotely Piloted Vehicle |
| | RSVP | Remote Sensor Video Pack |
| **S** | SADS | Surveillance and Detection System |
| | SAR | Synthetic Aperture Radar |
| | SASS | Small Aerostat Surveillance System |
| | SATC | Seismic/Acoustic Target Classifier |
| | SBPA | Supervisory Border Patrol Agent |
| | SBTD | Southwest Border Telecommunications Database |
| | SDC | Strategic Defense Command |
| | SDLS | Secure Data Link System |
| | SDR | Signal Data Recorder |
| | SEIWG | Security Equipment Integration Working Group |
| | SHF | Super-High Frequency |
| | SIA | Supervisory Intelligence Agent |

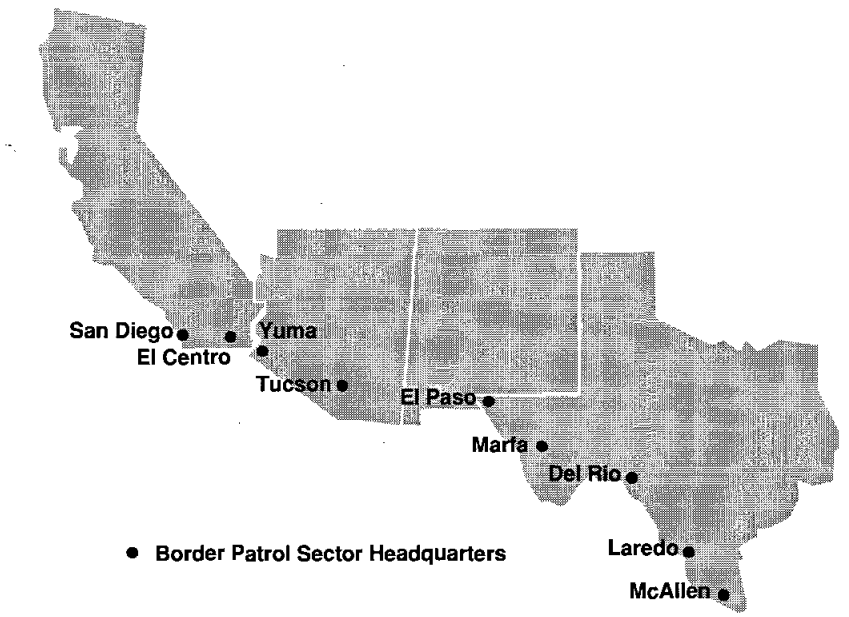
| | | |
|---|---|---|
| | SID | Seismic Intrusion Detector |
| | SIGINT | Signal Intelligence |
| | SINCGARS | Single-Channel Ground and Air Radio System |
| | SNL | Sandia National Laboratories |
| | SNR | Signal-to-Noise Ratio |
| | SPA | Senior Patrol Agent |
| | SSC | Surveillance Support Center |
| | SSPA | Station Senior Patrol Agent |
| | STC | Seismic Target Classifier |
| | STU | Secure Telephone Unit |
| **T** | TAC | Tactical Air Control Center |
| | TI | Texas Instruments |
| | TNC | A Type of Coaxial Connector |
| | TOPS | Transportable Observation Platform System (formerly known as COPS; replaced the IIEV) |
| | TRANSEC | Transmission Security |
| | TRITAC | Tri-Service Tactical Communication System |
| | TRSS | Tactical Remote Sensor System |
| | TV | Television |
| **U** | UAV | Unmanned Air Vehicle |
| | UGS | Unattended Ground Sensor |
| | UHF | Ultra-High Frequency |
| | UI | User Interface |
| | USA | United States Army |

| | |
|---|---|
| USAF | United States Air Force |
| USAMICOM | United States Army Missile Command |
| USASC | United States Army Signal Center |
| USBP | United States Border Patrol |
| USCG | United States Coast Guard |
| USCS | United States Customs Service |
| USFS | United States Forest Service |
| USIA | United States Information Agency |
| USMC | United States Marine Corps |
| USMS | United States Marshalls Service |
| USN | United States Navy |
| USPS | United States Park Service |
| UV | Ultraviolet |
| **V** | |
| VEH | Vehicle |
| VHF | Very High Frequency |
| VHF-FM | Very High Frequency-Frequency Modulation |
| VIDS | Visual Information Display System |
| VR | Voluntary Return (or Voluntary Departure) |
| VSWR | Voltage Standing Wave Ratio |

# Executive Summary

In September 1991 Sandia National Laboratories was tasked by the Office of National Drug Control Policy through the Immigration and Naturalization Service (INS) Research and Development Program to conduct a systematic analysis of the security along the United States/Mexico Border (Figure ES-1) between Ports of Entry (POEs) and to recommend measures by which control of the border could be improved. The recommendations and conclusions in this report are those of the Sandia National Laboratories staff associated with this project.

*Figure ES-1. Southwest Border Between the United States and Mexico*




The control of drug-related traffic across the US/Mexico Border involves the participation of some 41 agencies. These include federal agencies with charters and authority directed at drug and smuggling activities; federal agencies with only peripheral involvement, but wishing to share in both the budget and the asset forfeiture program; and state, county, and local law enforcement agencies directly concerned with illegal drug and smuggling activities in their jurisdictions. Most of these agencies participate in counternarcotics at a secondary level. The principal federal agencies with border control responsibilities are the following:

- INS/US Border Patrol
- Drug Enforcement Administration (DEA)
- US Customs Service
- Federal Bureau of Investigation (FBI)
- Operation Alliance

- US Coast Guard
- Joint Task Force Six (JTF-6)
- El Paso Intelligence Center (EPIC).

Recent congressional actions have also provided funds to support the National Guard in these interdiction operations. As a result of this action, the National Guard has become increasingly active in supporting the other agencies at the border and at "hot spots" within the US.

As the enforcement arm of the INS, the US Border Patrol is charged with the responsibility to detect and interdict all crossings of the US borders except at designated POEs.

The law requires that persons must report to POEs for entry into the US, and the Border Patrol enforces this law. The Border Patrol, therefore, has the most concentrated presence along the entire length of the Southwest Border of all of the agencies listed. The primary statutory mission of the agency is the apprehension of illegal aliens, and the agents have arrest and search authority within 100 miles of the border to enforce citizenship and entry requirements. The Border Patrol has been granted collateral authority to interdict drug traffic by the DEA because line patrol and highway checkpoints inevitably intercept drug smugglers as well as aliens. It is important to note that drug interdiction is a subset of the Border Patrol's activity and that the drug search and seizure authority is derived from the alien apprehension authority. Therefore, this study is heavily oriented toward the Border Patrol. Additional information about other agencies' responsibilities is given in Volume 2.

When this analysis was proposed, there was a belief that significant improvements in border control could be achieved by introducing new or improved technologies and that the application of these could lead to reduced manpower and significant control of the Southwest Border. During the first phase of the study, in which all of the Southwest sectors of the Border Patrol were visited, we realized that those beliefs were, in our opinion, incorrect. Our conclusions and recommendations about how to make significant improvements in border control are contained in Volume 1 of this study. A catalog of equipment that could be procured (Volume 3) has also been prepared. Additionally, to fulfill the contractual requirements of this study, we prepared Volume 2, which follows the outline of the original Sandia proposal and provides the detail for the budget suggested in Volume 1.

Our study consisted of characterizing the current border security environment, compiling a catalog of currently available or readily modifiable technologies, developing an implementation plan that provided optimal use of these technologies based on present staffing levels, and generating an implementation plan that allows a moderate increase in personnel.

Even though this study is limited to the Southwest Border between POEs, we have approached the study from an integrated system point of view. Over a 3-month period, we visited all nine sectors of the Southwest Border where we analyzed the problem by questionnaire and discussions with field and headquarters personnel. In addition, time was spent flying over many of the border areas and driving along the border to examine the terrain surrounding the area, touring all of the facilities (including the electrical maintenance and vehicle maintenance facilities), observing the agents work in the field (including several apprehensions), and meeting with the agents to discuss the problems they face and the ways in which their work could be made easier. We also reviewed many of the available reports on this topic (see Bibliography, Volume 2).

As of May 1, 1992, the portion of the El Paso sector east of a line through Cornudas and Hilltop, Texas, became part of the Marfa sector. Also, the responsibilities and personnel count of some of the stations within a few sectors have changed. The conclusions of this report are not affected by these changes, but the text, maps, and spreadsheet within this report reflect the information that was available before May 1 when the sector visits were made.

Most of the recommendations made in this report are not new; the basic problems have remained unchanged for years and have been individually studied by many qualified people with appropriate expertise. This report views the entire Southwest Border as a system and combines our observations with many of the previous recommendations in a systematic way.

We make suggestions within the report regarding sensor procurement; those suggestions represent less than 15% of the total cost for implementing all of the recommendations. The sensors we suggest will simply augment existing capabilities but, more importantly, will serve to replace a dilapidated inventory. A conclusion of this study is that the Southwest Border is being overrun, and the use of more sensors will only identify more targets that can be neither apprehended using current manpower

nor accommodated within existing facilities. In some rural areas verification techniques (*e.g.,* slow-scan closed circuit television [CCTV]) to reduce Border Patrol agents' responses to sensor alarms caused by legal activity have been effective. Additional research into making verification techniques consume less power, be easy to install, and be more covert are needed.

Our recommended strategy for improved control of the border is based on two tactics:

- **Border Enforcement:** the use of heavily patrolled multiple barriers on the border to control the large number of illegal aliens and drugs crossing in the urban areas of the border

- **Containment:** additional 24-hour highway checkpoints to minimize the number of illegal aliens and quantity of drugs leaving the border region if they get into the country.

Gaining control of the situation in large urban areas is important not only for purposes of border law enforcement, but because the uncontrolled situation puts the illegal aliens and US residents living near the border very much at risk. The containment strategy, reinforced by efficient deployment of sensor and surveillance technology and effective use of intelligence resources, will reduce the risks that illegal aliens face when dealing with alien smuggling organizations and will enhance the safety of enforcement agents by providing them with needed tactical advantages and eventually reducing the volume of illegal trafficking.

An important fact observed is that 66% of all illegal alien apprehensions occur in 4.7% of the border. That portion is totally contained in two sectors, San Diego and El Paso. Because of the huge numbers of illegal aliens involved, these two sectors also put a heavy demand on the alien transport and detention activities and the logistics that go along with the processing of large numbers of illegals. Many of these resources could be redirected to controlling drug and illegal alien traffic in other sectors if the illegal alien traffic in these sectors were controlled. The mat fence in the San Diego sector was nearly completed in late CY 1992; we expect that its existence may cause a shift in illegal alien activity to other sectors. The illegal aliens who attempt to cross rugged, uninhabited terrain (mountains, desert, *etc.*) will experience higher risks. Because many of these persons are expected to be uninformed, desperate, or criminal, the risk to Border Patrol agents may also be higher. Other urban areas on the border have similar problems, but to a much smaller extent.

OUO-7
(ALL)

(b) (7)(E)

[redacted] This is a technological solution that allows the immediate implementation of available technology to modify the situation at the border and reduce the number of persons who will cross only if they can do so easily. The solution is to channel and direct a significantly reduced level of traffic to places where the Border Patrol agents can adequately deal with it. We understand that the combination of budget, procurement, and installation may not allow immediate adaptation of the available technology, but all recommendations should be implemented as soon as possible.

[redacted] What is required to enforce the laws prohibiting illegal entry into the US is significantly increased discouragement that requires the use of multiple tools and substantial time and tires the violators to the point that they can be consistently apprehended or turned back.

*Figure ES-2.* [redacted]

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(ALL)

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

*Figure ES-5.* [redacted]

[redacted]. It should also be noted that as illegal aliens find ways to defeat the obstacles placed in their path, new technology will need to be developed.

The conclusions reached in our study are listed below:

- The illegal alien traffic must first be brought under control in the urban areas of the Southwest Border, especially in

1. *Ten Steps to Securing America's Border,* Federation for American Immigration Reform, January 1989.

San Diego and El Paso, so that existing resources can be reallocated to control the drug and illegal alien traffic in other sectors. We believe that control must be gained as soon as possible and that it can be accomplished with existing technology for less than 3% of the $11.7 billion National Drug Control budget for FY 1992.

- Control of the illegal alien and drug traffic can be gained by
  - [redacted]
  - [redacted]
  - [redacted]
  - [redacted]
  - [redacted]

- The Immigration Reform and Control Act (IRCA) of 1986[2] included provisions to increase the number of Border Patrol agents. Congress has ordered increases in Border Patrol personnel twice since then, but neglected to provide any additional funding. We believe that with presently authorized levels of Border Patrol personnel, in conjunction with the issues addressed above, control of the Southwest Border can be gained. The redistribution of personnel now required in the urban areas and the elimination of Border Patrol agents performing nonagent jobs (clerical, auto and facilities maintenance, transportation of deportees, *etc.*) will also increase enforcement effectiveness. It is very likely that future improvements in sensors and sensor fusion programs and other advanced enforcement technology will allow the number of Border Patrol personnel to decrease through normal attrition to some lower level after control is firmly gained.

- There are an adequate number of organizations and structure available on the Southwest Border to produce an

2. *Immigration Reform and Control Act (IRCA) of 1986,* Public Law 99-603, November 6, 1986.

effective security environment. The personnel and equipment of each of the individual organizations need to be better coordinated in order to better enforce the existing US laws.

- The integrated system can become more effective by strengthened policy and procedures, such as positive personnel identification of all apprehended illegal aliens, graded penalties for repeat offenders, adequate incarceration facilities for criminal aliens and those who refuse voluntary return, deep deportation, and fast judicial actions.

- Because the Nation's drug control program is an integrated system, emphasis applied to one part of the system increases pressure on the other parts. For example, if the percentage of total illegal alien apprehensions increases without a corresponding decrease in total illegal traffic, then problems in the processing, transportation, detention, and deportation of illegal aliens are intensified. The approach of significantly reducing the number of illegal aliens entering the country will reduce pressure on all of the other parts of the system except the POEs themselves. Additional and more sophisticated technology must then be applied at the POE to assist in handling this increased pressure.

It is imperative that control of the border be gained as soon as possible because of the problems caused by the uncontrolled illegal alien and drug traffic in our border communities and large inland population centers. It is also clear that we must be concerned about the inhumane treatment of these illegal aliens by alien and drug smugglers who are determined to profit from the plight of the illegal aliens. If we stop the illegal alien traffic, crimes (such as rape, robbery, and murder) being committed against illegal aliens crossing the border will also stop. If the reason to assemble on the Mexico side is eliminated, the crimes being committed there should also decrease.

The role of intelligence gathering, processing, and assessment will become even more important to help determine where to deploy Border Patrol assets as persons who are determined to cross the border are forced to make their attempts in more remote areas.

A good public relations program is also recommended—one which emphasizes the fact that the barriers are not an act of unfriendliness, but an act of control in order to allow more deserving immigrants and fewer of the criminal aliens, drug traffickers, or other undesirable persons to enter the US.

# Operational Environment

## Introduction

The purpose of this volume is to expand the information given in Volume 1 and provide additional justification for the information presented there.

## Threat Definition

There are some 150-200 Mexico-based groups involved in smuggling the majority of the drugs into the US. Historically, these Mexican organizations, composed to a large extent of close-knit family members, have run well-established and extensive operations involving the cultivation, processing, and smuggling of marijuana and opium. In recent years, Colombian organizations have expanded the distribution of their cocaine through these well-established Mexican networks. Recent intelligence indicates that the Colombians are now becoming more personally involved, at all levels, in operations in Mexico and along the border. These major organizations are supplemented by thousands of freelancers and smaller groups.

It appears that the primary threat to the Southwest Border is smuggling by land, both through and between the Ports of Entry (POEs). Smugglers appear to be employing what is termed a [redacted], in that they [redacted]

The Border Patrol regularly seizes "abandoned" loads of marijuana and cocaine, indicating that these drugs were smuggled between and not through the POEs. This is probably attributable to the [redacted] by returning to Mexico.

## Sources of Information

Our information was obtained from briefings and discussions with personnel from Immigration and Naturalization Service (INS)/ Border Patrol Headquarters in Washington, DC; from the Southern Regional Office/Dallas; and from our interactions with Border Patrol agents in the field. Additional information was obtained from the US Customs Service, the El Paso Intelligence Center (EPIC), Operation Alliance, Joint Task Force Six (JTF-6), and numerous documents, most of which are listed in the bibliography, Appendix A.

## Types of Adversaries Faced

The threat to be protected against is *illegal traffic across the US/Mexico Border between designated POEs.*

## Adversaries

Because the US/Mexico Border can only be legally crossed, in either direction, at designated Class A and Class B POEs, any person crossing at any other point, for whatever reason, is defined as *the adversary*. This study is primarily concerned with those persons or organizations engaged in moving drugs and illegal aliens into the US and transporting goods or currency in either direction in support of drug trafficking. Because it is difficult to impossible to discriminate between drug-related and non-drug-related border crossings, control of the border for drug traffic requires control of all border crossings. Adversaries, then, fall into the following major categories:

- **Drug Smugglers:** These are individuals and organizations whose specific mission is the introduction of controlled substances into the US by way of Mexico.

- **Alien Smugglers:** These are individuals and organizations engaged in the organized movement of Mexican and Other-than-Mexican (OTM) aliens into the US.

- **Smugglers:** These are individuals and organizations that move contraband other than drugs in either direction across the border. Some of this activity can be in support of drug trafficking.

- **Illegal Aliens:** These are individuals who cross the border from Mexico with the intention of migrating into the interior of the US.

- **Commuter Aliens:** These are individuals who cross the border from Mexico, usually in the vicinity of population centers along the border, with the intention of returning to Mexico in a very short time. The purposes for such crossings range from illegal employment on the US side, to shopping for US services or goods, to robbery or burglary of US property.

Any of these persons can also be engaged in drug smuggling. At the very least, the diversity of the traffic serves to complicate the border control problem, which makes the identification of drug-related activity more difficult.

## Threat Posed

The actual threat posed by the adversary categories varies in severity and consequence. The countermeasures appropriate for use against these categories varies accordingly. It is necessary to understand these differences in order to judge the applicability of

technology or procedures and to assign a priority to proposed solutions.

The drug smugglers, for example, are engaged in the movement of a highly valuable commodity that poses a severe threat to the health and social structure of the citizens of the US. Because the drugs are injurious and disruptive to society in the US, the threat they pose and the need to stop the traffic is clear. But because the commodity has very high monetary incentives attached to it, the sophistication and violence of the practitioners also poses a clear threat to the life and safety of the enforcement officers charged with stopping the traffic. Candidate countermeasures must account for the danger to the enforcement agents and must impose a commensurate penalty on the adversary. The smugglers of other types of commodities usually do not threaten society with their cargo, but the value of the smuggled goods may be high enough that they may be willing to engage the agents to prevent or evade interdiction.

The smuggling of illegal aliens has grown into a lucrative business for smuggling rings along the border, but those engaged in this traffic normally do not represent the threat to the safety of the enforcement agents and US residents that the drug traffickers do. Because people are being smuggled, the conveyance and concealment options are more limited and the consequences of interdiction of the cargo are minimized by the fact that the aliens are simply returned to Mexico to try again. The alien smugglers provide their services on the basis that organized smuggling rings can improve the chances of successful entry. Existing laws specifically prohibit illegal entry into this country, and the need to control this traffic in defense of US interests is becoming more clear as the traffic increases.

Individual illegal aliens do not pose a significant threat to US security or safety of the agents, again because the penalty for apprehension is of little consequence and provides the opportunity to try again and again until success is achieved. Although the likelihood of individual violent confrontations is small, the sheer number of individual aliens constitutes a threat to society and a source of frustration to the enforcement agencies.

Commuter aliens pose the lowest level of threat both to society and to the agents on the line. If they are illegally employed in the US, they are not likely to be paid enough to live well on the US side, but can do reasonably well in Mexico. Their willingness to work for very low pay makes them an economic threat to US citizens and documented immigrants engaged in similar work and compounds the injustice of their continued illegal activity. They also tend to know their border territory well enough to avoid confrontation with Border Patrol agents. Those who cross the border to engage in local

criminal activity do, however, become a problem for local police forces on the US side.

## Capabilities of the Adversaries

Drug smugglers will attempt any means possible to introduce drugs into the US. They will readily adapt to law enforcement successes, priorities, and perceived abilities to minimize potential losses. Therefore, they will choose the method with the greatest likelihood of success. Smugglers are well organized and often compartmentalize responsibilities on a need-to-know basis. Persons who actually move the drugs across the border are given only enough information to complete that specific task.

The drug traffickers are often armed with fully automatic weapons and employ sophisticated communications equipment, airplanes, and specially equipped four-wheel-drive vehicles. They have been known to employ very innovative techniques for moving drugs across the border ranging from tunnels to model airplanes.

[redacted]

## Expected Developments in the Threat

It is expected that the threat will continue to grow for a number of reasons:

- The population of the border communities along the Mexico side continues to grow, and if the Mexican economy does not drastically improve, the opportunity to hire persons willing to risk taking drugs across the border into the US will increase.
- The profits in the drug trade are very, very large and greed is a big motivator.
- Because of the huge profits and the need for technology to find markets, the latest technology can be expected to be available to the large smuggling operations.
- Demand for drugs will remain high unless the supply is interrupted.

The major smuggling route is believed to be on land. The "[redacted] is readily apparent between the POEs. [redacted]

Our study is focused on the land-based threat between the POEs. We do, however, recognize that smuggling also occurs through the POEs, by air, and by water.

## Law Enforcement Procedures and Missions

The control of drug-related traffic across the US/Mexico Border involves the participation of some 41 agencies ranging from federal agencies with charters and authority directed at drug and smuggling activities; to federal agencies with only peripheral involvement, but wishing to share in both the budget and the asset forfeiture program; to state, county, and local law enforcement agencies that are directly concerned with the illegal activities perpetrated by people involved in drugs and smuggling in their jurisdictions. Most of these agencies participate in counternarcotics at a secondary level. The principal federal agencies with border control responsibilities are the following:

- Immigration and Naturalization Service (INS)/US Border Patrol
- Drug Enforcement Administration (DEA)
- US Customs Service
- US Coast Guard
- Federal Bureau of Investigation (FBI)
- Operation Alliance
- JTF-6
- EPIC.

Recent congressional actions have also provided funds to support the National Guard in these interdiction operations. As a result of this action, the National Guard has become increasingly active in

supporting the other agencies at the border and at internal (to the US) "hot spots."

## Agency Missions

There is no clear division of effort between the organizations mentioned above; they do have some "general" areas of responsibility. For example, another government agency, the Defense Communication Agency, has taken the responsibility for integrating the communications network to support the other groups. The Customs Service has taken primary responsibility for illegal air traffic crossing the border. The US Border Patrol (an agency within the INS) deals with traffic crossing the border by land. The Customs Service conducts some intelligence-based activities on the land between the POEs. At the designated POEs, Customs and INS share responsibility. In some states, they are assisted by the National Guard. The DEA and the FBI deal less with the border crossings and more with activities near the border [redacted]. The data is more archival in nature as opposed to real-time. Operation Alliance is another multi-agency group that serves as a coordinator of field operations. The military, through JTF-6, is tasked to assist the other agencies with construction, transportation, and equipment as required. Interdiction along the east and west coasts and the northern border is conducted primarily by the US Customs Service with help from the Border Patrol and the Coast Guard. All of the agencies listed above are major participants in counternarcotics activities along the US/Mexico Border. The Coast Guard also has a primary role when the possible entry is by waters that they patrol. To understand the operational environment in this region, it is necessary to examine the missions of each agency and the interaction among them in greater detail in drug-related operations.

## Immigration and Naturalization Service

The INS has the mission to interdict all illegal entries to the US, to deny admission to those not qualified, and to channel qualified admissions through the POEs for inspection. INS inspectors are located at the POEs. As one of the enforcement arms of the INS, the US Border Patrol is charged with the responsibility to detect and interdict all crossings of the US borders except at designated POEs.

The law requires that persons must report to designated POEs for legal entry into the US, and the Border Patrol enforces this law. The agency therefore has the most concentrated presence along the entire length of the Southwest Border of all of the agencies listed. The primary statutory mission of the agency is the apprehension of illegal aliens, and the agents have arrest and search authority

within 100 miles of the border to enforce citizenship and entry requirements. The Border Patrol has been granted collateral authority to interdict drug traffic by the DEA because line patrol and highway checkpoints inevitably intercept drug smugglers as well as aliens. The important point is to notice that drug interdiction is a subset of the Border Patrol's activity and that the drug search and seizure authority is derived from the alien apprehension authority. Other parts of the INS are involved in inspections, investigations, intelligence, detention, and deportation of illegal aliens. INS, Border Patrol, and National Guard personnel assist Customs at the POEs.

**Drug Enforcement Administration**

The DEA is the lead agency for the enforcement of anti-drug legislation within the borders of the US.

This agency is focused specifically on the control of drugs and the traffic in chemicals needed in the production of drugs. They are primarily responsible for the seizure of controlled substances within the US. In support of this activity, the agency has developed a far-reaching knowledge of production capabilities, supply and distribution networks, and organizational structures both domestically and on foreign soil. A major portion of the DEA effort is directed toward investigating and building cases against drug supply and distribution organizations.

**US Customs Service**

The US Customs Service is responsible for the collection of revenues levied by the US Government on goods entering the country. Customs is the designated lead counternarcotics agency at the POEs.

Customs is also responsible for the enforcement of laws dealing with drugs, weapons, and fraud as they apply to traffic through the POEs and the enforcement of regulations imposed by 40 other government agencies. The agency is concerned with any activity that involves contraband crossing the border in either direction.

The Customs Service has an Operations element that operates all of the POEs and is responsible for vehicle and cargo inspection and control. The enforcement organization has three areas of activity: Investigations, Air Operations, and Internal Affairs. Investigations fields plainclothes investigators and develops confidential informants to build cases that can be used to disrupt the smuggling organizations and their drug-related activities. Air Operations operates a fleet of aircraft to monitor and track airborne smuggling operations.

## Operation Alliance

The mission of Operation Alliance is to support and coordinate efforts to disrupt the flow of illegal drugs and other contraband across the US/Mexico Border, as well as to coordinate the Southwest Border High Intensity Drug Trafficking Areas (HIDTA) Program.

Alliance was formed in August of 1986, originally by the Border Patrol, US Customs, and the DEA, as an interdiction coordination agency. Its Joint Command Group now has 14 member agencies. The activities covered by the charter include drugs, aliens, firearms, currency, and precursor drugs and chemicals used in drug production. Alliance is chartered to do "full-scale coordination of all operations" but has been given no command and control authority. The agency is based in El Paso, Texas.

## Joint Task Force Six

JTF-6 coordinates all Department of Defense (DoD) support to federal, state, and local law enforcement agencies, as requested by Operation Alliance and approved by the Joint Chiefs of Staff, in their efforts to disrupt illegal narcotics operations along the Southwest Border and to protect national security.

JTF-6 was started in November 1989 and is based in El Paso, Texas. This organization can draw upon the resources of all military branches to provide support through application of available DoD resources and assets to counternarcotics programs. The use of military assets is subject to constraints imposed by *posse comitatus*, rules of engagement, political sensitivity, and access to private lands. The types of support currently authorized include the following:

| Operational | Engineering | General |
|---|---|---|
| Observation/Reconnaissance | Construction | Intelligence Support |
| Flight Operations | Repair/Replace | Training Teams |
| River Operations | | Canine Support |
| Radar Surveillance | | Communications |
| Diving Support | | |

Other military elements involved in the drug war are the Army, Air Force, Navy, and Marines. Additionally, the Defense Intelligence Agency (DIA) is involved in the intelligence aspect, the Defense Advanced Research Projects Agency (DARPA) is funding long-term research, and the Unified/Specified commands are responsible for activities within their geographic area of responsibility. The Posse

Comitatus Act passed in 1878 prohibits the military (but not the National Guard) from acting as a law enforcement agency within the boundaries of the US. It does not apply to the use of military forces outside the jurisdiction of the US, but it does, of course, require very high level direction from the US military command structure. Because of the political sensitivity of such actions, the role of the military has been limited to training, providing transportation for other agencies, constructing roads and barriers, providing specialized equipment, and sharing intelligence information. The DoD elements do have extensive technology development centers, but they are accustomed to developing "mil-spec" hardware, which leads to long lead times.

**El Paso Intelligence Center**

EPIC is chartered to provide a comprehensive and accurate intelligence picture of drug movement by land, sea, and air throughout the world as it relates to the US.

EPIC was formed in 1974 as a joint operation of the INS and the DEA. It is currently composed of 11 member agencies:

| | | |
|---|---|---|
| DEA | US Customs Service | US Coast Guard |
| INS | Alcohol, Tobacco and Firearms (ATF) | Federal Aviation Administration (FAA) |
| FBI | Internal Revenue Service (IRS) | Department of State |
| US Marshal Service | Secret Service | |

In addition, the DIA and Central Intelligence Agency (CIA) have Associate Memberships.

[redacted]

The [redacted] is the lead agency at the EPIC and [redacted] The post of [redacted]. EPIC has representatives from [redacted] branches. The structure of the EPIC provides an excellent opportunity for cooperation among federal law enforcement agencies.

The working parts of EPIC are the Operations Section and the Analysis Section. The organization outline follows.

## Operations

- **General Watch:** Serves as the round-the-clock point of contact with the agents in the field.

- **Special Operations Watch:** Monitors continuing field operations. Has access to [redacted]

- [redacted]

- **Organizational Intelligence Team:** A new unit engaged in total characterization of the most active smuggling organizations.

## Analysis

- **Tactical Support Unit (TSU):** Coordinates with the Organizational Intelligence Team of active Watch.

- **Air Unit:** Analyzes data from Watch to characterize illegal air traffic, its origins and destinations, and its organizational affiliations.

- **Land Unit:** Most actively involved with the Border Patrol in tracking and characterizing smuggling activities in the vicinity of the border.

By far, the largest portion of the 300 full-time EPIC staff is assigned to the Analysis Section. The emphasis appears to be on the production of regular reports that depict border traffic and smuggling activities from a historical perspective for the participating agencies. The idea seems to be to develop predictive models that can be used to direct deployment of enforcement resources for best use; but, as with terrorism, [redacted]

## Other Agencies

The other agencies involved include the CIA's Center for Narcotics Control (CNC), the Department of Agriculture (DOA), and the Department of the Interior (DOI). The CNC provides intelligence

data to the other government agencies. [redacted] The DOA is involved in research for crop eradication and is also responsible for policing the National forests, which are increasingly being used as sites for growing marijuana. The DOI controls extensive public real estate through the Bureau of Land Management (BLM) and the National Park Service. They face problems similar to those of the US Forest Service in that public land is used for illegal purposes, including (in the case of BLM) places where small planes land and transfer cargo originating in Mexico.

The remaining key "player" in the counternarcotics program is the Office of National Drug Control Policy (ONDCP) headed by Governor Martinez, who is sometimes referred to as the nation's "Drug Czar." This office was established in 1988, and as the name implies, is primarily concerned with policy. The ONDCP has established a committee, the Science and Technology Committee (STC), which comprises representatives of the other law enforcement agencies. The STC is charged to review and prioritize the technology needed for more effective counternarcotic efforts, and then to coordinate the development of this technology with financial support for the participating agencies. Public Law 100-690, which established the ONDCP and the STC, also named several National Technology Development Centers (NTDCs) to assist in the development of new technology. Sandia National Laboratories is one of the eight agencies defined as an NTDC.

**Agency Interaction**

In the examination of agency charters, it would appear that the necessary organizational structure is already in place to promote strong cooperation among the federal agencies fighting the war on drugs along the US/Mexico Border. This is particularly true in the cases of the EPIC and Operation Alliance both in terms of their charters and composition. They are both multi-agency organizations with access to resources that should put them in a position to coordinate and direct drug interdiction activities.

Our observations along the border indicate that the Border Patrol, as required by their charter, is continuously engaged in the detection and apprehension of illegal aliens. They use sensor technology, sign cutting, and some local intelligence to alert themselves to traffic across the border and to put themselves in position to interdict the traffic. They also employ highway checkpoints and railroad yard inspections to interdict traffic moving away from the border. Some drug smuggling activities are embedded in this alien traffic. The highway checkpoints are also places at which to intercept drug shipments that have eluded detection at POEs as well as those that cross between them. The Border Patrol is clearly a border law

enforcement agency within the 100-mile band along the border with neither the authority nor the resources to do extensive investigations and follow-up on drug or alien incidents. However, the INS Investigation Units do conduct investigations and follow-up as much as their resources will allow.

The INS Inspections and US Customs Service jointly operate the designated POEs. INS is responsible for determining eligibility for admission of persons to the US. Customs is responsible for collection of import tariffs on cargo entering the US. In pursuit of that duty, document checks and inspections of both commercial cargo and private vehicles put Customs in a position to detect and intercept drugs at the POEs, again as a subset of their normal activities. Customs also acts as the enforcement agency for several other agencies concerned with the people and goods that enter the US at the border. There is, for instance, cross-designation between Customs and INS personnel to operate the primary check lanes at POEs because of the need to determine the citizenship of entrants. As mentioned above, they also conduct some intelligence-based activities between the POEs. In support of their control of contraband entering the US by land, air, and sea, the Customs Service has an active Investigations unit to assist in screening at the POEs and to track contraband to the interior. They use these same resources to assist their counterparts in Mexican Customs in the control of contraband out of the US.

The DEA is specifically dedicated to controlling the flow of drugs into and within the US and the movement of precursor chemicals, goods, vehicles, and currency out of the country in support of the drug trade. Most of the DEA assets are based at locations away from the border and placed to take a significant toll on the drug supply and distribution system inside the US. The DEA also operates an extensive investigations capability within the US to establish the identity and build cases against the drug trafficking organizations.

The Border Patrol, Customs, and DEA have differing missions, which overlap in the area of drug interdiction. There is also some overlap in terms of jurisdiction. The Border Patrol is responsible for crossings of the border between POEs; INS is responsible for admission of persons through the POE; Customs is responsible for vehicular and cargo traffic through the POEs. This demarcation seems to work well for both agencies along the border line. A territorial overlap occurs in the 100-mile zone inside the border, however, where the Border Patrol and Customs can have operations underway. Similarly, the DEA is concerned with drug and drug-related traffic across the border into the interior, and so tends to operate in territory also occupied by Customs and the Border Patrol.

The individual agencies and organizations involved would be more efficient and effective [redacted] Operation Alliance, through its Joint Command Group, which includes all of the federal agencies listed for the EPIC and several more state and local law enforcement agencies as well, is clearly in an ideal position to coordinate operations and to disseminate intelligence and operational data to the field agencies.

## Terrain

There is an enormous variation in both the topography and character of the terrain along the length of the US/Mexico border. These factors govern which detection and interdiction strategies are appropriate and effective. The effects of topography on border traffic and control strategies are obvious: both crossing and patrol activities are more easily done on flat and level terrain than in rugged mountainous areas. The character of the terrain and its general environment require more careful examination to determine their impact on traffic and operations.

### Dry Versus Wet

The most apparent character variation is that about half of the border is dry land and the rest of it is river. The Rio Grande River along the entire Texas/Mexico border presents itself as a natural barrier to crossing that is not available along the western half. It is also clear, however, that the [redacted] Even where the water is swift and deep, the barrier is certainly not a significant impediment to traffic. It simply forces the crosser to swim or to use a boat or raft as opposed to [redacted] The same sort of observation can be made about the dry land portion of the border. There are large segments of the line that can be crossed by foot and by vehicles because they are flat and level. Many other regions are so mountainous as to be essentially impervious to vehicular traffic and only marginal for pedestrians, horses, and mules. Even here, crossings do occur.

### Terrain and Environment Categories

Our observations indicate the most logical factor to use as the basis for categorization of border terrain and environment is tactical considerations. The types of countermeasures and strategies that are appropriate for enforcement of the law and control of drug traffic are of primary interest in this study, and we have categorized terrain types to facilitate this approach. The following categories and subsets meet this criterion:

- **Desert**
  - Flat Desert
  - Sand Dunes
  - Farmland and Ranchland
- **Rolling Hills**
  - Meadows
  - Brushland
- **Mountainous**
  - Mountains
  - Forests
- **River**
  - Flat and Wandering
  - Canyons
- **Lake**
  - Reservoirs
- **Urban**
  - Flat
  - Hilly.

**Tactical Descriptions**

The descriptions apply to the immediate area of the border and in most cases govern sensor selection and placement. Other factors such as north/south trails and roads, railroads and highways, transportation options south of the border, available cover, and population density tend to dictate the choice of tactics away from the border.

***Desert***

Desert terrain is most easily adaptable to construction of conventional barrier systems, such as fences, linear (long-line) sensors, and the possibility of closed circuit television (CCTV) alarm assessment.

Practical measures could include the construction of fences of sufficient height to require cutting or climbing and some form of vehicle barrier to make drive-throughs inconvenient. Linear sensors could be considered, but the cost is high and they would be stolen or destroyed very quickly. Drag roads and sign-cutting with

monitoring from the air make the most sense as both a sensor and traffic counter for most of this category.

### Flat Desert

Typically, flat sandy desert would require the least preparation of barrier construction and is most easily adaptable to dragging and sign-cutting. If no roads or railroads exist on the US side near the border, then interdictory response to likely pickup points inland from the border is the likely strategy. If these points can be forced far enough inland, then sign-cutting and tracking from the air on the next morning will be effective.

### Sand Dunes

In some of the desert settings, the border crosses sand dunes that are in a state of constant change. Here, the use of fences and walls would be precluded by the unstable ground. Airborne sign-cutting works very well in these areas and often requires only a minimum of dragging. There is also very little cover available in the dunes.

### Farmland and Ranchland

In areas of farmland and ranchland, dragging and sign-cutting can only be done at the border line. Crops are grown nearly to the border and provide significant cover. S[redacted]

## *Rolling Hills*

Rolling hills require more extensive site preparation before some types of barriers can be erected and preclude the use of certain types of [redacted]. Drag roads and airborne sign-cutting serve the detection and traffic count needs well. If the elevation variation is sharp enough, certain areas may be more favorable for alien traffic than others, which may allow the use of [redacted]

### Meadows

Grassy meadowland does not lend itself well to airborne sign-cutting and is usually populated by grazing animals, which further complicates tracking and [redacted]

### Brushland

In brushland areas the presence of scattered cover makes sign-cutting and monitoring from the air and from land vehicles more difficult. If the cover is dense enough at or very near the border, [redacted].

### *Mountainous*

Mountains present significant obstacles to technological control measures. Neither conventional barriers nor linear sensors are particularly suited to this application. However, the terrain itself constitutes both a natural barrier and a director of traffic, which benefits from the use of [redacted]. Practical strategies in these regions must take advantage of the terrain for both detection and response. Except for established roads and trails, intrusion of the border is not likely to be done using vehicles; pack animals and pedestrians are much more likely.

[redacted] rather than by the probability of use by intruders.

### Mountains

Traffic through these regions is strongly directed to roads and trails. It is d[redacted]

### Forests

These areas also direct traffic to trails and have the additional advantage to the intruder of significant cover. This allows the traffic to hide and wait out the response. [redacted]

### *River*

The Rio Grande River at the very least presents itself as an inconvenience to passage across the border. Whether it constitutes a barrier depends on the variable character of the river, both by location and by season. In general, however, the river forms a fairly effective vehicle barrier over most of its length.

### Flat and Wandering

Most of the river border falls into this description. The river course in many places is convoluted to the point where it nearly doubles back on itself. Much of the land included in these convolutions is irrigated farmland, much of which comprises cover and all of which limits the effectiveness of tracking.

### Canyons

Significant portions of the river are in relatively straight but deep canyons with steep walls. The water also tends to be quite deep and swift in these canyons. They are, therefore, very effective barriers to traffic, particularly when contraband is to be carried.

## *Lake*

Where the river widens to form lakes, it becomes a [redacted].

### Reservoirs

Falcon and Amistad Reservoirs are the two largest inland bodies of water along the border. Both have very ragged shorelines, numerous landings in concealed coves, and [redacted] are preferred to patrol or chase boats.

## *Urban*

These are the major concentrations of population and alien and drug smuggling activity along the border. All of the POEs fall into this category. Densely populated areas on both sides of the border [redacted] The volume of traffic across the border in these areas makes it very [redacted]. The agents are therefore forced to deal with all of the traffic all of the time.

Many of the urban areas have some form of fence along the line, but in most cases it is poorly maintained and the fence is totally ineffective as a barrier or delay mechanism. Unless significant barriers and delay can be introduced, the volume of crossing traffic probably will not be reduced.

### Flat

Urban areas that are also relatively flat lend themselves to linear barrier technology. Such systems must have a compatible response strategy in place in order to have significant effect on control.

### Hilly

Urban border areas that are also hilly are candidates for linear barriers, but the choice of technology and equipment is somewhat more limited than for flat terrain.

## Currently Available Resources

The US Border Patrol is clearly the lead law enforcement agency along the entire length of the border. Ideally, the Border Patrol should be able to detect all crossings of the border and, in response to detection, should interdict all crossers. However, the diversity of the terrain, the length of the US/Mexico border, and the limited resources available to the Border Patrol make this goal difficult to realize. The table below lists the major Border Patrol personnel and vehicular assets that are being applied to Southwest Border problems.

**Border Patrol Resource Data**

| Sector | Sector Personnel* (12/31/91) | Vehicles Present (12/31/91) |
|---|---|---|
| McAllen | 376 | 201 |
| Laredo | 368 | 318 |
| Del Rio | 394 | 185 |
| Marfa | 139 | 106 |
| El Paso | 655 | 425 |
| Tucson | 292 | 223 |
| Yuma | 225 | 188 |
| El Centro | 263 | 181 |
| San Diego | 928 | 569 |
| Totals | 3,640 | 2,396 |

* These numbers are dynamic. The numbers used in the sector discussions may vary slightly from these because they were obtained at a different time.

The Border Patrol concentrates most of its Southwest Border enforcement activities in a 100-mile zone on the US side of the border. The inability to instantly respond to all detected crossings at the border requires the application of a standoff strategy by which interdiction is made at known rendezvous and pickup points or along known routes leading inland. There are many other federal, state, and local agencies that are also engaged in law enforcement along the border. This fact should be an advantage in improving control of the border.

There are also about 4,000 unattended ground sensors available for use on the Southwest Border.

## Coordination

The ONDCP is the source of significant funding for drug control activities. It administers the program under which confiscated assets and currency are distributed to law enforcement agencies in HIDTA. Operation Alliance is involved in the allocation of the Southwest Border HIDTA resources through its assignment of case numbers to apprehensions and seizures. If Operation Alliance were given more direct authority over the allocation of assets and funds, it would be in a much more favorable position to exercise command and control.

Incentives should also be instituted, and applied through Operation Alliance, to enhance cooperation among the agencies. The current tendency toward competition for apprehensions and seizures might very well change to cooperation if the resource and budget allocation programs acknowledged cooperation in a more equitable way.

The ultimate goal of border control should be to increase detection and interdiction effectiveness to the point that essentially all significant smuggling activity is directed through the POEs. Resources and improved technology could then be concentrated at those relatively few points to stop all but legal traffic. A major short-term obstacle to the achievement of this goal is the current inability to allocate available resources and deploy them in those areas where the action is occurring. An initial step toward improved deployment is to apply existing intelligence resources to the problem of *timely* tactical alerts. This casts the intelligence capability in the role of an early warning system. The EPIC and its round-the-clock watch capability are ideally suited to this role. The DEA and US Customs Service have investigative units that track smuggling organizations and activities as ongoing efforts. The information that they develop should also be useful in predicting modes and routes of illegal traffic, which should assist in deployment of detection and interdiction resources.

It seems clear that the EPIC should be very tightly connected to Operation Alliance to ensure that current intelligence is always available. Operation Alliance, in turn, should be in close and constant contact with the Border Patrol, Customs, DEA, and local law enforcement agencies to coordinate enforcement and minimize friction. It is also possible that any of these agencies in their [redacted]

JTF-6 is empowered to provide DoD support at the request of all of the agencies through Operation Alliance. The services and specialized military equipment that JTF-6 can make available to the counternarcotics effort are typically very costly and expensive to maintain. By drawing on DoD assets, applying them in a coordinated manner through Operation Alliance, and moving them around among the agencies as needed, more effective use of the military assets will be made. Specialized high technology equipment, of the type available only to the military, can be made available without purchase.

## Policy Support

Many of the issues raised by a need for improved control of the US/Mexico Border will require policy decisions and support of the recommended increased security measures.

### Coordination

The first level at which this occurs is the identification and issuance of specific authority among the various law enforcement agencies with a goal of [redacted]. One way that cooperation and coordination can be realistically achieved among so many agencies is to identify and enable a strong command and control authority that can enforce its direction by control of operational budgets and resource allocations. We recommend that this be done at the highest administrative levels and with the greatest care.

### Diplomacy

An even more difficult policy issue will be the negotiations for the use of stronger enforcement measures along the border. If control of traffic across the border in some of the populated areas is to be significantly improved, harsh measures and obstacles to free movement must be imposed. These will require a firm commitment on the part of our government and agreement or acquiescence from the Mexican government and local officials.

### Penalties

The penalties imposed on the drug traffickers have been made relatively severe. The authority to seize and dispose of assets used in the smuggling of drugs have raised the commitment required of the participants in this enterprise. In the case of aliens who serve as both participants and maskers of smuggling activities, the penalties for violation of border laws are minimal. Voluntary returns comprise the bulk of dispositions, and amount to a guaranteed return to the process.

To make illegal crossing of the border less attractive or convenient will require serious consideration of deep deportation into the Mexican interior for repeat offenders. The identification of repeat offenders will require some form of tagging or biometric identity verification.

Incarceration in the US is an extremely expensive proposition. We have neither the facilities nor the budget to properly incarcerate the apprehensions made now. If we become more effective at controlling the traffic across the border, it will eventually decrease in volume. At some point, an accelerated judicial system and incarceration may again become a viable option. In the early stages of increased enforcement, however, deep deportation may be the only option.

## Technological Support

A catalog of currently employed technology is contained in Volume 3 of this study.

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## Recommendations by Sector

The first sector to be discussed is the McAllen sector. In the general discussion about the sector, and in the discussion of the individual stations, there is some repetition. The details about linewatch and stillwatch activities; patrol; farm and ranch check; highway traffic check; transportation check (buses, railroads, aircraft); city patrol; liaison-informant development; air operations; and identification, screening, and removal are somewhat similar in all of the sections; therefore, they will not be discussed in the same amount of detail as in the McAllen sector. Likewise, the information about topology, terrain, and road networks will be abbreviated in the other sectors. The positions of the agents and their Government Service (GS) levels are also similar from sector to sector. In some of the sectors, the discussion of the sector as a whole is given instead of details about the activities of each station. Station descriptions were included in the McAllen sector discussion to give a more complete picture of the types of activities required of Border Patrol agents, in general.

### Applicable Technologies

A detailed discussion of the applicable technologies, their capabilities, their costs, *etc.*, is given in Volume 3 of this study.

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# McAllen Sector

## Introduction

The McAllen sector is responsible for control of approximately 270 miles of Rio Grande River border in [redacted] The sector covers approximately 17,000 square miles. The sector is organized into Sector Headquarters and nine stations. The stations are Brownsville, Corpus Christi, Falfurrias, Harlingen, Kingsville, McAllen, Mercedes, Port Isabel, and Rio Grande City.

The sector includes 9.4% (153.5 miles straight line or 269 miles meandering) of the total Southwest Border. The McAllen sector had about 100,000 apprehensions in FY 1990 and 10% of those are Other Than Mexican (OTM). The sector is credited, however, with 30% of the narcotics that are apprehended coming into the US. During FY 1989, 1,100 narcotics seizures occurred with a value of $304,000,000. FY 1990 seizures dropped to a value of $158,000,000 but the FY 1991 seizures had already reached the FY 1990 value by July.

## Operational Environment

### Terrain

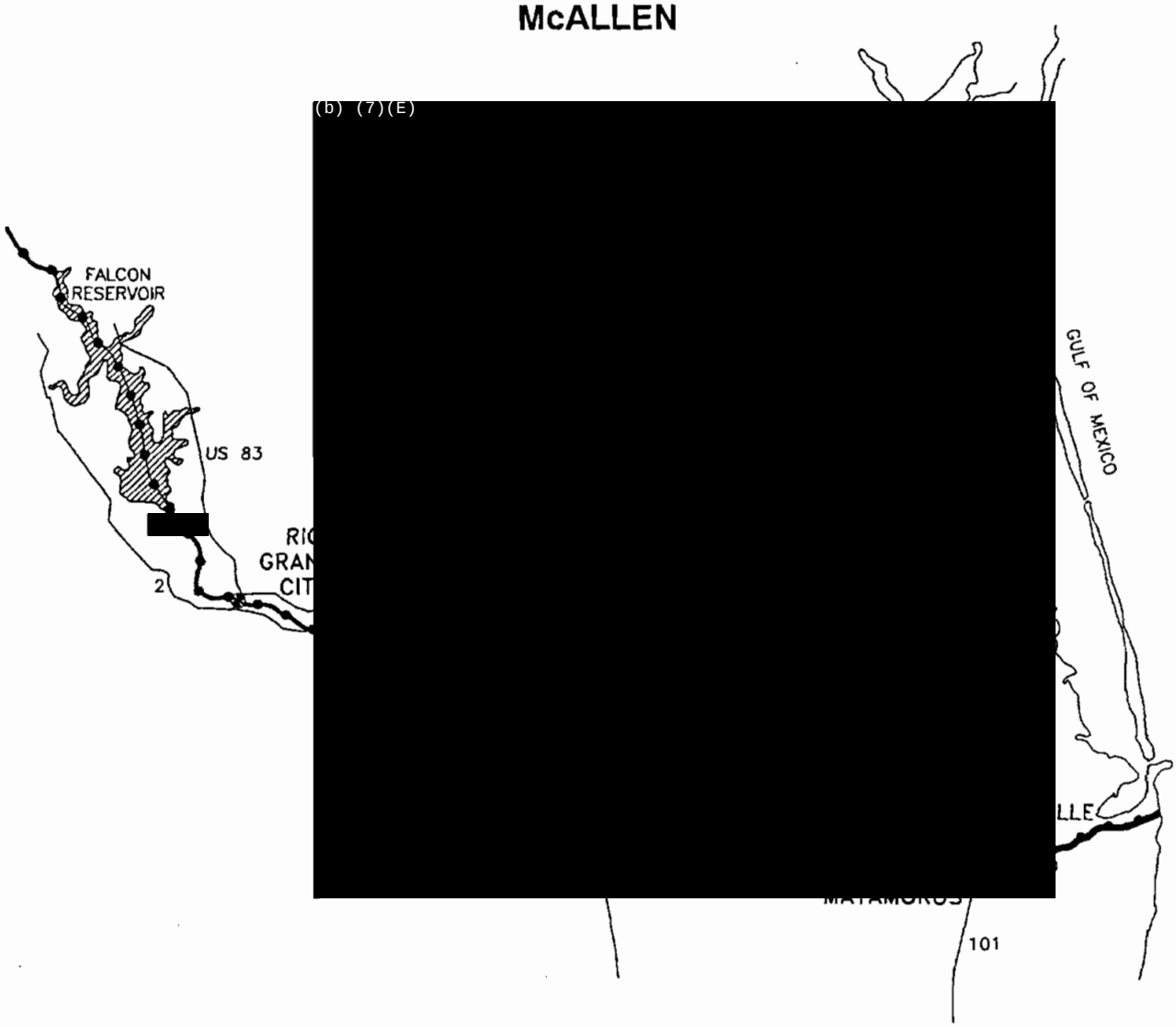
The [redacted], which includes [redacted]. Anzalduas Dam is about 12 miles upstream from Hidalgo and forms a reservoir approximately 600 yards wide, which is used for irrigation. The [redacted]. There are numerous small Mexican settlements along the Rio Grande River with large populations concentrated near the Texas cities of Hidalgo, McAllen, and Brownsville.

There are 153.5 linear miles of border in the McAllen sector. Those miles are composed of

| | |
|---|---|
| 123.0 | miles of farmland |
| 16.0 | miles of rolling brushland |
| 12.5 | miles or urban flat |
| 2.0 | miles of forests. |

A map of this sector is shown on the following page.

# McALLEN




KEY

INTERNATIONAL BORDER

RAILROAD

CITY OR TOWN

[redacted]

PORT OF ENTRY

[redacted]

SCALE
0 20

*Map of the McAllen Sector*

(b) (7)(E)

[redacted]

Gulf of Mexico, is about 150 miles by highway. On the extreme western tip, the Rio Grande River flows into Falcon Lake, which is created by Falcon Dam.

Falcon Lake is 60 miles long, 11 miles wide at its maximum width, and covers 177 square miles. The dam and a small section of the lake area, approximately 1 mile, are within the McAllen sector. Water is released downriver for irrigation, for the purpose of generating electricity, and to release floodwaters, which could fill the lake to capacity. For these reasons, the water level of the Rio Grande River fluctuates.

Anzalduas Dam is located about 12 river miles upriver from the Port of Hidalgo. The dam forms a smaller lake, approximately 600 yards wide and backs the water up to the Port of Los Ebanos. The purpose of this dam and lake is for flood control and to create a supply of water for the Anzalduas Canal, which is a Mexican outlet furnishing water for irrigation to bordering Mexican areas. Water is released downstream from the dam at irregular intervals as needed for irrigation, also causing the river's depth to fluctuate.

Starr County is generally an arid, low, rolling territory with sparse vegetation and no streams, which slopes toward the Rio Grande River. Hidalgo, Cameron, and Willacy Counties are generally flat terrain sloping gradually toward the Rio Grande River. Kenedy, Kleberg, and Brooks Counties and the northern part of Hidalgo and Willacy Counties are rolling, sandy, arid terrain covered by mesquite and brush with no streams or water, other than wells or man-made tanks. The eastern boundary of Cameron, Willacy, Kenedy, and Kleberg Counties is the Gulf of Mexico. The terrain along the coast is largely uninhabited tidal flats interspersed with sand dunes. Padre Island, a low, narrow, sandy strip of land, varying in width from 100 yards to approximately 2 miles, parallels the coast along the entire eastern boundary of the sector.

The sector's principal population centers are located along US Highway [redacted] Communities and towns, varying in population from 500 to 70,000, are located along the highway every few miles from the point near Falcon Dam where the highway enters the sector to its termination at Brownsville.

A large floodway and series of levees were planned and constructed and are maintained by the International Boundary and Water Commission. The floodway system begins at the Rio Grande River near Mission and runs mainly parallel to the river until it reaches a point near Weslaco. It then turns northeast and empties into the Laguna Madre, south of Port Mansfield.

From the western edge of the sector's boundary downriver on the Mexico side are numerous small settlements, some of which have been in existence since the late 1600s. The population is dense opposite the Texas cities of Hidalgo, McAllen, and Brownsville. Other small towns and settlements are prevalent throughout the valley in Mexico.

The Rio Grande River does not provide an impenetrable barrier and can [redacted]. The fluctuation of the river level from upstream irrigation releases can quickly wash away any sign of crossing near the river. Tracking in this area is conducted on a daily basis, however, to detect tracks before washout.

## Climate

The climate in the sector is semi-tropical along the river. The altitude is about 130 feet above sea level. The average yearly temperature is 74°F (average January temperature 55°F, average July temperature 84°F), and the average rainfall is 21 inches. The monthly weather averages in the McAllen sector are shown below:

| | J | F | M | A | M | J | J | A | S | O | N | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High (°F) | 68.1 | 72.2 | 80.1 | 86.2 | 89.1 | 93.2 | 95.2 | 96.2 | 92.4 | 86.7 | 78.9 | 71.0 |
| Low (°F) | 46.0 | 49.5 | 56.7 | 64.4 | 69.7 | 73.0 | 73.9 | 74.2 | 71.6 | 63.8 | 56.4 | 49.1 |
| Rainy days | 4 | 4 | 2 | 4 | 9 | 8 | 5 | 7 | 14 | 8 | 3 | 3 |

The region may occasionally be hit by a hurricane, but the offshore sandbars give some protection.

## Available Resources

The McAllen sector currently has 331 agents and 54 nonagent support personnel assigned to nine border patrol stations. There are not enough agents to man all highway checkpoints on a 24-hour basis.

Since April 9, 1987, the singularly most effective addition for combating the illegal smuggling of narcotics has been the creation of the US Border Patrol Canine Program. The Canine Program has been responsible for more than 42% of the narcotics apprehensions for the McAllen sector since the creation of the program. Initially, the program began with two drug detection dogs assigned to the McAllen sector. Presently, a contingent of 12 dogs and handlers are assigned to the Border Patrol checkpoints at Falfurrias, Kingsville, and Rio Grande City. They are also stationed at McAllen, Brownsville, and Harlingen.

Aircraft operations continue to be an effective tool, both as a deterrent and as an aid in the apprehension of violators. There are five aircraft assigned to this sector: two Piper PA-18 Cubs, one Cessna

182, and two newly acquired ASTAR helicopters. There are five airplane pilots, one supervisory pilot, and one airplane mechanic assigned to the sector.

**Threat**

The McAllen sector includes the Brownsville Port of Entry (POE), which in FY 1990 admitted almost 16,000,000 persons of which about 10,700,000 were aliens. In FY 1990, the McAllen Border Patrol apprehended about 100,000 persons, of which about 10,000 were OTM. There was a total of 1,067 apprehensions in which narcotics trafficking was involved. There were about 136,000 pounds of marijuana, 11,000 ounces of cocaine, and 61 ounces of heroin seized in FY 1990. In FY 1990 there were 72 incidents involving a Border Patrol agent confronting armed persons. There were seven assaults on Border Patrol agents in FY 1990.

The threats encountered in the McAllen sector are the following:

- **Narcotics trafficking:** South Texas has become a very hot area on the US/Mexico border for narcotics trafficking. The increased traffic has placed additional burdens on virtually every enforcement operation in the area. There has been a tremendous increase in criminal activity associated with narcotics smuggling including murder, torture, shootings, and bribery.

- **OTMs:** OTM apprehensions for FY 1989 rose to an all time high of 19,678. Arrests for FY 1989 represented about 33% of the total deportable aliens arrested by McAllen sector agents.

- **Organized commercial smuggling:** Organized commercial smugglers recruit aliens in their native countries, bring them to the border in groups, cross clandestinely, and take them north and east in closed vehicles through checkpoints or via unchecked roads to avoid checkpoints.

- **Agent encounters with smugglers:** Agents encounter smugglers who are better armed and who use technologically superior equipment. These encounters significantly increased in FY 1990 and FY 1991. Intelligence gathered indicates that underworld sales of fully automatic weapons have escalated. A favored weapon of Mexican narcotics gangsters is the Chicom AK-47 fully automatic assault rifle manufactured in mainland China.

- **Area undocumented workers:** Surreptitious entrants and visitors enter for the purpose of working in the valley area, either in agriculture or service industries.

- **Document/status fraud:** Aliens in possession of fraudulent, altered, or counterfeit documents attempt to leave the area by public and private transportation. False claims to citizenship (both by birth and derivation) are very prevalent in the McAllen sector. A rapidly increasing problem is false claim to Amnesty Status Programs.

- **Fishing industry:** Undocumented aliens in the shrimp and fishing industry along the South Texas Gulf Coast add to the enforcement problems.

The operations brief of the McAllen sector indicates that the principal movement of aliens and/or contraband out of the sector is by the following means:

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- On foot – walking northward through the brush.
- Air – commercial air from Brownsville, Harlingen, and McAllen.
- Air – private and chartered.
- Special Vehicles – increased use of tractor-trailer rigs for smuggling contraband.
- [redacted].

The Immigration Reform and Control Act (IRCA) has created the need for the redirection of already critically low manpower to nonline operations. The much needed US Border Patrol Criminal Alien Program (BORCAP) has also required that additional agents be redirected away from line interdiction duties. The increase of narcotics smuggling cases, large number of OTM apprehensions, overextension of manpower, and the volume of per agent apprehensions deter from the overall effectiveness of present staffing levels.

Undocumented aliens generally appear to be destined for Houston and other major metropolitan and industrial centers in the US. In general, the majority of these aliens are OTM.

(b) (7)(E) [redacted] Sporadic traffic check coverage on these highways because of insufficient manpower offers alien and narcotics smugglers a ready escape route. Intelligence sources reveal that these routes are heavily traveled during hours of non-coverage. The Laredo sector's Hebbronville and Freer stations assist in controlling these areas as their resources permit.

Means of transportation to the border area from the interior of Mexico have improved. The Mexican border area adjacent to the McAllen sector is increasing rapidly in population. A greater number of valley residents, from which the field laborers previously came, are either migrating out of the area or are refusing to do field labor. It appears certain that the increase in nonresident alien border crossing cardholders violating their status will continue and that entries without inspection will continue to increase.

Ironically enough, the smuggling of aliens and contraband by air remains the most successful method of eluding apprehension by law enforcement officers in this sector because there is no adequate radar coverage to detect air intrusions from Mexico.

The increase in narcotics traffic in this sector over the past few years is attributed by some to the continued pressure by the South Florida enforcement community forcing Florida smugglers to move their operations. This move has created a "Drug Corridor" through South Texas.

### *Contact with Suspects*

The information presented in the tables below is the compilation of the Border Patrol agents' contact with illegal aliens and/or drug traffickers and the amounts of drugs confiscated. Sector personnel indicated that assaults on Border Patrol agents are rare and were estimated to be about 10% of the number of armed encounters.

| Contact w/Suspects: | Jan '90 | Feb '90 | Mar '90 | Apr '90 | May '90 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien | – | – | – | – | – |
| Drug-Related | 135 | 109 | 88 | 58 | 76 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 28,093.0 | 16,030.0 | 7,618.0 | 3,519.0 | 12,749.0 |
| Cocaine (oz) | 13.2 | 4,968.2 | 58.0 | 0.360 | 501.2 |
| Heroin (oz) | 5.32 | 2.0 | – | 0.036 | 41.8 |
| Other (lb) | 37 | – | – | – | 334 |
| Number of Confrontations: | | | | | |
| With Armed Persons | – | – | – | – | – |
| Assaults on BP Agents | – | – | – | – | – |

| Contact w/Suspects: | Jun '90 | Jul '90 | Aug '90 | Sept '90 | Oct '90 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien | – | – | – | – | – |
| Drug-Related | 66 | 59 | 36 | 33 | 93 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 6,959.0 | 5,549.0 | 5,261.0 | 1,104.0 | 6,373.0 |
| Cocaine (oz) | 8.574 | 0.684 | 23.116 | 129.374 | 5,186.26 |
| Heroin (oz) | 2.556 | 2.736 | – | 6.4 | – |
| Other | – | – | – | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | – | – | – | – | – |
| Assaults on BP Agents | – | – | – | – | – |

| Contact w/Suspects: | Nov '90 | Dec '90 | Jan '91 | Feb '91 | Mar '91 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien | – | – | – | – | – |
| Drug-Related | 164 | 150 | 123 | 104 | 68 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 15,752.0 | 27,464.0 | 13,977.0 | 9,240.0 | 4,141.0 |
| Cocaine (oz) | 116.144 | 9.606 | 14,783.8 | 199.776 | 5,695.4 |
| Heroin (oz) | – | – | – | – | – |
| Other | – | – | – | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | – | – | – | – | – |
| Assaults on BP Agents | – | – | – | – | – |

| Contact w/Suspects: | Apr '91 | May '91 | Jun '91 | Jul '91 | Aug '91 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien | – | – | – | – | – |
| Drug-Related | 55 | 47 | 41 | 32 | 64 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 5,452.0 | 2,899.0 | 1,567.0 | 687.0 | 2,773.0 |
| Cocaine (oz) | 3.071 | 126.93 | 1,004.19 | 6,471.74 | 21,667.7 |
| Heroin (oz) | | – | – | – | 4.814 |
| Other (oz) | 0.05 | – | – | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | – | – | – | – | – |
| Assaults on BP Agents | – | – | – | – | – |

| Contact w/Suspects: | Sept '91 | Oct '91 | Nov '91 | Dec '91 | Jan '92 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien | – | – | – | – | – |
| Drug-Related | 86 | 97 | 102 | 108 | 138 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 4,705.0 | 10,253.0 | 9,753.0 | 17,975.0 | 23,430.0 |
| Cocaine (oz) | 1,074.6 | 12,864.1 | 2,115.236 | 145.7 | 1,463.378 |
| Heroin (oz) | – | 16.0 | – | – | 14.0 |
| Other (lb) | 7 | – | – | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | – | – | – | – | – |
| Assaults on BP Agents | – | – | – | – | – |

| Contact w/Suspects: | Feb '92 | Mar '92 | Apr '92 | May '92 | Jun '92 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien | – | – | – | – | – |
| Drug-Related | 109 | 123 | 159 | 133 | 104 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 6,512.0 | 13,060.0 | 9,747.0 | 18,993.0 | 16,455.0 |
| Cocaine (oz) | 319.241 | 37.642 | 610.041 | 9,681.9 | 2,125.1 |
| Heroin (oz) | 8.21 | 4.0 | 0.126 | 464.08 | 51.2 |
| Other (lb) | – | – | – | 6 | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | – | – | – | – | – |
| Assaults on BP Agents | – | – | – | – | – |

| Contact w/Suspects: | Jul '92 |
|---|---|
| Number of Arrests: | |
| Illegal Alien | – |
| Drug-Related | 121 |
| Illegal Drugs Confiscated: | |
| Marijuana (lb) | 18,281.0 |
| Cocaine (oz) | 1,119.26 |
| Heroin (oz) | 11.5 |
| Other | – |
| Number of Confrontations: | |
| With Armed Persons | – |
| Assaults on BP Agents | – |

## Sector Operations

The McAllen Sector Headquarters is located in McAllen, Texas. There is also a McAllen station, located at 4201 West Military Highway in McAllen, Texas.

From earlier days the Mexican towns of San Miguel, Camargo, Miguel Aleman, [redacted]

Sector Headquarters is operated on a 24-hour basis with a radio operator on duty at all times.

Radio electronic maintenance is performed by three radio electronics technicians.

Sector Headquarters was originally established at its present site in order to centralize it geographically in its area of responsibility. The sector includes the entire Rio Grande Valley where, for years, enforcement problems have been particularly critical and sensitive. It is a semi-tropical area devoted primarily to agriculture and allied industries. Employment opportunities exist throughout the area for unskilled and semi-skilled laborers.

Because the [redacted] increases considerably. There are no specific "crossing points," although other topographical features tend to funnel aliens through broad areas.

The river's fluctuating level increases the difficulty of sign-cutting because the water often washes away any tracks of aliens.

The sparsely settled, hilly brush country in the western part of Hidalgo County and in Starr County make sign-cutting in these areas more difficult, although the sandy areas in the northern sections lend themselves better to sign-cutting.

All of the brush has been removed along the riverbank in practically all of Hidalgo and Cameron Counties as a result of farming operations extending to the riverbank in most areas. This makes sign-cutting difficult because there is a considerable amount of foot traffic by farm workers and locals.

The sandy areas in Brooks, Kenedy, and Kleberg Counties are good for sign-cutting, except that they make travel by motor vehicle somewhat difficult. This necessitates the use of four-wheel-drive vehicles.

Cleared farmland extends only about 15 to 20 miles northward in the Rio Grande Valley. This land is dry, arid, sandy ranchlands, which tend to discourage some of the aliens who would normally attempt to walk further north.

The Anzalduas Canal originates in Mexico about 12 miles north of the Port of Hidalgo. It runs south a short distance from, and more or less parallel to, the river to a point in Mexico immediately opposite Mercedes. Here, it is large and deep enough that it cannot normally be crossed except at the bridges. The few bridges tend to funnel aliens into general crossing areas.

The dense population areas adjacent to the border, especially in the Hidalgo and Brownsville vicinities, hampers sign-cutting and offers illegal aliens ready opportunity to lose themselves in crowds of people of similar racial characteristics.

There are seven POEs into the sector:

- Falcon, across the Falcon Dam (open from 8 a.m. to 12 p.m.)
- Roma
- Hidalgo
- Progreso
- Brownsville (all of which are 24-hour ports with bridges)
- Rio Grande City (with a bridge, open from 8 a.m. to 12 p.m.)
- Los Ebanos (a ferry port, open from 9 a.m. to 5 p.m.).

US Highway 83 enters the sector at the Starr/Zapata County Line (b) (7)(E) [redacted]. Near Mission, US 83 divides into two routes with Business Route 83 passing through the numerous towns and (b) (7)(E) [redacted]. Business 83 merges with Expressway 83 in Harlingen, which continues on to Brownsville.

US Highway 281 originates at Brownsville and proceeds west along the Rio Grande River to a junction 4 miles east of Hidalgo. During this distance, the [redacted] At the junction, [redacted] turns north and leaves the sector at Alice, Texas.

US Highway 77 originates at Brownsville and generally proceeds north. (b) (7)(E) [redacted]

State Highway 649 originates at US Highway 83 about midway between Roma and Rio Grande City and runs northward out of the sector eventually terminating in Hebbronville on State [redacted] which runs due north to San Antonio.

In Starr County, there are several unpaved roads that originate in the Roma/Rio Grande City area. These roads pass through ranches and eventually connect with [redacted] leading from Zapata to Hebbronville or with [redacted] in Jim Hogg County outside this sector). In part of Starr and Hidalgo Counties, there is also an "[redacted]," which is an unpaved gravel road more or less [redacted] and the International Border.

In Hidalgo and Cameron Counties, there are paved and unpaved roads running both north and south at 1-mile intervals throughout both counties.

The entire riverfront area can be reached by automobile at almost any point in the sector. [redacted] *etc.* Past experience has shown that this practice is very common, and recent cases continue to prove this to hold true. Aliens are also able to [redacted]

There are two railroad lines within the sector. One is the [redacted], which originates in Edinburg. It runs one freight train each

day, 7 days per week, and an additional freight train 4 days per week. Additional freight trains are run during heavy vegetable or fruit shipping seasons. The [redacted], operates a line more or less parallel with [redacted] through the valley from Rio Grande City to Harlingen, where it joins the main line. The [redacted] main line originates in Brownsville and proceeds northward, exiting the sector north of Kingsville. Generally, there is only one freight train each day, northward, except during heavy shipping seasons. There is no rail passenger service out of this sector.

Brownsville, Harlingen, and McAllen have international airports of entry and are also served by commercial airlines.

Harlingen has daily flights by American Airlines to and from Houston; and Southwest Airlines has six daily flights to and from Dallas Love Field. McAllen has six flights by Continental to and from Dallas and Houston. Charter planes are also available at the McAllen, Harlingen, and Brownsville Airports.

There are a number of private aircraft smuggling merchandise from McAllen and Brownsville clandestinely into Mexico and possibly some Central American countries. They appear to comply with all departure and entry regulations, except that their designated destination is usually fictitious and merchandise is usually landed at some point in Mexico.

There is a large amount of aerial spraying and dusting. This is done from small fields and ranch strips located throughout the area. These numerous dusting planes also present hazards to the observation aircraft.

All towns in the Rio Grande Valley are served by the Valley Transit Bus Company. Many of these routes are on a 30-minute schedule. These buses can and do stop at any point along the road to pick up or discharge passengers. The frequency of these schedules and the close proximity of some routes to the border makes it easy for aliens to secure transportation.

Continental Trailways operates daily service out of the valley through Kingsville, Falfurrias, and Rio Grande City, where the buses are checked.

There is an overabundance of taxicabs in each of the towns and villages in Starr and Hidalgo Counties. These taxicabs belong to individuals and small companies and are not organized or policed in any manner. They have few central dispatch points and the drivers, many of them being aliens themselves, are extremely uncooperative. Local authorities allow Mexican taxicabs to enter through the POEs and to transport passengers as far as McAllen,

Pharr, Mission, Weslaco, and Mercedes, Texas; and to pick up the same passengers and return them to Mexico at a later date, if desired. Border Patrol agents have, on several occasions, discovered the drivers of these cabs in violations for which their local cards have been voided.

There are companies (car rental, U-Haul trailer rental, and truck rental) in Mission, Harlingen, McAllen, Brownsville, and Weslaco. These rental companies are contacted regularly by INS Anti-Smuggling Unit (ASU) officers as smugglers regularly move aliens by rental vehicles.

In adjacent areas of Mexico, the only rail line from the interior of Mexico first reaches the border at Camargo. This is the Mexican town adjacent to Rio Grande City. The rail line then closely parallels the Rio Grande River through Reynosa and Rio Bravo and terminates in Matamoros. There are two passenger trains daily to the border area from the interior of Mexico. Freight train schedules are numerous and irregular, depending on the volume of traffic.

Because of the number of freight trains arriving daily, many destitute aliens find it very easy to come to the Mexican border area for an attempted illegal entry into the US. Fares on passenger trains are very low, facilitating the travel to the border by aliens with very little means.

[redacted]

Reynosa and Matamoros are both served by Aeronaves de Mexico with one daily flight to and from Mexico City.

Buses arrive in Matamoros at a rate of approximately one each hour. These buses arrive from Monterey and Ciudad Victoria or downriver from Reynosa. Local buses also run along the paved and unpaved roads paralleling the river on the Mexico side, extremely close to the river throughout the entire area allowing aliens quick, easy, and cheap transportation to any point along the river.

Taxicabs in the adjacent area are numerous, and fares are cheap. They regularly transport persons to points outside the city areas for later surreptitious entry.

Buses arrive in Reynosa from Monterey and Ciudad Victoria at a rate of approximately one each 30 minutes. These buses arrive from Monterey either directly on Mexico Highway 40 or through Ciudad Miguel Aleman, opposite the Port of Roma, and then travel downriver along the road paralleling the river. This last route allows potential surreptitious entrants to disembark at any point along the river without coming into Reynosa. Many also travel downriver from Reynosa to the city of Rio Bravo, a distance of approximately 14 miles. There, they disembark and make their way a short distance to the river for illegal entry.

The most important crop in relation to total farm income is cotton. The only laborers required are irrigators and tractor drivers. Planting is done by large six to eight row planters pulled by tractors, which requires little labor. The first heavy requirement for manual labor comes during the cotton chopping season, which begins about the third week in February. This requirement for labor is being reduced each year as farmers use herbicides for the control of weeds, and, as the mechanical planters become more effective, reducing the amount of thinning necessary.

Irrigated vegetables are raised throughout Starr, Hidalgo, and Cameron Counties and account for the major manual labor requirements in the agricultural field. Much of this labor requirement in "stoop labor" involves weeding, transplanting, and harvesting the vegetables. This is a year-round operation because of the varying seasons of vegetables; however, the need for the greatest number of workers comes between March and June when onions, carrots, lettuce, beets, cabbage, spinach, bell peppers, tomatoes, okra, watermelons, cantaloupes, cucumbers, squash, peas, and beans are normally harvested.

With the elimination of most of the labor required for cotton harvest, and because of this greater need for labor in April, May, and June, the heavy illegal entry period has shifted from July and August to April, May, and June.

The citrus-raising industry requires some hand labor year-round in the form of irrigators and weeders. Many citrus fruit growers have found that chemical weed control is more economical and effective and are using this method instead of hand labor. The only operation that has not been mechanized in the industry is the picking. This must be done by hand and offers considerable employment starting the first of November and lasting through the middle of April. In the ranching areas of the sector, burning the thorns off the prickly pears in order to make it easier for cattle to eat is performed during winter months every year and year-round during extremely dry years when there is little grass. This is work that must be done in remote ranch areas, and it is a very undesirable type of work. For that reason, very few local residents wish to do it, and this offers job

opportunities for undocumented workers. One can expect this operation to continue indefinitely. There is work available year-round building fences, cleaning fence lines, cutting brush, *etc.*

In Brooks and Jim Wells Counties, there is considerable dairy farming where undocumented workers are regularly employed.

The sugar cane industry and harvest, which was discontinued in the Rio Grande Valley about 1921 because of insects and competition from foreign countries, has been reinstated. This crop was started in 1973 with the construction of a processing plant and an initial planting of approximately 28,000 acres. Planting and harvesting is mechanized and only irrigation of the crop offers employment opportunities. The tall, thickly standing crop offers ideal concealment for irrigation workers and aliens walking through the area.

That area of the sector lying north of the Rio Grande Valley is principally devoted to ranching. These are large, privately owned and operated ranches devoted to cattle raising. Labor demands are not great in the ranching industry. The work is considered unattractive by local labor and, consequently, ranchers willingly hire undocumented workers, if available.

Population in that area of the sector outside of the Rio Grande Valley is sparse with few towns or communities. In the Rio Grande Valley, there are many small towns and cities ranging in population from 100 to 70,000. The population of the Rio Grande Valley is approximately 424,600.

Heavy manufacturing is limited to several firms in the Brownsville area. Light manufacturing firms prevail throughout the area, but are limited to the production of small items and food processing. The Brownsville-based shrimping fleet is the nation's largest with more than 600 trawlers.

Agricultural work is seasonal and year-round work is unavailable for some of the agricultural labor force. During the summer months, many of these persons migrate north and east to secure employment.

Tourism is actively promoted by the various Chambers of Commerce in the Rio Grande Valley. The area is increasingly attractive to winter tourists. Income to tourist-related industries in the Rio Grande Valley is estimated at 100 million dollars per year. This creates a demand for service personnel such as dishwashers, hotel workers, maids, and cooks. Most of these positions require little training and are usually lower paid; therefore, they are filled by a number of aliens with "visitor" documents.

## Intelligence

The McAllen Sector Intelligence Section consists of a Supervisory Intelligence Agent (SIA), a Sector Intelligence Agent, an Intelligence Assistant, and a part-time student aide. The SIA is assigned to supervise the Intelligence Section and the Vehicle Seizures Section and normally reports to the Chief Patrol Agent or the Deputy Chief Patrol Agent, but is subject to supervision by any of the five Assistant Chief Patrol Agents. Both personally and through his subordinates, the SIA maintains liaison with local, state, and federal agencies; commissions; departments; and agencies.

The intelligence effort is supported through the use of one detailed agent as Acting Intelligence Agent and the input from collaterally assigned individual Station Intelligence Agents. A major intelligence source is derived from the direct input and cooperation of the patrol agents in charge of each station and the sector Anti-Smuggling Unit. The reports sent in by these various groups constitute the foundation for the intelligence collection chain. The intelligence reports are reviewed and analyzed by the Intelligence Office personnel. The agents then prepare collated intelligence reports for dissemination to the appropriate offices.

[redacted] and Service G-23 and G-623 end-of-month reports for forwarding to the Central Office and the Regional Office. These records are computerized, and the reports are computer generated.

Government reports are maintained and filed in the Records Subsection of the Intelligence Section.

In July 1990, McAllen Sector Intelligence laid the ground work for the Modern Analysis of Traditional Intelligence (MATI) Program. This program is strongly dependent on field sign-cutting intelligence and sophisticated Automated Data Processing (ADP) applications.

The Intelligence Section created and maintains the cross-reference narcotics violator database. This database allows for the immediate retrieval and cross-referencing of information on individual narcotics smugglers apprehended by the sector.

Intelligence personnel are used to assist in the investigation and documentation of unusual situations and incidents. Video and still photography are used to photo-document armed encounter scenes, potential terrorists activities, and potential liability entanglements involving Service personnel. In addition, the video editing skills and forensic photographic skills of section personnel enhance the

sector's ability to better complete its mission. The proactive investigation of leads derived from various sources results in the acquisition and documentation of possible future apprehension information. This section has also acted as the storage and control point for various pieces of evidence involved in both criminal and administrative proceedings.

## Air Operations

The observation aircraft operate between dawn and dusk 7 days per week to provide aerial reconnaissance along the river and avenues of entry into the US from the river. The aircraft are particularly effective in assisting river units in trailing aliens during the early morning hours. Use of the aircraft accelerates work of the ground offices in effecting apprehension of illegal aliens traveling on foot to interior points. Observation aircraft work with farm and ranch check units. In this activity, they locate groups of workers, direct ground units, and maintain surveillance of the area to prevent the escape of illegal aliens.

## Screening and Prosecutions

Aliens apprehended at the stations are usually processed by apprehending agents at those stations. Disposition is usually determined by the respective station's Patrol Agent in Charge (PAIC), and, at times, by apprehending agents on the basis of written instructions by the Chief Patrol Agent (CPA).

The McAllen Screening and Prosecutions Office (responsible for the Falfurrias, McAllen, Mercedes, and Rio Grande City stations) is staffed by two supervisory Border Patrol agents, one clerk-typist, one detailed agent (sent on detail; not permanently assigned), and one student aide.

The Brownsville Screening and Prosecutions Office (responsible for the Brownsville, Harlingen, Port Isabel, Kingsville, and Corpus Christi stations) is staffed by one Supervisory Prosecutions Agent, two Prosecutions Agents, one Warrant Screening Agent, and a student aide.

The Screening and Prosecutions sections review all paperwork forwarded for files opened by Border Patrol agents to ensure that they are in compliance with outstanding policy, instructions, and injunctions. Orders to Show Cause, Warrants of Arrest, Own-Recognizance Releases, and numerous other forms and documents are prepared by these screening and prosecutions sections for administrative as well as criminal cases. The sections are also responsible for the review of all cases forwarded for criminal prosecution to ensure that all the essential elements for the arrest have been articulated and that the arrest was proper. In addition,

they are responsible for the initial preparation and presentation in US Magistrate's Court of all felony and misdemeanor criminal cases. The US Government is represented by these sections in court for bond reduction, detention and discovery hearings, motions (pre-trial), and jury selections. In addition, the units present cases to the grand jury for indictment. The sections ensure that the cases and people involved are transported to their final destinations within a prescribed time frame.

The McAllen Office supervisors are the sector coordinators for the BORCAP. The section provides technical assistance on complex BORCAP cases to all the sector stations.

There are seven detention agents (one assigned to Falfurrias, three assigned to Brownsville, and three assigned to Headquarters) and one supervisory detention agent (assigned to Sector Headquarters) to do all transportation of aliens. The detention agents are assigned a schedule that provides for the most effective removal of aliens to the Port Isabel Detention Facility or for Voluntary Return (VR) at the nearest POE.

Aliens are detained at the Kleberg County Jail, Kingsville; the Brooks County Jail, Falfurrias; the Starr County Jail, Rio Grande City; and the Hidalgo County Jail, Edinburg, Texas.

Presently, there are 10 criminal investigators, anti-smuggling (6 at McAllen and 4 at Brownsville) and 2 supervisory criminal investigators, anti-smuggling (1 at McAllen and 1 at Brownsville) assigned to the McAllen sector.

**Communications System**

The McAllen sector uses the Justice Teletype system with a direct circuit to Washington, DC. Through Washington, the circuit can be connected to any other point in the US that uses the Justice Teletype system.

[redacted]

Sector Headquarters has FM communications with the POE at Falcon, Roma, Rio Grande City, Los Ebanos, Hidalgo, and Progreso, as well as the District Director's Office in Harlingen, and the

Service Processing Center at Port Isabel. This system uses car-to-car, car-to-station, or station-to-station transmissions.

Traffic from McAllen Headquarters for local units is transmitted and received from a [redacted] with an [redacted]

Traffic for Mercedes and McAllen units, which are more than [redacted]

The sector also has a series of transmitters, repeaters, and receivers to communicate the alarm signals from the unattended ground sensors in a separate network.

## Station Operations

All of the regular sector activities of the Border Patrol mentioned in earlier sections of this volume are conducted in this sector. There are presently nine stations in the McAllen sector: Corpus Christi, Kingsville, Brownsville, Falfurrias, Rio Grande City, McAllen, Mercedes, Harlingen, and Port Isabel. The last six listed are responsible for portions of the US/Mexico border.

### Corpus Christi Station

Linewatch function has been performed on Padre Island and the Intracoastal Waterway usually in conjunction with the US Coast Guard or the National Park Rangers at Padre Island. Corpus Christi also conducts boat patrol operations in the Intracoastal Waterway.

### Kingsville Station

The primary reason for the establishment of a Border Patrol station in Kingsville, Texas, was the [redacted]

The Kingsville station is presently manned by 1 PAIC, 4 Senior Border Patrol Agents, 8 Senior Patrol Agents, and 22 Border Patrol agents, including 4 canine handlers. The Kingsville station area comprises [redacted]. A total of three towns are located in the area of assignment, which consists of [redacted] square miles of flat coastal plains. This area has sparse patches of salt grass in the coastal region and live oak and mesquite thickets further inland. Kingsville has a population of approximately 28,800

with the other two towns of Rivera and Sarita, whose population is 700 people.

Kingsville is situated just north of the large farming areas of the lower Rio Grande Valley and south of the metropolitan and industrial regions. [redacted] are the only vehicular routes going north from the Valley area. Kingsville is surrounded by semi-arid ranchland. If not for the Kingsville station, [redacted]

The Kingsville station is a backup station for the McAllen sector and is responsible for maintaining a [redacted]; sign-cutting; farm and ranch check; and Employer Sanctions and BORCAP.

Most of the illegal aliens encountered by this station are in transit, many by using vehicular transportation and some are on foot through the ranchland, from brush thickets to water holes at night, and concealment in the brush thickets during the day. While the semi-arid terrain deters many, it also provides cover for the hardy ones who have a strong motive to attempt the trip on foot.

There are five buses daily from the border area, which connect to all points in the US after proceeding north out of the station area. Thus, there is sufficient public transportation for any illegal alien who might escape apprehension in the border area and wish to go to northern parts of the country.

Patrol, or sign-cutting, has a two-fold purpose: to apprehend aliens walking long distances through the brush in an attempt to reach interior points and to apprehend those who disembark from smuggler vehicles or public transportation a short distance south of the checkpoint, walk around it, and are picked up or reboard public transportation to continue their journey northward.

Normally one or two agents working in separate, radio-controlled four-wheel-drive vehicles commence work at daylight, o[redacted]

[redacted] When tracks are encountered, both units work the "trail" until aliens are apprehended.

As manpower is available, one or two agents perform the same assignments, around the clock. These agents make periodic checks

of [redacted] by searching south and north of the point for suspicious vehicles.

(b) (7)(E) [redacted].

Traffic checkpoint is in operation checking northbound traffic 24 hours per day, 7 days per week, being discontinued only when rain or fog makes its continuance dangerous, or when lack of manpower makes continuance impossible.

Because of recent court decisions, the traffic checkpoints have been limited to one stationary house trailer, which is located [redacted] Texas, on [redacted] and approximately 60 air miles and 64 land miles from the nearest border point. The house trailer is 10 x 52 feet, is air conditioned, and has all radio equipment and a telephone. The new checkpoint is still referred to in court as being the Sarita Checkpoint and is referred to as [redacted] by Service agents. It meets all safety and operational criteria of the *Border Patrol Handbook*. Signs meeting standards of the recently enacted highway safety code have been approved and installed by the Texas Highway Department. Electricity to operate lights and radio is available as is a connection for telephone. Two mercury vapor lights are installed to light the area. A strip of shoulder has been paved by the Texas Highway Department for a safety lane and pull-off area. [redacted] by the ranch.

Normally, two agents are assigned to each of the three daily shifts. At times (on weekends, during heavy migratory labor movements, or on holidays), the volume of traffic requires three and sometimes four agents for parts of the two shifts between 8:00 a.m. and 12 midnight.

The agents alternate in checking vehicles that stop at the checkpoint, and unless the occupants are persons known to the agents, they are advised of a reason for the check—"This is an Immigration Border Patrol Checkpoint"—and inquiry is made about the citizenship of all occupants of the vehicle. Should further interrogation be necessary, the vehicle is pulled over to the side of the road where

the agent who originally commenced the check completes it while the other maintains the checkpoint.

[redacted], monitoring vehicles suspected of being involved in the smuggling of aliens, and checking areas where [redacted] walkers.

Aliens who are apprehended at the checkpoint are usually processed there, and a request is made to the Sector Headquarters for a detention guard to transport them. Otherwise, they are either placed in the Kleberg County Jail at Kingsville overnight or transported to Sector Headquarters by apprehending agents at the termination of their shift.

To efficiently cover the traffic check, 15 agents (3 shifts of 5 agents each) should be assigned 7 days per week, 24 hours per day.

Buses are checked at the checkpoint when it is in operation, or at the terminal in Rivera or Kingsville when the checkpoint is down. When a backup agent is available, he usually [redacted].

One northbound [redacted] freight train pass through the area daily and are checked by the agents assigned to patrol or by supervisory agents. The trains pass within sight of the checkpoint, so that checkpoint agents can give sufficient advance notice for checking.

City patrol activities are carried out when information indicates the presence of illegal aliens in any of the three towns in the area. Less than 0.01% of the major manpower of the station is devoted to this program.

### *Air Operations*

Sector aircraft are available as needed.

### *Liaison-Informant Development*

Because of the size of the Kingsville station area and the type of enforcement programs carried out, this function is more of an integral part of the regularly assigned activities rather than a distinct program to which agents can be assigned.

The traffic check units encourage disclosures of any information that might be of interest to the general public and especially those who frequently travel the routes and are in position to note any

unusual activity by others. This is especially helpful in cases where illegal aliens are concealed in an auto or under equipment in trunks.

Liaison is maintained with local law enforcement officials by all agents. Cooperation is solicited from major ranchers, foremen, cowboys, railroad section crews, and bus and truck drivers. All of these people are in an excellent position to observe actions of possible illegal aliens and movements of suspects who are passing through the area and solicit food and water. They are encouraged to furnish prompt reports of any such activities.

### *Identification and Screening*

Most aliens apprehended at the checkpoints are screened and processed there, as are those apprehended in that vicinity by patrol units. Involved smuggling cases may now be processed at the checkpoint.

The decision to grant voluntary departure or to hold for formal deportation hearing or prosecution is usually made by a station supervisor under criteria set by the CPA. Smuggling cases are discussed with a sector supervisor for a decision about disposition.

Detention agents, from Sector Headquarters, usually make daily pickup of aliens for movement to the Service Processing Center for a deportation hearing, for voluntary departure to the interior by bus lift, for prosecution, or to Hidalgo for local voluntary return.

### *Special Programs and Activities*

Litigation accounts for 5% of the man-hours spent.

### *Intrusion Detection*

[redacted]. The signals from these sensors are received at McAllen Sector Headquarters and relayed to sensor teams. Sensor signals are also monitored with a portable monitor when the checkpoint is in operation.

## Brownsville Station

Linewatch is the most important single activity in the Brownsville station's operation. It is the first line of defense against the surreptitious entry and illicit smuggling activity. The greatest portion of the station's complement is directed to meet this threat and the greatest number of apprehensions result from its successful application. It is the most effective means of preventing the escape of the surreptitious entrant into the interior of the US. During

normal operations, 23 agents are assigned to the day shift, 18 agents to the evening shift, and 3 agents to the midnight shift. A Senior Patrol Agent is always assigned with each of the shifts.

[redacted] Most signs of illegal alien traffic found during these hours are reported to the day shift and an all-out effort is made to overtake the suspect. The Service aircraft is used at this time to assist in placing the ground crews on proper roads and trails and in locating the suspect or putting him into hiding for a time sufficiently long so that the sign-cutting units are able to overtake and apprehend him.

[redacted]

**Falfurrias Station**

The Falfurrias station is located at 904 East Rice Street (Highway 285), Falfurrias, Texas. (b) (7)(E) [redacted] which accounts for the bulk of narcotics seizures in the McAllen sector.

Sign-cutting is done daily 7 days per week. Manpower permitting, two agents are assigned on duty each day, commencing work at daylight. Four-wheel-drive vehicles equipped with radios are used as transportation for these agents. They start just south of [redacted]. They continue working southward in this manner until they either encounter tracks of aliens or until the [redacted] is reached. Should the tracks of aliens be encountered, both agents concentrate on following the trail until the aliens are apprehended.

On the west side of US Highway 281 both a power line and an underground gas pipeline more or less parallel the highway at distances varying from 2 to 10 miles. [redacted]

[redacted]. The station agents also perform a ranch check in connection with their duties.

While most of the ranch gates in the area are locked, [redacted] installed on the gates. Cooperation among the ranchers is normally good. It has improved because Border Patrol agents assisted Sheriff's officers in apprehending an illegal alien who had murdered a ranch worker.

Sector aircraft normally make an early morning reconnaissance of the area and assist in sign-cutting. The walkie-talkie radios are very valuable and useful in this work, because agents must walk at times for several miles through the sandy areas.

For adequate control of brush walkers, six agents per day should be assigned to sign-cutting.

***Intrusion Detection***

[redacted]

**Rio Grande City Station**

The s[redacted]

Along the Rio Grande River, there is a narrow belt of flat valley land, a small amount of which is devoted to irrigated farming from Falcon to Roma. From Roma, downriver to the eastern boundary, this flat valley increases in width somewhat to 4 to 5 miles and the majority of it is devoted to irrigated vegetable farming. During the past 3 to 5 years, several thousand acres of brushland in the western section of the county has been root-plowed and reclaimed for agricultural use. It is not irrigated, and cotton and grain sorghum is grown there. The remainder of Starr County is rough, rolling, low, hilly brush-covered, arid ranch country. There are no streams, and water for the ranching operations comes from either wells or reservoirs created by damming up the many large dry

gulches known locally as "arroyos." Much of the area is caliche and shale and is covered with brush, wild olive trees, and prickly pear. The northern and northeastern parts are more sandy, and there is some dry land farming of cotton, grain, sorghum, and watermelons. There are small communities located along the entire area immediately adjacent to the river and along US Highway 83.

The elevation at Falcon Dam is 323 feet above sea level, while that at the eastern boundary of the sector, La Grulla, on the Rio Grande River, is 14 feet above sea level.

In adjacent Mexican areas along the river, there is a very narrow strip of flat valley farmland. The remainder is rolling, brush-covered, rocky hills. Two rivers, the Alamo and the San Juan, empty into the Rio Grande River, one near Roma and the other near Rio Grande City. At a distance of about 14 miles south of its junction with the Rio Grande River, the San Juan River has been dammed to form the Marte Gomez Lake, approximately the same size as Falcon Lake. The Rodeo Canal, a large gravity canal, carries irrigation water from this lake downriver, more or less paralleling the river at distances of 10 to 14 miles.

[redacted] the presence of agents in the area is required. Its distance from McAllen or Laredo makes it [redacted] This was the original reason for establishment of the station, and it still holds true. An office to serve the administrative needs of the station; furnish space for holding and processing apprehended aliens; for preparation of reports; for holding conferences; and for contact with the public, made necessary the construction of the present building.

### *Topographical Enforcement Problems*

The [redacted]. Water is released at irregular intervals from Falcon Dam for irrigation and for generation of electricity at the Dam, causing the river level to fluctuate daily.

This fluctuation often washes out tracks of aliens who have crossed illegally. There being little farming activity along the river, and consequently few agricultural opportunities for illegal aliens, a majority of those who cross in this area either attempt to walk northward and eastward to reach interior points; or are part of an organized smuggling operation with an interior destination. The hilly, brush country with soil composed mostly of caliche and shale makes sign-cutting difficult in most areas.

While the northern and northeastern sections of the County are more sandy, sign-cutting is difficult there also due to the fact that the wind often blows out tracks in the loose sand. There being very few sources of water in the area, aliens who walk northward and eastward, follow routes from windmill to windmill because these mills can be seen from great distances and there is usually water available at each. This fact assists agents in sign-cutting operations.

***Transportation***

(b) (7)(E) [redacted] In the extreme western portion of the county, an unpaved road known locally as the "Loma Blanca Road," originates at US Highway 83 about 5 miles west of Roma and runs northward through the area, terminating on State Road 649 in Jim Hogg County. State Road 649 originates at US Highway 83 about halfway between Roma and Rio Grande City and runs northward through the area, terminating at State Highway 359 between Laredo and Hebbronville, Texas.

[redacted] originates at Rio Grande City and runs northeast to a termination with [redacted] 24 miles south of Falfurrias, Texas. At a point about 30 miles north of Rio Grande City, Texas, [redacted] intersects with [redacted] runs from that point northward to Hebbronville, Texas. Throughout the area are numerous dirt roads that run from ranch to ranch, which can be traveled by persons familiar with the area. Using these roads, it is possible to travel from the immediate border area into the Hebbronville/San Diego area, and from there, to any point inland.

The Missouri Pacific Railroad operates a rail line that carries unscheduled freight traffic from Rio Grande City to McAllen. There have been no problems in connection with this rail system.

There is no air service into the area and though there are a few aerial applicator planes and other private aircraft using the Starr County Airport as well as several air strips on ranches in the area, no problem has been encountered in connection with them.

The Continental Trailways Bus Company operates four daily schedules: two eastbound and two westbound buses through the area, stopping to pick up and let off passengers at any point along the route. These buses are periodically checked at [redacted] but little problem of illegal aliens riding this line has been encountered.

From the Port of Falcon and the Mexican town of Nuevo Guerrero, a paved road runs upriver to the towns of Parras and Nuevo Laredo, Mexico. From the Port of Roma and its adjacent town of Ciudad Miguel Aleman, a paved road runs 90 miles south to Monterrey, Mexico. A paved road [redacted], passing through the towns of Nuevo Guerrero, Mier, Ciudad Miguel Aleman, and Camargo. [redacted] "Brechas" (or unpaved roads or trails) run southward at mile intervals to the Rodeo Canal.

Buses operate locally on 30-minute schedules between Ciudad Miguel Aleman and Reynosa; and on one-hour schedules between Reynosa, Ciudad Miguel Aleman, and Monterrey.

The only rail line from the interior of Mexico first reaches the border at Estacion Camargo, about 10 miles south of Rio Grande City. It then parallels the border downriver closely throughout the remainder of the area. Two passenger trains arrive daily from the interior, as do several unscheduled freight trains. Aliens regularly ride both.

### *Programs and Activities*

#### *Linewatch*

Linewatch is extremely difficult in this area because there are many small settlements or ranches along both sides of the river, the inhabitants of which are relatives by either marriage or blood, and most of whom are either involved in alien or contraband smuggling or are sympathetic to it. They do not cooperate and often actively oppose Border Patrol operations by [redacted].

Because of the many miles of riverfront for which the station is responsible, advance information is almost a necessity to successfully combat alien smuggling. [redacted].

### *Traffic Check*

Traffic leaving the border area within the Rio Grande City's area of responsibility is checked at a permanent checkpoint site. It has been recognized by Federal Judge Reynaldo Garza, of the Brownsville Division-Southern District of Texas, as a "functional equivalent of border search points," as set forth in the court's Almeida-Sanchez decision.

The checkpoint is operated in full compliance with the Fifth Circuit Court's Speed-Ranier decision. Agents do not conduct searches of car trunks, closed trucks, trailers, *etc.*, without probable cause. They confine themselves to the inspection of the person's citizenship, or if an alien, his right to be in or remain in the US. Further investigation, such as search of the vehicle, is only undertaken where probable cause exists, or is developed, during the initial investigation.

The traffic checkpoint is located on [redacted], Texas. The site is [redacted] from the nearest border point. It is in an area—and along a route—[redacted]

Toward the south, [redacted] Also, there is a confluence of [redacted] immediately south of the checkpoint site. From this point, [redacted]

The traffic checkpoint is maintained 16 hours per day, manpower permitting, except for periods when weather conditions make it unsafe. All northbound vehicles are stopped and checked as traffic only averages about 110 vehicles per a 24-hour period.

No commercial bus traffic travels this route. Two agents, per shift, man the checkpoint and the hours of operation are varied to avoid a pattern, which could be determined in advance by potential smugglers or immigration law violators.

### *Air Operations*

Border Patrol aircraft and pilots are dispatched from Headquarters in McAllen to the Rio Grande City area on a daily basis. These aircraft have proved to be an invaluable asset in coordinating ground activities during linewatch and sign-cutting operations and

are also used effectively for aerial surveillance of smugglers' vehicles and other Border Patrol stations, as needed.

### *Intrusion Detection*

[redacted] are used along the riverfront areas most receptive to illegal entry. Additional devices are placed at strategic points along known routes of travel in order to establish valid patterns. Readouts from these devices are transmitted to a base console in McAllen, Texas. [redacted]. Numerous apprehensions of undocumented aliens and several narcotic seizures have been brought about by these sensor alerts.

[redacted]. Agents periodically check these areas to determine if illegal entry has occurred.

### *Communications*

Communications are either by telephone or by FM radio. There is an [redacted]. There is an [redacted] that enables the base station or mobile units in the area to communicate with Sector Headquarters and car to car. This unit is installed on a Service-owned tower located on leased land. Power is furnished by Central Power and Light Company. The Texas Department of Public Safety also has a repeater on this tower. [redacted]

[redacted].

## McAllen Station

The area of responsibility of the [redacted]

[redacted]

[redacted]

[redacted] This area contains approximately [redacted] miles. The northern half of the county is sandy, flat country with a few rolling hills covered mostly by mesquite, chaparral brush, and prickly pear. The southern half is flat, irrigated land, sloping gently toward the Rio Grande River. It is irrigated to about 14 to 20 miles north of the Rio Grande River and to a point about 6 miles west of the city of Mission. From that point westward, the land is more hilly, with a caliche-type soil, covered with mesquite, ebony, wild olive, black brush, and prickly pear. The only water comes from irrigation canals pumped from the Rio Grande River or from a few wells. The majority of this area is classed as alluvial deposit and although there are 27 different soil types, the most predominant is heavy, sandy loam.

In the extreme [redacted], the area is rather hilly and has numerous dry gulches called "arroyos," which carry heavy runoff water during rainy periods. This area is mostly devoted to ranching. The northern half of the area is devoted mostly to ranching, although some dry land farming is done.

Through the center part of this area, there are numerous towns at a distance of from 3 to 10 miles from the international border commencing with [redacted]. From that point to the western boundary, there are several small towns along a parallel line with the border. There is a heavy concentration of population along [redacted], which runs through these towns.

In the adjacent Mexican area, almost the entire area immediately adjacent to the river is irrigated farming area, flat, with very little vegetation. The city of Reynosa, which is immediately adjacent to the Hidalgo/McAllen area, is one of the largest cities in the entire Mexican area with a population of about 200,000. The topography of that area is very similar to that on the US side.

In the extreme western section, the Mexican town of Miguel Aleman is adjacent to the US Port of Los Ebanos. Miguel Aleman is the first border stop near the river for the only rail line reaching the border from the interior of Mexico. Many aliens disembark at that point. In addition, in the same general area, many of the residents

have, in the past, worked as ranch hands under the Contract Labor Program in the ranches northward from that area in Starr, Jim Hogg, and Brooks Counties. There is very little farming done on the US side in this same area. The terrain is generally rough and dry and is used almost entirely for ranching.

There is a [redacted]

All of these facts tend to cause aliens entering in this area to attempt to escape by walking north and east, rather than attempting to secure work locally. The sparsely settled, dry country makes sign-cutting somewhat difficult.

The Anzalduas Dam, which is about 12 miles upriver from the Port of Hidalgo, backs up water almost to the Port of Los Ebanos, making crossing in that area more difficult. For that reason, crossing from about 5 miles below Los Ebanos to the Anzalduas Dam is very light and is done only occasionally by boat.

In the city of Reynosa, which is adjacent to the Port of Hidalgo, the "red light" zone, in which the registered prostitutes are concentrated, is located about 1/2 mile upriver from the Port of Hidalgo at the very edge of the river. This fact causes inebriated aliens or [redacted]

The city of Reynosa has residences along the riverbank for approximately 2 miles; and the [redacted]. There are numerous buildings and population immediately adjacent to Reynosa and the US City of Hidalgo. The fact that these two populated areas are immediately adjacent to each other along an area that can be crossed at any point, causes this to be one of the heaviest crossing points in the entire station area.

Anzalduas Canal, which commences at Anzalduas Dam on the Mexico side, runs through the City of Reynosa and more or less [redacted] along the entire [redacted]. This large, concrete-lined canal carries enough water and is deep enough that it cannot be waded and persons who might try to swim it find that they cannot climb up the slanting, wet, concrete sides. For that reason, it is crossed only at bridges. Below Reynosa, for a distance of approximately [redacted], there are no bridges. For this reason, crossing is light after reaching a point about [redacted] below Reynosa to a point where the first traffic from these two bridges can reach the river.

On the US side, downriver about 10 miles from the Port of Hidalgo, is a large, wooded area that has been set up as the Santa Ana National Game Refuge. The eastern edge of this Refuge more or less coincides with a point on the Rio Grande River [redacted]

The Mexican town of Rio Bravo, which is the second largest in the area, with a population of about 100,000 is the hub of agricultural activity in the entire adjacent Mexican area. Many hundreds of migrant laborers from various points of Mexico, regularly come into this town. [redacted], to have usually heavy illegal entry traffic.

Except for the Santa Ana Game Refuge and one small spot just below the Anzalduas Dam, most of the brush along the riverfront on the US side has been removed and farming continues to the riverbank. [redacted]

Commencing at the bridge at the Port of Hidalgo, there is a canal belonging to the Pharr Water District, which carries enough water to prevent persons wading across it. This canal runs north and east for about 3/4 of a mile, turns due east for about 1 mile, and then due north along 2nd Street in McAllen to Pharr. [redacted]

[redacted]

The [redacted] when seeking to make their entry.

The fact that most of the brush and trees have been removed from the immediate riverbank on the US side makes [redacted]

[redacted]

### *Transportation*

[redacted], depending on the curvature of the river. [redacted] enters the station area through its [redacted], running west for about 12 miles paralleling the Rio Grande River at distances from 2 to 4 miles, turns northward through the cities of Pharr, Edinburg, and San Manuel, and leaves the station area at its [redacted]. At a point about 30 miles north of the International Boundary, [redacted]. This divides the station area into about half. The southern half of the area is crisscrossed by roads running north and south and east and west at 1-mile intervals. Many of these roads are paved.

[redacted]. In addition, because of the heavy population belt along US [redacted]

[redacted]

The Missouri Pacific Railroad runs east and west throughout the entire station area, paralleling US Highway 83. This line has no passenger services and because of its east/west direction of travel, seldom is used by illegal aliens and, therefore, presents no enforcement problem. This line also runs a spur line from McAllen to Hidalgo, but it is seldom used by illegal aliens because it makes no connection other than the east and west line, and has, to date, posed no problem.

The Southern Pacific operates a rail line for freight only from Edinburg north, paralleling US Highway 281. Illegal aliens sometimes use this route of escape, but because it is extremely difficult to check freight trains effectively while in the freight yards, which are located in Edinburg, Texas, and because there is no stop from

Edinburg to the northern boundary of the station area, very light freight train checking is required. Agents occasionally work in the freight yards and regular sources of information are maintained there. These trains are checked at the Falfurrias station.

The McAllen Miller International Airport is located in the City of McAllen. Continental Airline schedules inbound and outbound flights daily. The outbound flights are checked periodically by McAllen station agents along with sources of information maintained in the ticket office.

Taxicabs from Reynosa, Mexico, are allowed to enter the US at the Port of Hidalgo and bring fares into the cities of McAllen, Pharr, and Mission. They are also allowed to pick up these same fares at a later time the same date and return them to Reynosa. Because they bring large groups on one trip and because there is no regulation of the numbers that they may haul at one time, their fare is extremely low per individual and many local cardholders coming to the US to work take advantage of this transportation. Several cases have been encountered where the local cardholder returned his local card to Mexico by these taxi drivers.

Valley Transit Bus Company operates 30-minute schedules along numerous routes both east and west throughout the area. Some of these routes are within sight of the international boundary. The schedules operate both in the daytime and at night and will stop and pick up fares at any point along the route. Illegal aliens regularly take advantage of this easy means of escape from the immediate border area. Because most of the drivers are either aliens themselves or of Mexican origin, very little assistance is received from them. Union Bus Lines operates three schedules per day inbound and outbound from McAllen westward through Mission to Laredo. These buses travel along US Highway 83 and will stop and pick up fares at any point. They are checked periodically by the Rio Grande City station, but, to date, have been used very rarely by illegal aliens. Continental Bus Lines operates six inbound and six outbound schedules from McAllen to points north. These buses are all checked at Falfurrias so no problem exists at this station.

### *Special Problems*

The false claim to citizenship problem expressed in the Sector Operations discussion also exists in this area.

### *Linewatch*

The control and assignment of agents engaged in this activity is under the overall supervision of the station senior patrol agent. A Senior Patrol Agent assigned to the various daily shifts assumes the immediate responsibility of direction and supervision of

available manpower. The number of agents used fluctuates as the station strength varies.

The McAllen station has approximately 70 sensor units installed at strategic crossing points along the Rio Grande River in the area of responsibility. Under ideal circumstances, one or more additional units would be installed as backup units to existing implants and [redacted], which is located at Sector Headquarters and manned on a 24-hour basis. [redacted]

[redacted]. The 30 miles of drag roads are patrolled continuously to discourage possible illegal entrants and to gather intelligence data to be used, or passed on, as information to be used by subsequent agents who may be assigned in the same area.

During daylight hours, [redacted] in a radio-equipped vehicle and an additional hand-carried walkie-talkie, with assistance always being close by. [redacted]

The day line watch unit is responsible for the entire river area and usually enters on duty shortly before dawn in order to be on the river area by daylight. On both day and night river linewatch, apprehensions are usually transported to the Unit Office and processed for removal, either at the time they are transported or at the end of the tour of duty, depending on manpower availability.

Observation aircraft is used in a very effective manner in conjunction with the linewatch and sign-cutting activities.

In the western part of the station area, sign-cutting is done starting at dawn along predetermined routes paralleling, and at a varying distance from, the river. These routes are changed as the alien's walking pattern changes.

### *Transportation Check and City Patrol*

Because Cuban and other OTM aliens have been found in air transports out of the area, departures of commercial aircraft are checked at regular intervals. Informants have been developed at the McAllen Miller International Airlines and at the various travel agencies in the city.

City patrol and transportation check are combined and should have 11 agents assigned in order to effectively cover the activity.

[redacted]

No general patrol of residential areas or indiscriminate check of private homes for domestic servants is done. The only time that agents go to private homes to search for domestic servants is in response to specific information.

Agents work information received concerning illegal aliens and make periodic checks of hotels, restaurants, motels, tortilla factories, and other service and commercial industries for illegal aliens. They maintain liaison with police departments and other agencies that are able to furnish information. They are also responsible for daily check of the Hidalgo County Jail in Edinburg.

***Liaison-Informant Development***

The station maintains liaison with police departments, the County Sheriff's office, Constable offices, and city and county officials throughout their area of Hidalgo County. They also maintain good relations with the Department of Agriculture (DOA) river riders in their station area.

Hundreds of commuters and US citizens enter the US each morning at the Port of Hidalgo where they are met by vehicles that take them to the fields to work. In this group are always illegal aliens using false or altered documents. The most practical and positive manner to identify these illegal aliens is to infiltrate parolees into the movement. Numerous illegal aliens are caught weekly and good false claims cases made regularly.

In order to monitor incoming transportation media in Reynosa and detect plans for smuggling or illegal entry, informants are placed in bus and train stations to mingle with and watch incoming passengers and report on their movements.

There are certain routes along which illegal aliens regularly walk in an attempt to pass through the sector or reach the northern areas of the sector. While some assistance is received from residents along these routes, this is not sufficient; therefore, informants are placed, in some instances without the knowledge of the employer, in

strategic points to report on this traffic. They, and sometimes the employer, report by telephone as time is usually critical to this type of information.

In a few ranches, farms, and small communities, it has been impossible to develop sources of information because of the animosity of individuals or because the local residents are usually inter-related and will not report a neighbor or relative using illegal labor. Informants are placed in these areas, without the knowledge of anyone, to report illegal aliens. Time is usually not critical as the illegal alien is usually employed. This operation has enabled the Border Patrol to apprehend numerous illegal aliens on several large ranches and farms before they have worked more than 1 or 2 days.

Aliens given voluntary departure will usually be carried to the POE at Hidalgo by the apprehending agents or by the detention agent, if one is available.

***Intrusion Detection***

Oil-impregnated [redacted]

[redacted], too, in busy crossing areas. These enable linewatch agents to more effectively cover the area.

Of the sector-wide [redacted] this station has approximately 65 units installed at strategic points, which greatly expand the coverage. The [redacted]

**Mercedes Station**

The Mercedes station is bounded on the south by 24 miles of the Rio Grande River; on the east from the Rio Grande River north along the Hidalgo/Cameron County Line to the [redacted] he western boundary commences at the intersection of State Highway 186 and Brush Line Road and continues south on Brush Line Road to Farm-to-Market Road 1925; east on 1925 to Val Verde Road; south on Val Verde Road to State Highway 107; east on Highway 107 to Farm-to-Market Road 1423 (known as Valley View Road); and then south on Valley View Road to the Rio Grande River to a point known as "Rancho Viejo."

The two primary activities of the station have always been linewatch (along its boundary) and Farm and Ranch Check.

The entire area is a flat, intensely farmed area, sloping gently from north to south to the Rio Grande River. There are no streams in the area, and the area and the soil is considered an alluvial deposit with sandy, loam-type predominant.

The Rio Grande River is extremely crooked along the entire area and can be [redacted]. Most ground cover, such as brush and trees, has been removed from the western boundary to about 2 miles below the Port of Progreso, and farming activities extend to the riverbank in most areas. From about 2 miles below Progreso to the station's boundary, there is a belt of brush and trees along the river for a distance of about 1 mile.

There are [redacted]. The termination of the [redacted] is well within a point opposite the Mercedes station area. [redacted]

The only other Mexican town of any size in the Mercedes station area is Las Flores, which is adjacent to the Port of Progreso. This is a mushrooming town, which has bus service from Matamoros, Rio Bravo, Reynosa, and Valle Hermoso. In front of Las Flores, the River is very shallow and can be crossed at any point.

(b) (7)(E) [redacted] The area on the US side is devoted to irrigated farming of vegetables and cotton, citrus, sugar cane, dryland farming of sorghum, grain and to livestock raising.

There has always been a heavy demand for manual labor in the US area and there has always been an oversupply of this type of labor in the adjacent Mexican areas. The difference in the economy of the two areas, with hourly wages in the US being approximately eight times those in Mexico, has always created an atmosphere that encourages illegal entry.

This area was too far removed from either the Brownsville or McAllen stations to effectively do either linewatch or Farm and Ranch checks and for that reason, a station was, and is, necessary.

A group of as many as 27 agents require certain administrative functions and supporting facilities such as space for alien holdover, space for alien processing, space for agents to prepare reports and hold conferences, *etc.*, thereby justifying the establishment of an administrative office for the station.

### *Topographical Enforcement Problems*

A topographical feature, which is most detrimental to enforcement in the area is the [redacted].

Another problem is the fact [redacted].

The Arroyo Colorado floodway running north/east contains a relatively deep body of stagnant water that acts as a barrier.

In the adjacent Mexican areas, there is considerable brush and tree cover along the riverbank, affording concealment of aliens planning illegal entry. The [redacted]

### *Transportation*

[redacted]

All three of these highways carry heavy traffic and have a heavy population belt along the entire distance. State Road 107 traverses the area east to west at a distance of about 17 miles from the international boundary. It also has a heavy population belt along its entire area.

[redacted] These roads provide a handy access to the

international boundary for persons wishing to pick up illegal aliens, in addition to providing escape routes where an individual vehicle can lose itself in heavy traffic. Traffic checking is almost an impossibility.

The only rail service in the station area is the Missouri Pacific east/west freight service paralleling US Highway 83. (b) (7)(E) [redacted]

There is no airline service into the area. There are numerous aircraft landing strips located on farms and ranches throughout the area and many dusting aircraft make trips into Mexico in their aerial application program. One case developed within recent years wherein a pilot engaged in aerial spraying transported an illegal alien from the US to Mexico by aircraft.

The Valley Transit Bus Company operates 30-minute schedules both day and night, running east/west and north/south throughout the entire area. These buses will stop and pick up passengers at any point along the route and furnish a ready means for illegal aliens to make their escape. Continental Bus Lines operates east and west schedules along US Highway 83.

***Linewatch***

The Mexican city of Rio Bravo, which is located directly across the river from the western boundary of the Mercedes station, is a gathering point for a large floating population.

The [redacted]. The town of Las Flores, located immediately adjacent to the Port of Progreso, has 30-minute daily bus service from Matamoros, Reynosa, Valle Hermoso, and Rio Bravo. The Rio Grande River can be crossed at almost any point along the area. Because of these facts, (b) (7)(E) [redacted]

[redacted]

The agents assigned to day linewatch work alone in radio-equipped vehicles. They usually commence work in time to be on the river at daybreak. They check assigned sections of the approximately 16 miles of drag strips along the edge of the river for tracks of aliens

who have made illegal entry. Upon finding tracks, they alert other agents in the area to assist them in following the trail until the alien is apprehended.

Located at distances varying from 1/2 to about 2 miles from the river, and roughly paralleling it, is a levee that is part of the drainage system. This levee is maintained in generally good condition, without weeds, by the International Boundary Commission and is a "made to order" drag strip. After working the drag strip along the river, agents back up and work along this levee looking for tracks.

[redacted], which are cleared out by agents going off duty around midnight. [redacted] by the day crew as soon as possible after working the [redacted]. When a track is found, agents call by radio for the assistance of aircraft in searching for the alien.

The agents assigned to night linewatch duty normally commence work about 2 hours before dark; and they are assigned general areas of responsibility. Working alone in a radio-equipped vehicle, they usually scout these areas along the riverbank and along sign-cutting drag strips. At dark, they combine into two-agent units to guard an assigned watch point. These are usually [redacted] areas, *etc.*

Should the agents discover suspects on the Mexico side while scouting the immediate river area, be informed by the observing aircraft of the presence of suspects, or receive sensor information indicating a watch point other than that assigned needs attention, they contact the senior patrol agent by radio for instructions. They have the latitude to proceed on their own judgment, if timing and circumstances demand.

When apprehensions are made, the respective shift's supervising agent is advised by radio and arranges for pickup and processing.

***Intrusion Detection***

[redacted]. The station has approximately nine units of the sector-wide [redacted] installed at strategic points.

## Harlingen Station

Linewatch is one of the major responsibilities of the Harlingen station. During FY 1978, 39% of the total productive hours of the station were devoted to linewatch. [redacted]. Personnel assignment and hours of assignment are continuously altered to meet changes in trends of illegal crossers. [redacted]

Sign-cutting is a closely integrated part of linewatch. A ready-made drag strip is provided in the river area; this is a flood control levee that extends from the west-end to the east-end of the station's territory. Secondary cuts are worked on various country roads and cleared trails that border canals, levees and other waterways. These secondary cuts are strengthened through the use of [redacted] on many tributary [redacted].

Linewatch operations are organized into morning and evening shifts, with manpower assigned according to availability and need.

In the morning, agents working separately in radio-equipped vehicles start work sufficiently early to be on the river at daylight, where they commence scouting and sign-cutting at the east and west ends of the station's area of responsibility and work toward the center. Should either agent encounter tracks, they usually join up to follow the trail. When intelligence dictates, these agents start work at the earlier hour indicated and hold early morning still-watch at suspected crossing places.

The evening shift usually starts work about 2 hours before dark, with agents working separately in radio-equipped vehicles. Depending on the number of agents available, definite portions of the river area are assigned to each. This area is scouted, looking for tracks or suspects on the Mexico side. At dark, they join into pairs and hold stillwatch at points previously assigned by the Senior Patrol Agent, or if scouting and sign-cutting has indicated a change, at other points.

Aliens apprehended are usually picked up by the evening Senior Patrol Agent or held in the vehicle until the end of the shift when they are processed.

A log is maintained in which the linewatch shifts note river activity and information for use by other shifts.

Agents also check field workers encountered in the area between the Military Highway and the river.

Manpower is assigned to Farm and Ranch Check on the basis of need, which varies with the season and availability.

The station's area of responsibility has been organized into numbered areas, and agents are assigned certain areas daily to ensure coverage and to eliminate duplication.

Agents usually work in teams of two, in radio-equipped vehicles. Hours are varied to suit the need for various phases of farming activity. Working with an aircraft, when available, all laborers in the assigned area are checked.

Because irrigation is done at night, as well as during the day, special assignments for checking specific farms at night are made as this work offers favorable job opportunities for undocumented aliens. In all cases possible, without compromising the operation, the owner, foreman, or person in charge of the farm or ranch is advised of the presence of agents on the property.

Agents assigned to farm/ranch check inspect laborers employed in all agricultural, construction, and other pursuits encountered in their assigned areas.

Transportation check includes checking departing commercial aircraft from the Harlingen Airport. Presently, there are 68 Southwest Airlines flights daily. Flights are assigned to one agent working in plainclothes. This agent will also maintain liaison with persons working the Valley Transit and Continental Trailways Bus Terminals to check activities of potential violators using buses for lateral movement within the Valley area.

Missouri Pacific and Southern Pacific northbound trains depart the Valley area from Harlingen, and it is necessary to conduct checks before departure to prevent undocumented aliens from using the train to leave the Valley.

***City Patrol***

Agents continuously strive to maintain good relations with employers in the area; and through these efforts, the station has maintained excellent communications and cooperation with the employers and their employees. Employees are checked away from employment when possible to reduce embarrassment to those that are citizens or are legal and also to reduce potential incidents.

Taverns and other night-time hangouts that are known to be frequented by undocumented aliens are checked systematically.

Because of the various activities of the program, varied hours are necessary.

Daily liaison activities are conducted with Federal, State, and local officials throughout the station's area of responsibility as a part of city patrol, farm and ranch check, *etc.* Informants from among the local populace are being used and the development of this type of informant is presently being stressed.

Aliens to be given voluntary return are processed in the field where possible and taken in groups to the POEs at either Brownsville or Progreso.

Aliens to be held for prosecution or deportation are usually processed at the station office and taken to the Port Isabel Service Processing Center. Transportation is by detention agents from Sector Headquarters.

***Intrusion Detection***

The use of electronic sensor devices are employed in linewatch activities in the river area. Also available at this station are night [redacted], which are portable and can be moved as the need dictates.

The station has five units of the sector [redacted] installed at strategic locations.

Approximately 12 detector units of the sector-wide [redacted] are installed at points within the station area where activity is heaviest. Alerts from sensors are relayed by repeater to the central console at Sector Headquarters and disseminated by FM radio to Brownsville field units. Linewatch units rely heavily on this system to augment riverfront coverage and accomplish their mission more effectively.

## Port Isabel Station

The station area is mostly bordered by water. It is surrounded on the [redacted]. All waterways are host to recreational boating and commercial fishing and are teeming with people from all walks of life with diverse nationalities.

Immediately to the north of the Port Isabel station is the Laguna Atascosa Wildlife Refuge and the Cameron County Airport. To the extreme north and outer fringes of the station area is the Port Mansfield Cut, which slashes through Padre Island and provides for

access of fishing vessels to the town of Port Mansfield on the coast. Also in this area is the community of Arroyo City, which, as of late, has become a shrimp farm "boom" area, investment by Taiwan businessmen being the impetus. To the east, lie the major and busiest communities of the area: Laguna Vista, Laguna Heights, Port Isabel, and South Padre Island. In the immediate area and to the west is mostly developed farmland, which produces cotton, sugar cane, and an abundance of citrus. Within this same area are the small farming communities of Laureles, San Carlos, and Las Yescas; they are but a speck on the map and of no consequence to station operations. The towns are not incorporated townships and contain no real commercial businesses, other than an occasional small grocery store owned and operated by local residents. The people of these communities are mostly impoverished, unskilled farm workers. The southernmost portion of the station's area is adjoined by the Rio Grande River and the Intercoastal Waterway. Assigned to the station is a 10-mile stretch of river, beginning from the mouth of the Rio Grande River and proceeding west.

Two major roadways proceed from the Brownsville border area toward the Port Isabel station area. [redacted], which parallels the Intercoastal Waterway, leads to the Port of Brownsville, the Brownsville Shrimp Basin, and finally to Port Isabel, at its end. This road is heavily used by undocumented aliens seeking a direct route to the shrimp boat work in the Shrimp Basin and Port Isabel. They employ hitchhiking, walking, and bus transportation as means to their final destination.

The second major road is [redacted], which leads northward to Corpus Christi, Texas, from the Brownsville station area. This road is a major artery in the lower Rio Grande Valley and is also heavily used by alien smugglers. The nighttime hours, as in most places, are notorious for smuggling activities. Smugglers prefer exiting the Brownsville area during change of shifts in an attempt to drive through on [redacted] when buses or the nightly freight train are being checked, this in an effort to lessen the potential of apprehension by Border Patrol agents.

The larger communities in the Port Isabel station area are mainly "dead end" locations, in that they are not located along a route that leads to bigger, farther north towns. Port Isabel, South Padre Island, Laguna Heights, and Laguna Vista are bordered by the Laguna Madre and thus provide a natural deterrent to further travel. At present, no smuggling cases have been discovered that involved the use of boats en route to interior points. The Laguna Madre area however, is otherwise bustling with illegal activity.

Despite being "dead end" locations, these areas do attract aliens seeking jobs. The strongest magnet in the area is that of the unskilled labor market, shrimp boat work that mainly deals with

the deheading of shrimp on vessels out at sea. Other jobs as maids attract mostly young females who care for children and maintain households. In contrast, although South Padre Island is highly populated by top rate hotels, only a few cases of employment of undocumented maids have arisen. All businesses have been checked and most employees have been found to be legal. IRCA in this area has been successful to a great extent.

The station is also responsible for a large area of the Rio Grande River. This area starts at the mouth of the river and proceeds west for 10 miles. These 10 miles are [redacted], but will produce vast numbers of apprehensions when worked on a regular basis.

The area of responsibility and the great number of apprehensions throughout has solidified the need for the Port Isabel station. The Brownsville station is inundated with river crossings and will undoubtedly continue to miss many of the possible apprehensions. The Harlingen station faces an enormously large patrol area as well and is burdened by many activities that prohibit ample coverage in all areas. The end result has been a gap between the two neighboring station areas, which Port Isabel has successfully filled.

### *Topographical Enforcement Problems*

The large amount of water in the area is both good and bad. While it is a natural "corral," it is also a hindrance to illegal alien apprehension. For example, because of manpower constraints, if an agent is checking one dock area and views undocumented aliens across the channel on another dock, he must drive around the water to the other dock. This takes time and affords the illegal aliens the opportunity to escape.

### *Roadways*

Expressway 77 is presently undergoing major renovation. Overpasses are being constructed at intersections, and the roads are being repaved. Upon completion, this will create a very fast roadway and will hamper vehicle stops.

### *City Patrol*

At present, the majority of apprehensions are generated by patrolling both land and coastal borders. Routinely, agents patrol local communities and docks on coastal waters and channels, as well as highways and Farm-to-Market roads. They apprehend aliens who are on foot, domiciled in residences, or employed in businesses. Unique to Port Isabel station is the examination of the shrimp boats and the many IRCA sanctions cases generated. Aliens

on any shrimping vessel are "programmed" to deny employment for fear of jeopardizing their future employment opportunities. Agents must be extremely proficient in the interrogation process and must allot time for proper investigations.

City patrol also involves patrolling Expressway 77 for alien smuggling operations. Some smuggling activities involve small unorganized operations that deal with aliens being transported to local townships. Other activities involve more sophisticated arrangements to major cities. These cases involve either transportation from Brownsville or Port Isabel to the Harlingen Airport or to south of the [redacted] Such cases involve a great deal of investigation, interrogation, and paperwork. As jail space and the US Attorney permit, these cases are presented for prosecution to the Federal Magistrate in Brownsville.

The Laguna Madre offers the potential to be highly productive. With only the Coast Guard operations to oversee the Gulf of Mexico, the waterways are virtually untamed. A pilot canine program coupled with routine patrolling of the local waters by the currently authorized boat will soon actively address the problem.

### *Boat Patrol*

Port Isabel and Corpus Christi are the only stations in the McAllen sector that conduct boat patrol. The present vessel, acquired from the DEA by virtue of a seizure in a drug arrest, is a 23-foot Wellcraft with a 150-horsepower inboard/outboard motor. Presently, three station agents have completed the Marine Law Enforcement boat school at the Federal Law Enforcement Training Center (FLETC) in Glynco, Georgia. On a periodic basis, they conduct boat patrol operations in the boat dock areas.

### *Transportation Check*

There is a transportation check, consisting of examination of the Valley Transit Buses, centered in the small expressway town of Olmito, Texas. This town is situated in the Brownsville/Harlingen "gap" and has produced a large number of alien apprehensions. Most of the aliens apprehended are local Mexican border crossers, but a distinct trend of Central American apprehensions has always been commonplace. These apprehensions increase as the news media reports a worsening situation in Central America. Especially productive have been US holidays, when it is expected that Border Patrol operations would be curtailed for that day.

### *Communications*

Communications are provided by telephone and FM radio. There is an 80-watt transceiver installed in the station office. Low-powered Channel 1 is used for local contact with mobile units, and the higher-powered Channel 2 is used to communicate to other parts of the sector through the Faysville Repeater.

## Recommendations

General recommendations that are common to all of the sectors are given after the San Diego sector write-up. These general recommendations are then followed by sector-specific recommendations.

# Laredo Sector

## Introduction

The Laredo sector includes 10.6% (172.5 miles) of the total Southwest Border. The Laredo sector has averaged about 75,000 apprehensions per year for the last 2 years. During FY 1990, 498 narcotics seizures occurred with a value of $120,300,000. FY 1991 seizures had already reached 345 by July.

## Operational Environment

### Terrain

The [redacted]. There are numerous small Mexican settlements along the Rio Grande River with a large population concentrated near Laredo, Texas. The Laredo sector includes a total of 116 Texas counties extending north to the Oklahoma border.

There are 172.5 linear miles of border in the Laredo sector. Those miles are composed of

92.0 miles of rolling brushland
43.0 miles of reservoirs
22.5 miles of farmland
15.0 miles of urban flat.

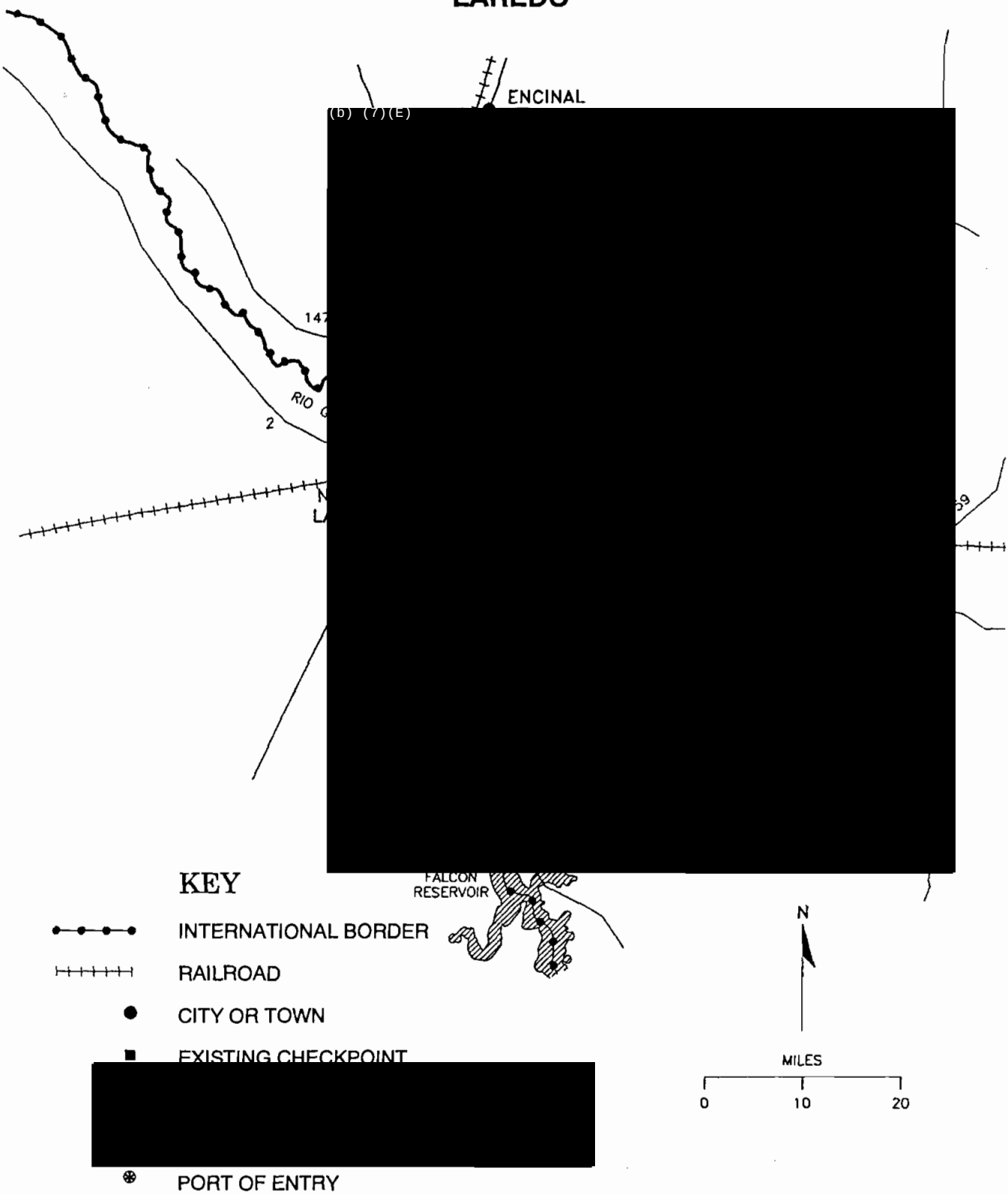
A map of this sector is shown on the following page.

### Climate

The climate in the sector is semi-tropical along the river. The altitude is 160 feet above sea level. The average yearly temperature is 76°F (average January temperature 62°F, average July temperature 87°F), and the average rainfall is 19 inches.

| | J | F | M | A | M | J | J | A | S | O | N | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High (°F) | 66 | 70 | 75 | 80 | 86 | 90 | 93 | 93 | 93 | 89 | 75 | 68 |
| Low (°F) | 47 | 51 | 56 | 63 | 69 | 74 | 75 | 75 | 72 | 65 | 55 | 49 |
| Rainy days | 8 | 7 | 6 | 5 | 6 | 5 | 4 | 5 | 8 | 6 | 6 | 6 |

# LAREDO




***Map of the Laredo Sector***

## Available Resources

The Laredo sector has 330 agents and 40 nonagent support personnel assigned to eight Border Patrol stations within the sector. The sector also possesses intrusion detection, communications, information control and display, and assessment equipment (some for day and some for night use). Some of the obsolete equipment has recently been replaced. The new equipment recommended will augment and upgrade the sector's existing physical protection equipment inventory. Mention of most of this equipment is not included; however, in a few cases, specific sensor or camera locations are discussed.

## Threat

All of the types of threat mentioned earlier in this report exist in this sector. The threats appear to be balanced among the types of threats mentioned.

Destinations for the undocumented aliens are normally the large metropolitan areas in Texas such as [redacted], and [redacted] These three areas are regarded as centers for alien smuggling activity and serve as distribution centers for the smugglers. A vast majority of all aliens smuggled from the [redacted] areas are transported to one of these three areas where they are [redacted]. After payment is received, the smuggled alien will be released and at that time will either continue his/her journey by public transportation or will remain in the city and search for employment.

Smuggled aliens and nonsmuggled aliens alike use various modes of transportation to further their entry into the US. In an effort to combat this activity, the Laredo sector has implemented checkpoint operations on most of the highways leading away from the border area. Each checkpoint location is operable 24 hours per day. This type of operation requires a great amount of manpower and other resources. [redacted] Employer Labor Relations (ELR)/Sanctions agents, or Border Patrol Criminal Alien Program (BORCAP)/ Immigration and Naturalization Service Criminal Alien Program (INSCAP).

The checkpoint locations throughout the sector are the most effective tool in controlling and intercepting undocumented aliens. The checkpoints deter undocumented aliens from using public transportation (such as the bus) and travel bureau vans. The checkpoint locations cause a bottleneck for the smugglers, which allows sign-cutters and backup units more time to make

apprehensions. [redacted]

Special Operations Units (such as stakeouts based on intelligence, special tactical operations, *etc.*) have been extremely successful in remote areas of the sector. These units require trained and experienced agents. This type of activity acts as a siphon from the existing manpower resources of the sector. Special Operations are an effective and valuable part of sector activities.

A major problem affecting the control of the border in the Laredo sector is the heavy influx of aliens and smugglers using the [redacted] and the [redacted] as a means of leaving the border area. The Laredo sector freight train check operation has been the most productive in the southern region. The Laredo North, [redacted] and San Antonio stations take active roles in this particular activity.

Linewatch and sign-cutting crews are at best minimal in the Laredo sector. Because of limited manpower and a decayed fleet, many of the [redacted]. The sector sensor equipment is used to the maximum; however, most of the equipment is old and continues to break down. [redacted].

Narcotics seizures and armed encounters continue to increase annually. This increase is due to enhanced checkpoint operations and sign-cutting teams assigned to all major arteries leaving the Laredo area.

The operations brief of the Laredo sector indicates that the principal movement of aliens and/or contraband out of the sector is by the following routes:

- (b) (7)(E) [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

## *Contact with Suspects*

The information presented in the tables below is the compilation of the Border Patrol agents' contact with illegal aliens and/or drug traffickers and the amounts of drugs confiscated.

| Contact w/Suspects: | Jan '90 | Feb '90 | Mar '90 | Apr '90 | May '90 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien | 7,493 | 7,918 | 10,624 | 8,528 | 7,897 |
| Drug-Related | 61 | 89 | 72 | 63 | 103 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 5,128.1 | 5,499.60 | 3,648.69 | 6,333.3 | 5,490.79 |
| Cocaine (oz) | 1.4857 | 2,423.431 | 11.5001 | – | 0.212 |
| Heroin (oz) | 0.28 | – | 0.001 | – | 14.018 |
| Other (oz) | 0.21 | 0.71 | – | 25.57 | 18.5 |
| Number of Confrontations: | | | | | |
| With Armed Persons | 7 | 5 | 2 | – | – |
| Assaults on BP Agents | 3 | 5 | 2 | – | – |

| Contact w/Suspects: | Jun '90 | Jul '90 | Aug '90 | Sept '90 | Oct '90 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien | 7,812 | 9,185 | 8,533 | 6,352 | 4,715 |
| Drug-Related | 61 | 30 | 51 | 50 | 16 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 2,291.1 | 2,173.35 | 3,424.26 | 1,504 | 9,862.64 |
| Cocaine (oz) | 0.102 | 0.002 | 25.37 | 16 | 0.27 |
| Heroin (oz) | – | 0.087 | 8 | 0.03 | 10.5 |
| Other (oz) | – | 863 | 0.002 | – | 0.06 |
| Number of Confrontations: | | | | | |
| With Armed Persons | 3 | 2 | 4 | 3 | 12 |
| Assaults on BP Agents | 3 | 2 | 4 | 2 | 5 |

| Contact w/Suspects: | Nov '90 | Dec '90 | Jan '91 | Feb '91 | Mar '91 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien | 3,825 | 3,287 | 5,096 | 5,897 | 8,747 |
| Drug-Related | 64 | 71 | 43 | 73 | 75 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 3,664.16 | 6,858.66 | 2,745.33 | 5,029.96 | 1,897.74 |
| Cocaine (oz) | 0.008 | 0.0965 | 0.001 | 0.005 | 0.028 |
| Heroin (oz) | 0.251 | | 0.03 | – | 0.07 |
| Other (oz) | 0.357 | 13 pills | – | 259 | 15 pills |
| Number of Confrontations: | | | | | |
| With Armed Persons | 7 | 8 | 7 | 5 | 2 |
| Assaults on BP Agents | 1 | – | 1 | – | – |

| Contact w/Suspects: | Apr '91 | May '91 | Jun '91 | Jul '91 | Aug '91 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien | 7,614 | 7,319 | 6,686 | 6,350 | 6,968 |
| Drug-Related | 33 | 22 | 16 | 24 | 64 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 1,145.37 | 311.62 | 106.03 | 667.85 | 4,151.66 |
| Cocaine (oz) | 0.53725 | – | 0.0043 | 0.016 | 0.006 |
| Heroin (oz) | – | 10.54 | 4.34995 | 0.385 | – |
| Other (oz) | 737 | – | – | – | 0.25 |
| Number of Confrontations: | | | | | |
| With Armed Persons | – | – | 3 | 2 | 4 |
| Assaults on BP Agents | 2 | 1 | 2 | 4 | 2 |

| Contact w/Suspects: | Sept '91 | Oct '91 | Nov '91 | Dec '91 | Jan '92 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien | 5,789 | 4,876 | 3,649 | 3,009 | 6,375 |
| Drug-Related | 52 | 36 | 71 | 59 | 42 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 2,053.75 | 2,734 | 4,878 | 5,782 | 4,883 |
| Cocaine (oz) | 61.7554 | 8 | 8,912 | 37 | 0.084 |
| Heroin (oz) | | 24 | – | 0.08 | – |
| Other (oz) | 32 | – | – | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | 3 | 7 | 15 | 2 | 2 |
| Assaults on BP Agents | – | 4 | 1 | – | – |

| Contact w/Suspects: | Feb '92 | Mar '92 | Apr '92 | May '92 | Jun '92 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien | 6,187 | 8,632 | 7,129 | 6,910 | 5,567 |
| Drug-Related | 52 | 39 | 50 | 48 | 47 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 6,375 | 4,945 | 3,604 | 2,361 | 4,312 |
| Cocaine (oz) | 0.215 | 0.002 | 480 | 3 | 13,288 |
| Heroin (oz) | – | 10 | – | – | – |
| Other (pills) | 9,911 | 10,000 | 59 | 500 | 3,006 |
| Number of Confrontations: | | | | | |
| With Armed Persons | 5 | 5 | 3 | 3 | 3 |
| Assaults on BP Agents | 1 | – | 1 | – | 1 |

| Contact w/Suspects: | Jul '92 |
|---|---|
| Number of Arrests: | |
| Illegal Alien | 5,935 |
| Drug-Related | 91 |
| Illegal Drugs Confiscated: | |
| Marijuana (lb) | 2,756.1 |
| Cocaine (oz) | 209.921 |
| Heroin (oz) | 0.07 |
| Other (pills) | 928 |
| Number of Confrontations: | |
| With Armed Persons | 4 |
| Assaults on BP Agents | – |

## Sector Operations

The Laredo sector encompasses 116 counties and covers 101,439 miles of southwest and northeast Texas. The [redacted] and international boundary. The Laredo sector is situated between the Del Rio and Marfa sectors on the west and the McAllen sector on the southeast. The northern boundary extends to the [redacted] The sector contains large metropolitan areas such as San Antonio, Dallas, Fort Worth, and Houston. Outstations are as much as 435 miles from Sector Headquarters. The most distant point from Sector Headquarters to the other boundary is 565 miles. Air Operations is responsible for the support of the stations and their agents within this area.

There are approximately 172.5 miles of riverfront between the northwest point of the intersection between Webb County Line in the Rio Grande River and the southeast corner of Zapata County at a point on Falcon Lake near Falcon Dam.

### Current Operations

The activities that the Laredo sector performs include most of those listed earlier in this volume, with emphasis on traffic check/ surveillance, linewatch, patrol, sign-cutting, sensor response, and freight train check.

The Laredo sector has linewatch responsibility for the border extending from the [redacted] to [redacted] Texas. Throughout the Laredo sector, the border is delineated by [redacted]

In spite of the relatively rough country surrounding the Laredo sector, illegal alien apprehensions are the third highest in the nation, after San Diego and El Paso.

The chief reason for this high volume of illegal alien traffic is the proximity of the border towns of Laredo, Texas, and Nuevo Laredo, Mexico. Because Laredo is the only metropolitan area of consequence on this stretch of the border, the overwhelming majority of the sector's illegal crossings take place in its vicinity. In fact, 75% of the crossings in the 172.5-mile Laredo sector are along the 6 miles of border that separate the centers of the two border cities.

Approximately 40% of the illegal aliens apprehended by the Border Patrol in the Laredo sector are caught in the Missouri-Pacific Railroad freight yards as they attempt to board northbound freight cars. In 1987, a record was set when nearly 500 illegal aliens were removed from a single train.

[redacted]

[redacted]In 1987, 18 illegal aliens were found dead inside a locked railroad car left on a siding near Sierra Blanca, Texas.

All of the regular sector activities of the Border Patrol mentioned in the earlier section of this volume are conducted in this sector.

There are presently eight stations in the Laredo sector: Laredo North, Laredo South, Hebbronville, Cotulla, Freer, Dallas, San Antonio, and Zapata.

## Air Operations

The Laredo Sector Air Operations is located in Hanger 3, 730 Flightline Drive, Laredo International Airport, Laredo, Texas. It comprises one hanger with approximately 10,000 square feet of floor space and an additional office/shop area of 2,000 square feet. At present, manpower consists of one air operations supervisor, five journeyman aircraft pilots, and one aircraft mechanic. The aircraft fleet consists of two light observation helicopters and three fixed-wing single engine light planes.

## Station Operations

### Laredo North Station

The [redacted]. The present number of personnel assigned to this station is 114. The following is a breakdown of the activities performed by Laredo North agents.

***Responsibilities***

- Prevention of illegal entries along [redacted] and all enforcement activities in this area
- Transportation check involving commercial air flight and bus departures
- [redacted]
- [redacted]
- City patrol in Laredo
- Special Operations
- Employer Sanctions
- INSCAP
- Sign-cutting and farm and ranch activities in the area.

***Checkpoint Operations***

The necessary manpower to effectively operate the traffic checkpoint on [redacted] is five agents and one supervisor per shift. Three backup units are needed to support the [redacted] checkpoint operations effectively. [redacted]. Another [redacted] Four agents are needed to work both sides of the checkpoint. They would be positioned on [redacted]. The checkpoint is operational

24 hours per day, 365 days per year. A total of [redacted] per day is needed to effectively cover all phases of the checkpoint.

One canine unit could also be effectively used per shift at all checkpoint operations.

***Linewatch Operations***

[redacted]

***Sign-Cutting Operations***

Five sign-cutting units of [redacted] per unit cover the sign-cutting operation effectively. Four of the units cover the [redacted] side of [redacted] One unit covers the [redacted] side of [redacted]. Most of the [redacted] that is where manpower concentration is needed. The sign-cutting units follow and work alien traffic [redacted], Texas area. A total of [redacted] per day is needed to effectively cover all the brush traffic in the assigned area.

***Freight Train Operations***

Sector personnel feel that to effectively monitor all the night trains, 20 agents [redacted] These agents would work the two night trains. The day trains would be checked by the local teams and some of the river unit teams. A total of 20 agents per day is needed to check all night trains leaving the Laredo area. An inspection area, which has already been proposed, is needed where all the trains could be checked. The proposed inspection area is at the 22-mile marker on [redacted]. The inspection area is approximately [redacted] and would assist tremendously in removing all the illegal aliens from all the trains leaving the Laredo area.

We believe that the inspection zones (explained in greater detail in the General Recommendations at the end of this volume) will allow the operations to be performed with six to eight agents.

***Local and City Patrol Operations***

[redacted] each are needed to handle all the local duties, which consist of airport check, city patrol, and response to police calls if needed. [redacted] will work the downtown

area on foot patrol with the Laredo Police Officers during daylight hours. The two remaining teams will check all outgoing flights at the airport and also respond to other local illegal alien traffic.

### *Toll Road Proposal*

With the opening of the new Laredo-Colombia Solidarity Bridge, a toll road has been proposed. The toll road will start at the Mines Road and extend north to Highway 83 North. This road would provide illegal alien traffic with another avenue of escape because the I-35 checkpoint will be bypassed. If the toll road becomes a reality, it will be necessary to establish another checkpoint where all traffic leaving the Laredo area through this particular road could be checked. The traffic must be checked on a 24-hour basis. Four agents are needed to work the checkpoint, one backup unit of two agents to provide support for the checkpoint, and one two-agent team to work illegal alien traffic [redacted]. A total of 24 agents could be effectively used to cover the toll road.

### *Equipment*

The Laredo North station presently has only one camera to scan the river area. The camera is mounted at the [redacted], which is basically on the [redacted]. [redacted] are needed at this station. [redacted] of the [redacted] from the [redacted] These [redacted] could be placed [redacted] of the [redacted] This would allow the area to be monitored and illegal aliens and smugglers who are [redacted] to be apprehended.

Approximately [redacted]) are implanted in the ground in the area. An additional [redacted] are needed to cover all of the remaining area. The additional sensors would allow [redacted] to be monitored.

A tractor can be used to maintain all of the drag roads for sign-cutting operations. This tractor could also be used to maintain the inspection area when it is complete and could be used by all of the stations in the Laredo sector.

## Laredo South Station

### *Responsibilities*

The major responsibilities of the Laredo South station are prevention of illegal entries along [redacted]

The enforcement activities include many of those listed in the Programs and Activities Subsection of the Operational Environment Section of this volume. Checkpoint activities are a major priority for this station.

### *Linewatch*

This is the activity that requires the most manpower of the station. At least 25 active crossings are located in the Laredo South station area. These stretch from [redacted]. At least 16 two-agent units are estimated by station personnel to be needed to fully control the river area 24 hours per day, 365 days per year. In addition, a four-agent unit is needed in the area of the [redacted] and in the area of the two Ports of Entry (POEs) and the railroad bridge. The new trade and commerce agreement with Mexico will attract thousands of people to the Nuevo Laredo area.

Agents are also assigned to the special operations unit who normally work in [redacted], planning special tactics for a given operation, and realigning sensors from inactive or burned out areas to new productive ones.

## Hebbronville Station

### *Responsibilities*

The Hebbronville station is responsible for all enforcement activities in [redacted]. The activities are similar to those described in the McAllen sector.

### *Duties*

The types of duties performed at the Hebbronville station, ranked by the number of man-hours devoted to the activity not necessarily by productivity, are listed below:

- Traffic checkpoint – The permanent traffic checkpoint on [redacted] is maintained 24 hours per day.

- Traffic check observation – Although the Rio Grande City station is charged with the coverage of [redacted] has historically provided 24-hour roving patrol coverage. This highway accounts for approximately 80% of the alien and narcotics smuggling cases apprehended by the station.

- Sign-cutting/area control – Establishing permanent check-points on [redacted]. They must now [redacted] their loads [redacted], increasing their risk of apprehension.

  The Hebbronville station area consists of 2,900 square miles, which is laced with well-established routes for alien foot traffic, such as the many [redacted]. The use of electronic personnel intrusion devices (sensors) although antiquated, greatly increases the coverage of the area while reducing the man-hours required to apprehend walkers.

- Transportation check – Transportation check is limited to the Greyhound and Valley Transit Bus Lines and the Texas-Mexico freight train that passes through Hebbronville daily *en route* from Laredo to Corpus Christi, Texas. It normally consists of more than [redacted] and requires at least [redacted] agents to properly check it.

- ELR/Sanctions – Two agents are presently assigned to ELR/Sanctions. They are charged with both educating employers and referral cases discovered while aliens are being processed, and it is learned they have been employed.

- BORCAP – Two agents are assigned to BORCAP duties. They handle all criminal aliens convicted in Jim Hogg and share Duval County with the Freer station. Hebbronville has one of the more aggressive BORCAPs in the sector. In addition, they handle all aliens who are discovered to have criminal records.

- Intelligence Program – All agents are charged with intelligence-gathering responsibilities. Two agents are designated as station intelligence agents and are charged with the responsibility of gathering, analyzing, coordinating, and disseminating all intelligence gathered by the station agents and sector intelligence agents.

The Texas-Mexico freight train is checked daily in [redacted]. It normally has in excess of [redacted] cars. The amount of time allowed for train check is from [redacted] because of stringent schedule requirements.

Agents assigned to ELR/Sanctions, BORCAP, Intelligence, Drug Awareness, Prosecutions, Sensors, the Tri-County Task Force, Explorer Post Advisors, and Special Operations will be drawn from the manpower pool.

***Communications***

Although the Hebbronville station is limited in its area of responsibility, there are large portions that are [redacted]. There needs to be a [redacted]. Farm-to-Market [redacted] is the most productive highway in the area, yet, on occasions, [redacted]

Communication is also [redacted] Texas area. The McAllen sector has an [redacted] Texas, [redacted] of their area of operation. The [redacted] When Hebbronville agents need to communicate with the sector, they must use the [redacted] It would be only logical for Laredo to share the use of the [redacted] and decreasing the operation/maintenance costs.

***Fence Cutters***

South Texas is a network of oil industry service roads. A knowledgeable person [redacted]l. The more adventurous, without keys, simply cut fences and drive across country, circumventing checkpoints or areas where the Border Patrol normally maintains a Roving Patrol unit. With the proper sensor equipment, many of these major routes could be monitored.

[redacted]

Organized smuggling organizations have traditionally [redacted] Their pickup points are on [redacted] and they continue their journey north using the [redacted] Upon arrival at the intersection of [redacted]

[redacted] they have the option of continuing east to [redacted] or turning north on [redacted] The last few miles of the [redacted] have been paved, allowing traffic to travel at highway speeds. This makes it possible for units from [redacted] to respond to [redacted] Therefore, units must be on location or nearby to respond to the detection unit's alerts and traffic entering [redacted], which does not have detection devices.

[redacted]

[redacted] connects [redacted] It is only [redacted] long, but is used repeatedly by smugglers of aliens and narcotics to circumvent the [redacted]. Loads are either walked or driven to [redacted] west of [redacted] and picked up near the [redacted]

Traffic entering [redacted] north arrives by many routes.

- [redacted]
- [redacted]
- [redacted]
- [redacted].

There is currently a detection device on the highway which, while useful, is unreliable because of the large number of ranchettes on the highway and because local traffic sets it off. A low-light-level camera would be beneficial to maintain control of this highway.

### *Traffic Check Facility*

With the addition of a proper awning, the present facility can be used as an all-weather checkpoint, allowing the inspection of vehicles 24 hours per day, 365 days per year.

## Cotulla Station

### *Responsibilities*

The Cotulla station is responsible for all enforcement activities in [redacted]. The activities include most of those listed earlier in this volume.

The Cotulla station is primarily engaged in the following activities: train check, traffic observation, bus and freight check, and sign-cut operations. A breakdown of the manpower needs for each activity is as follows:

- Train check – [redacted] agents minimum per shift per day
- Traffic observation (including bus and freight check) – Two agents per shift per day
- Sign-cut operations – [redacted] agents per shift per day.

## Freer Station

### *Responsibilities*

The Freer station is responsible for all enforcement activities in [redacted] Counties. The activities include most of those listed earlier in this volume.

The primary operations of the Freer station are to provide 24-hour per day enforcement in a five county area. This includes all of [redacted] The station is located in Freer, Texas, on Texas Highways 44, 65 miles east of Laredo and 85 miles west of Corpus Christi. A permanent traffic checkpoint is located at the intersection of [redacted] approximately [redacted], Texas. The area is mostly open ranch and farmland and oil-field-related industries. The centers of population are Freer, Tilden, Three Rivers, George West, Mathis, Orange Grove, Alice, San Diego, and Benavides, Texas.

The area is traversed by the following routes: [redacted] and numerous county and ranch roads. There are two railroads, the Union Pacific and Texas-Mexico, as well as eight major oil and gas pipelines running north and east through the area. [redacted]

The operations performed by the station are fixed and roving traffic check, sign-cutting and sensor response/maintenance, city patrol, transportation check, train check, liaison/intelligence with other agencies, ELR/Sanctions, BORCAP, drug awareness presentations, special operations, and details.

## Dallas Station

### *Responsibilities*

The Dallas station is responsible for all enforcement activities in 51 counties in the state of Texas. [redacted]y. The activities include most of those listed earlier in this volume.

The Dallas station concentrates its enforcement efforts in three main areas: area control, the criminal alien program, and sanctions enforcement.

All voluntary-return Mexican aliens are removed by way of a daily bus run between Dallas and Laredo. Dallas District Office detention officers meet Laredo sector detention officers in Austin, Texas, to shuttle the apprehended aliens back to Laredo for voluntary return. The Dallas station does not have any detention officers assigned to the station. All deportation cases are handled by the Dallas District Office and are housed in contract jails or placed in service processing facilities.

## San Antonio Station

### *Responsibilities*

The San Antonio station is responsible for all enforcement activity in 20 counties in the state of Texas. [redacted] The activities include most of those listed earlier in this volume.

The San Antonio station has concentrated its efforts on aliens traveling to interior destinations and concentrations of indigent alien laborers. Employer Sanctions and the Criminal Alien Programs have been addressed when manpower and workload permit.

San Antonio is a center for aliens who cross the border from Brownsville to El Paso, Texas, and who are continuing onward to points north or east.

### *Transportation Check – Bus*

In the past 3 years, San Antonio agents have apprehended 3,564 undocumented aliens traveling to interior destinations on buses. This is generally accomplished working one 8-hour shift. If two agents were assigned to each shift 7 days per week, apprehensions would obviously double or triple. Agents assigned to the bus station would also be available to perform interior enforcement duties in the downtown area when no buses are arriving or departing. By maintaining a presence 24 hours per day, the concentration of

illegal aliens in the downtown area could be controlled and, as an additional benefit, petty crimes such as auto burglaries, purse snatching, assaults, and robberies by indigent aliens would be controlled.

***Transportation Check – Train***

During the past 3 years, San Antonio agents have apprehended 4,714 illegal aliens traveling on freight and passenger trains in San Antonio. This is accomplished with an average of three agents per day checking only those trains arriving during daylight hours. Trains arrive and depart from San Antonio 24 hours per day, and to properly check each train will require a minimum of six agents per shift for three shifts each day.

Two major rail lines serve San Antonio, the Southern Pacific and the Union Pacific, and each has numerous arrivals and departures each day.

When not actively engaged in checking trains, agents would be free to work interior enforcement activities in the San Antonio area.

***Traffic Check – Observation***

Two major traffic arteries leave San Antonio and go north and east, [redacted]. In the past 3 years, 803 illegal aliens have been apprehended on these two highways. This figure is extremely low because of the station's limited resources to cover these highways. The majority of the time, only one one-agent unit is available for the activity in a 24-hour period and less than 2 working days per week are devoted to this program. However, two major narcotics seizures and two lesser ones have been realized during this period.

***Interior Enforcement***

The San Antonio station has three major metropolitan areas within its area of responsibility; San Antonio, Austin, and Houston. All of these cities have large populations of indigent alien laborers who are not being addressed by INS investigators. These concentrations create numerous problems for local law enforcement agencies and citizenry, and the Border Patrol Interior Enforcement Units are a major solution to this problem.

The San Antonio station apprehended 5,598 illegal aliens in this activity during the past 3 years. These apprehensions were primarily aliens who concentrate on street corners seeking day labor jobs until they can earn enough money to move on to interior destinations.

### *Employer Sanctions*

During the past 3 years, the San Antonio station has produced over 200 Employer Sanctions cases.

### *Border Patrol Criminal Alien Program*

The San Antonio station's BORCAP has been limited to five rural counties by agreements with the San Antonio District Office. This program has produced 63 criminal aliens and has been handled as a collateral duty by an agent.

With the additional counties—some of which are in the Houston District—it is unknown at this time whether an additional agent would be necessary. Most likely this will continue to be handled as a collateral duty by an agent.

### *Alien Removal*

The San Antonio station currently uses the San Antonio District's Detention and Deportation Unit to remove apprehended aliens. The District Unit only works the day shift and leaves alien removal to Border Patrol agents after hours, on holidays, and on weekends. This hampers current operations and would be unacceptable if proposed expansion of manpower is realized.

### *Justification*

Border Patrol operations are 24-hour operations and the speedy removal of detainees is essential to a smooth operation. It is also fiscally more prudent to remove aliens rapidly than to encourage detention costs.

## Zapata Station

### *Responsibilities*

The Zapata station is responsible for all enforcement activities in the [redacted] The activities include most of those listed earlier in this volume.

The [redacted].

There are four highways leading out of [redacted] (US [redacted] that are used by alien and drug smugglers to gain entry into the US. Control of these highways can be achieved with the correct amount of personnel and equipment.

There are approximately [redacted] that bound Mexico with areas as wide as 2 to 3 miles to the international markers.

## Recommendations

General recommendations that are common to all of the sectors are given after the San Diego sector write-up. These general recommendations are then followed by sector-specific recommendations.

# Del Rio Sector

## Introduction

The Del Rio sector includes 9.4% (154 linear miles) of the total Southwest Border. The Del Rio sector has averaged about 39,000 apprehensions per year for the last 2 years. During FY 1990, 50 narcotics seizures occurred at a value of $100,400,000. FY 1991 seizures had already reached 70 at a value of $66,000,000 by July.

## Operational Environment

### Terrain

The [redacted]. There are a few Mexican settlements along the Rio Grande River and large populations concentrated near the Texas cities of Del Rio and Eagle Pass.

There are 154 linear miles (river frontage 205 miles) of border in the Del Rio sector. Those miles are composed of

- 90.5 miles of rolling brushland
- 27.5 miles of reservoir
- 25.5 miles of farmland
- 5.5 miles of urban flat
- 5.0 miles of mountains.

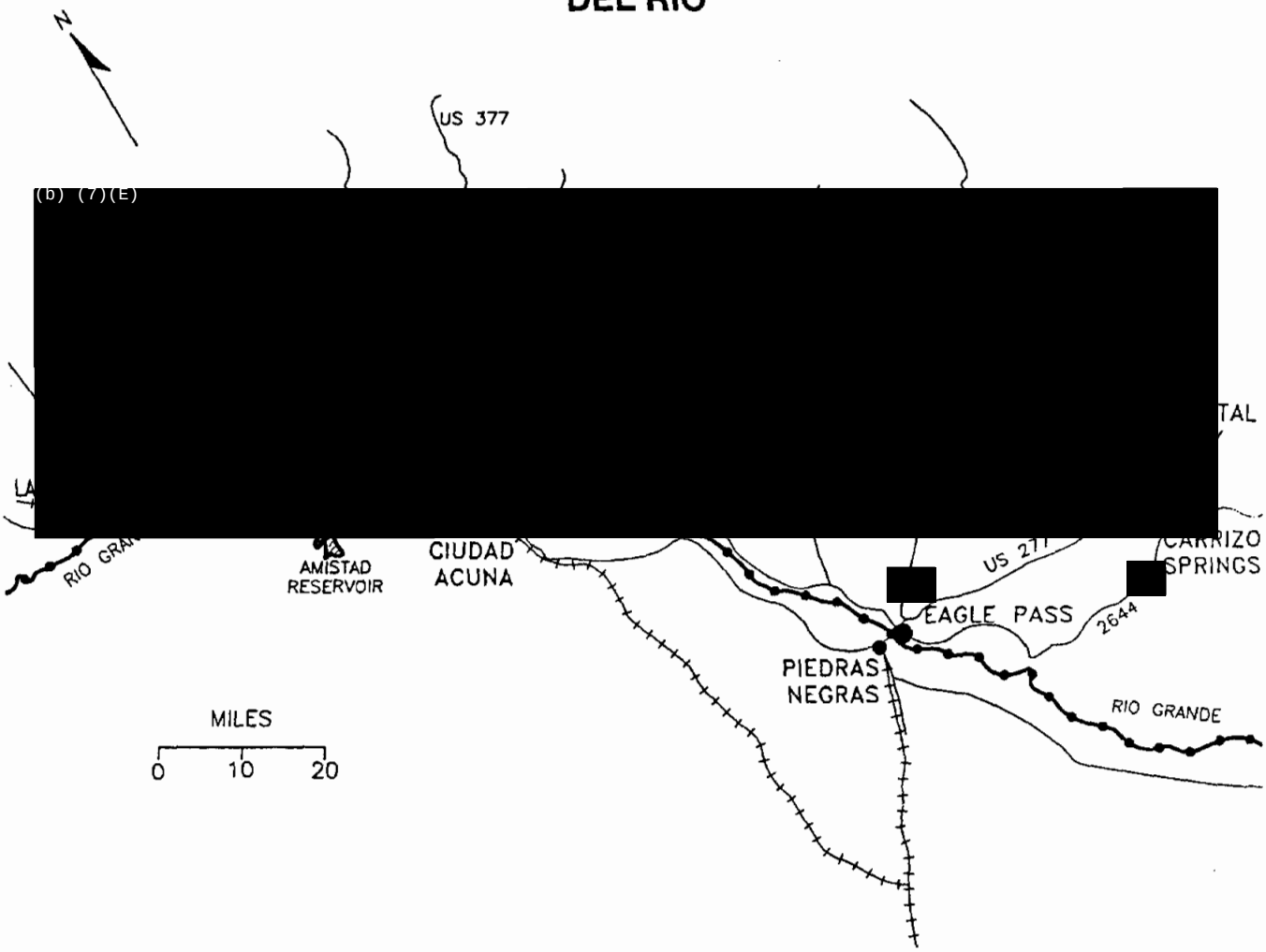
The Del Rio sector covers a wide variety of topography, from desert and mountains to farms and ranches. [redacted]. A map of this sector is shown on the following page.

### Climate

The average summer temperatures in the Del Rio sector are a low of 74°F and a high of 95°F; however, temperatures as high as 100°F have been recorded. Winter temperatures are mild, with average lows of 46°F and highs of 64°F. The precipitation is 25 inches per year, with an average of 320 days of sunshine per year. There are no unusual storms such as high winds, flooding, sandstorms, or heavy snow that occur in this sector.

| | J | F | M | A | M | J | J | A | S | O | N | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High (°F) | 67.3 | 71.3 | 72.2 | 78.6 | 87.5 | 98.6 | 92.2 | 93.8 | 88.2 | 82.0 | 73.2 | 64.6 |
| Low (°F) | 43.5 | 47.4 | 52.5 | 60.7 | 67.4 | 76.8 | 73.2 | 73.2 | 69.5 | 56.9 | 51.9 | 40.2 |
| Rainy days | 1 | 3 | 4 | 8 | 4 | 1 | 7 | 2 | 8 | 3 | 2 | 1 |

# DEL RIO




## KEY

INTERNATIONAL BORDER

RAILROAD

CITY OR TOWN

EXISTING CHECKPOINT

[redacted]

PART-TIME CHECKPOINT TO BECOME FULL-TIME

[redacted]

***Map of the Del Rio Sector***

## Available Resources

The Del Rio sector currently has 337 agents and 54 nonagent support personnel assigned. The sector also possesses intrusion detection, communications, information control and display, and assessment equipment (some for day and some for night use). Some of the obsolete equipment has recently been replaced. The new equipment recommended will augment and upgrade the sector's existing physical protection equipment inventory. Mention of most of this equipment is not included; however, in a few cases, specific sensor or camera locations are discussed.

Current on-duty force in the sector consists of 1 Chief Patrol Agent, 1 Deputy Chief Patrol Agent, 5 Assistant Chief Patrol Agents, 1 Supervisory Pilot, 5 Aircraft Pilots, 2 Supervisory Special Agents, 1 Supervisory Special Agent, 23 Special Agents, 1 Intelligence Agent, 1 Vehicle Seizure Officer, 6 Patrol Agents in Charge, 3 Assistant Patrol Agents in Charge, 3 Field Operations Supervisors, 35 Supervisory Border Patrol Agents, 70 Senior Border Patrol Agents, 231 Border Patrol Agents, 1 Administrative Officer, 24 Clerks, 4 Electronics Technicians, 12 Law Enforcement Communications Assistants, 10 Detention Enforcement Officers, 16 Automotive Mechanics, 4 Maintenance Mechanics, and 2 Aircraft Mechanics.

## Threat

The principal movement of illegal aliens and/or contraband out of the Del Rio sector is by the three main north/south highways and both freight and passenger rail services:

- (b) (7)(E) [redacted]
- [redacted]
- [redacted]
- [redacted].

Sightings of Colombian aircraft landings in remote areas have also been reported.

## *Contact with Suspects*

The information presented in the tables below is the compilation of the Border Patrol agents' contact with illegal aliens and/or drug traffickers and the amounts of drugs confiscated.

| Contact with Suspects: | Jan '90 | Feb '90 | Mar '90 | Apr '90 | May '90 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 3,126 | 3,788 | 4,820 | 3,450 | 3,580 |
| Drug-Related Arrests | 9 | 28 | 1 | 10 | 4 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 1,453.14 | 0.46 | 0.06 | 53.32 | 2,740.15 |
| Cocaine (oz) | – | – | – | 16 | 9,557.60 |
| Heroin (oz) | – | 3.77 | – | – | – |
| Other (oz) | – | – | – | 20 | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | 3 | 2 | – | – | 1 |
| Assaults on BP Agents | – | – | – | – | – |

| Contact with Suspects: | Jun '90 | Jul '90 | Aug '90 | Sept '90 | Oct '90 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 3,749 | 4,219 | 3,939 | 3,101 | 2,153 |
| Drug-Related Arrests | 10 | 11 | 5 | – | 4 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 0.20 | 89.61 | 202.78 | – | 285.65 |
| Cocaine (oz) | 32.96 | – | – | – | – |
| Heroin (oz) | 7.89 | 0.78 | – | – | – |
| Other (oz) | 6 | 102 | – | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | 1 | 1 | – | 2 | 1 |
| Assaults on BP Agents | – | – | 1 | – | – |

| Contact with Suspects: | Nov '90 | Dec '90 | Jan '91 | Feb '91 | Mar '91 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 1,539 | 1,131 | 1,823 | 2,845 | 5,729 |
| Drug-Related Arrests | 30 | 17 | 24 | 6 | 15 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 913.8 | 2,214.43 | 2,494.9 | 1,055.53 | 1,537.70 |
| Cocaine (oz) | 3,385.60 | – | 0.16 | – | – |
| Heroin (oz) | – | – | – | – | – |
| Other (oz) | – | – | – | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | 3 | – | 4 | – | 13 |
| Assaults on BP Agents | 1 | – | – | – | 1 |

| Contact with Suspects: | Apr '91 | May '91 | Jun '91 | Jul '91 | Aug '91 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 5,319 | 4,535 | 3,706 | 3,353 | 3,962 |
| Drug-Related Arrests | 7 | 3 | 10 | 4 | 7 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 0.25 | 1,091.26 | 75.09 | 0.03 | 165.75 |
| Cocaine (oz) | – | – | 0.48 | – | – |
| Heroin (oz) | – | – | – | – | – |
| Other (oz) | – | – | – | – | 5.55 |
| Number of Confrontations: | | | | | |
| With Armed Persons | – | 3 | – | 2 | – |
| Assaults on BP Agents | – | 1 | – | – | – |

| Contact with Suspects: | Sept '91 | Oct '91 | Nov-91 | Dec '91 | Jan '92 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 2,458 | 2,310 | 1,701 | 1,004 | 2,981 |
| Drug-Related Arrests | 25 | 15 | 17 | 12 | 32 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 1,198.8 | 519.82 | 495.12 | 1,257.83 | 786.22 |
| Cocaine (oz) | – | 2.4 | – | – | 2,736.00 |
| Heroin (oz) | – | – | – | – | – |
| Other (oz) | – | – | – | – | 1 |
| Number of Confrontations: | | | | | |
| With Armed Persons | – | 3 | 4 | 4 | 2 |
| Assaults on BP Agents | – | – | 1 | – | 2 |

| Contact with Suspects: | Feb '92 | Mar '92 | Apr '92 | May '92 | Jun '92 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 2,936 | 4,145 | 3,624 | 3,325 | 2,322 |
| Drug-Related Arrests | 16 | 19 | 26 | 22 | 27 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 309.98 | 412.78 | 1,236.75 | 1,928.41 | 1,619.64 |
| Cocaine (oz) | – | – | – | 44.96 | 23.36 |
| Heroin (oz) | – | – | – | 4 | – |
| Other (oz) | – | – | 158 | 16 | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | 3 | 4 | – | 2 | 2 |
| Assaults on BP Agents | – | – | – | – | – |

## Sector Operations

The boundary lines of the Del Rio sector are the following counties:

- [redacted]
- [redacted]
- [redacted]
- [redacted]

The Del Rio sector is composed of 41 counties that extend about 300 miles into the interior from the border. There are over 29,000 farms and ranches in the sector, which contain about 48,000 square miles. The sector has 154 linear miles of river frontage that borders Mexico.

The Del Rio sector is basically sheep and goat country. The western portion is frequently referred to as the "brush country," being covered with mesquite, small oak, huisache, black brush, ceniza, and prickly pear cactus. It is semi-arid with about 23 inches of rain per year.

The northern portion of the sector is situated in the Plains area. There are some buttes and rough lands tapering to gently rolling prairies.

The eastern section of the sector has quite a few wide expanses of prairie country and pecan trees along the streams. There is a dense growth of cedar in broken regions and quite a bit of erosion.

The southwestern section is largely rough, rocky country with deep canyons and moderate hills covered with mesquite, huisache, and ceniza. Cultivated areas are principally in the southeastern parts of the area.

Adjacent Mexican territory is generally rough rangeland. To the west of a line running north and south through Del Rio, the land is semi-arid, cut by rocky canyons and varying from moderately rolling to foothills to mountains.

Three mountain ranges—Serranias del Burro, Sierra de Huacho, and Sierra de la Encantada—traverse the northwest part of the State of Coahuila in the northwest to southeast direction parallel to the international boundary. Peaks of the first range, Serranias del Burro, with altitudes up to 5,280 feet above sea level at Picaho Mas

Alto, lie within about 150 miles of Del Rio. Varying degrees of altitude and roughness of terrain lie in between.

Northern Coahuila has developed rapidly in the past few years, particularly the cities of Piedras Negras and Ciudad Acuna. The population of Piedras Negras is approaching 200,000 and Ciudad Acuna, 100,000. The land along the river between these two cities, approximately 50 miles, is now easily accessible and gaining population.

The Del Rio sector area of responsibility remains relatively sparsely populated, with much of the sector being ranchland dedicated to wool and mohair production. The four Texas counties adjacent to the Mexico border in the Del Rio sector, a total of approximately 154 border miles, contain approximately 81,000 residents. Roughly 50,000 of these reside in the cities of Del Rio and Eagle Pass. [redacted] At normal flow, the [redacted], the [redacted] to enter the US illegally.

Generations of Mexican Nationals have entered through this area in search of work. Economic conditions in Mexico and the ever-increasing number of young people entering the job market indicate that these entries will continue, notwithstanding the decrease in volume provided by the Immigration Reform and Control Act (IRCA).

Recent drug seizures clearly indicate new routes of transport have been established by traffickers. During the second week of February 1990, two cocaine seizures (one in Ciudad Acuna and one in Monclova) resulted in the removal of 1,600 kilograms from the market. The cocaine supposedly belonged to the same group that provided the 2,003 pounds seized by agents near Comstock in December 1989. The rapid growth of Piedras Negras, Ciudad Acuna, and Northern Coahuila has attracted the attention of Mexican and South American smugglers and many have purchased ranchland, equipped with airstrips, to facilitate movement of drugs to the nearby border area. A number of former alien smugglers in Ciudad Acuna and Piedras Negras are known to have graduated to the more lucrative drug trade.

There are presently 10 stations in the Del Rio sector: Abilene, Brackettville, Carrizo Springs, Comstock, Del Rio, Eagle Pass, Llano, Rocksprings, San Angelo, and Uvalde.

The 10 stations now operational are well situated to intercept foot traffic, inspect public transportation and freight trains, perform highway check, both through observation and permanent points, maintain linewatch, conduct effective criminal alien removal programs, and administer the Employer Labor Relations (ELR)/ Sanctions provisions of the IRCA. Intelligence and liaison activities are well established and diligently pursued. Station locations, interstation communications, and cooperation provide exceptional area coverage.

[redacted] A shortage of serviceable sensor equipment affects the Comstock, Del Rio, Brackettville, Eagle Pass, and Carrizo Springs stations in their efforts to control 154 linear miles of border (actually 205 miles of river frontage).

[redacted] when moved in small quantities.

A major enforcement problem is a lack of funding for detention. Continual release of aliens having no equities in the US without bond serves as an invitation to others. There is no Service Processing Facility within the sector, and the voluntary return program may become self-perpetuating.

## Communications Unit

The communication centers at Del Rio and Eagle Pass provide 24-hour duties to relay [redacted]; vehicle registration information; Federal, State, and local criminal histories; and information from the [redacted] The Del Rio office has access to the Immigration Service [redacted]. Mobile unit security checks for the Carrizo Springs, Uvalde, and Eagle Pass stations are monitored by the Eagle Pass office. Communications in the Comstock, Del Rio, Brackettville, and Rocksprings stations are recorded by the Del Rio Communications unit. Abilene, San Angelo, and Llano stations provide local security check coverage.

Sector forms, smuggler vehicle information, and EPIC aircraft reports are computerized at the Del Rio office for immediate review.

## Maintenance

Vehicle maintenance is performed at garages at Del Rio Sector Headquarters and the Eagle Pass station. Distant stations use local

mechanics for minor maintenance, with major repairs done at sector facilities. A mobile vehicle maintenance unit stationed at Del Rio services vehicles on a regularly scheduled basis. Because of the distances involved, this service cannot be regularly provided to the San Angelo, Abilene, and Llano offices.

General maintenance of facilities is performed by maintenance mechanics assigned to Sector Headquarters. This unit is capable of completing most sector needs. Only situations requiring specialized equipment or involving faulty structures are beyond their abilities.

### Air Operations

Sector aircraft support all operations in varying degrees. Much time is spent supporting sign-cutting, linewatch, and train check duties. The Anti-Smuggling units and Intelligence agents receive assistance in surveillance and locations of staging areas or landing strips. In all activities, the air assistance is an invaluable enforcement tool.

There are presently two Super Cubs, one Cessna 206 fixed-wing aircraft, and two helicopters assigned to the sector.

The sector aircraft maintenance unit services aircraft for other sectors in the Southern Region. The geographical location of Del Rio is such that it is most convenient to other air operations. This maintenance/repair facility is located at the Del Rio International Airport in a 14,880-square-foot building leased from the city of Del Rio. The building was constructed to comply with INS needs and specifications and became operational in September 1989. Four aircraft mechanics are authorized with two presently on role.

## Station Operations

In an effort to enforce the nation's immigration laws, the Del Rio sector is authorized 10 Border Patrol stations. Five stations (Brackettville, Carrizo Springs, Comstock, Del Rio, and Eagle Pass) are line stations having responsibility for an assigned section of international boundary.

### Brackettville Station

The current force consists of 43 persons: 1 Patrol Agent in Charge, 1 Assistant Patrol Agent in Charge, 4 Supervisory Border Patrol Agents, 8 Senior Border Patrol Agents, and 29 Border Patrol Agents.

Brackettville's area of responsibility is approximately 2,500 square miles, containing roughly 250 ranches. This area includes all of [redacted]

[redacted] Most of this area lies on the [redacted], with the northern portion lying on the [redacted]

The area south of US Highway 90 is relatively flat, but the remainder consists of rocky hills, traversed by deep canyons. This terrain is covered by brush, mesquite, and cedar.

Average rainfall for the Brackettville area is approximately 22 inches.

The geographical location of Brackettville is ideal for coverage of the river area in lower Kinney County and for interdiction of aliens evading apprehension by the Del Rio and Eagle Pass stations. State highways leading from the immediate area of the border intersect [redacted] in the Brackettville area. Secondary highways and ranch roads originate at [redacted] and lead northward through the area to connect with US highways well inland.

The Southern Pacific Railroad sidings at Spofford attract aliens attempting to board [redacted], and aliens destined inland to staging areas used by smugglers require constant attention.

[redacted]

[redacted]

There are approximately [redacted] of maintained drag strips in the Brackettville station area. [redacted]. This enables station agents to intercept illegal entrants between the town of Brackettville and the [redacted] a distance of approximately [redacted]. The [redacted] to aid in the detection of persons attempting to board [redacted]

[redacted] pass through the Brackettville station from the south, three of them originating on U[redacted] which parallels the border from [redacted] originate at [redacted] near Brackettville and proceed north through the station area to intersect with east-west highways to the north of the station area.

The Brackettville station is committed to the border area in the section belonging to [redacted]. On the Mexico side of the border, a [redacted] from

[redacted] and regular bus service is available along this route. The Mexican towns of Purisima and Jimenez are in this area, both notorious for smuggling activity. When the Rio Grande River is at normal flow, there are [redacted] that may be used with little or no difficulty. [redacted].

The large majority of land within the Brackettville station is rough ranchland, most used for production of wool and mohair. Although not abandoned, this activity does not require as much attention as in the past. Since the passage of the IRCA, results of farm and ranch check and information received from apprehended aliens would indicate there is little work available to illegal aliens. Sheep shearing crews are generally workers from the local area and apprehended aliens display little interest in local agricultural work.

[redacted]

[redacted], operated by the Del Rio station.

There are eight daily arrivals/departures of buses at Brackettville. City units normally inspect all departures. No other public transportation is available.

The train sidings receive constant attention. All train departures are searched unless the Uvalde station is conducting a coordinated train check in that area. During those special operations, Brackettville agents are freed to engage in other activities.

All station personnel contribute to the Intelligence Liaison program. Communication with county and state officials has been long established and highly effective. Data received by the designated Station Intelligence Officer is routinely discussed with the sector for evaluation. This station area is sparsely populated and current information concerning smuggling or illegal alien traffic is of critical importance.

County and District Court officers have responded enthusiastically to station efforts in this activity. Constant contact with these officials has established an effective tracking system for removal efforts.

One drug detection dog is assigned to the Brackettville station. The dog will be particularly effective at the newly established traffic checkpoint on [redacted] Large cocaine seizures in the northern portion of Coahuila would indicate that this program is a timely addition to interdiction efforts.

| Apprehension Statistics | | |
|---|---|---|
| FY 1987 | FY 1988 | FY 1989 |
| 5,741 | 6,415 | 5,224 |
| **Narcotics Seizure Statistics** | | |
| FY 1987 | FY 1988 | FY 1989 |
| $7,582 | $850,372 | $287,040 |

## Carrizo Springs Station

The Carrizo Springs station occupies [redacted] square foot building leased from Dimmit County. The facility is located on US Highway 85 at the east edge of Carrizo Springs.

The current force consists of 1 Patrol Agent in Charge, 4 Supervisory Border Patrol Agents, 7 Senior Border Patrol Agents, 25 Border Patrol Agents, and 1 Detention Enforcement Officer.

The Carrizo Springs area is located on the Rio Grande plain, which is dissected by valleys and hills, largely covered by brush. In the river area and most commonly used illegal alien routes of travel, the terrain is flat and the soil is sandy, which is excellent for sign-cutting operations. The Carrizo Springs area of responsibility is all of [redacted]

Carrizo Springs is well situated to provide river coverage for the 26 miles of border within the area. [redacted] to the south of Carrizo Springs and [redacted] to the northwest are major highways. State [redacted] leads from Carrizo Springs directly to the border. [redacted]
The area adjacent to the Rio Grande River from Carrizo Springs south to Laredo, a distance of approximately 80 miles, is sparsely populated. On the Mexico side of the river, a [redacted]

Smuggling of aliens and contraband is difficult to control with the maze of highways and ranch roads throughout the area. It is not unusual for illegal entrants to walk across in excess of 30 miles to be picked up near the small farm town in the area. Many groups are picked up by sign-cutting agents, but the routes of travel are too

numerous for total success. Traffic check and observation are also effective, but cannot possibly screen all roads.

Agriculture and ranching activities are much less of a problem since the IRCA came into being. The station area, some 2,618 square miles, contains numerous farms and ranches, but few apprehended aliens claim to be destined to work in these endeavors.

Linewatch, traffic check and observation, and sign-cutting are primary commitments.

The Criminal Alien Removal Program has been effective and will continue to expand as State and County prosecutors witness the value of removal in crime reduction efforts.

ELR/Sanction contacts indicate that the large majority of employers are in compliance.

One canine is assigned to the Carrizo Springs station. This has been of great assistance to the ongoing Drug Enforcement Task Force operating in the station area and will be invaluable at the traffic checkpoints, particularly during the crop harvest, for transport trucks.

Smugglers indices have led to identification of numerous violators operating under assumed names. Exchange of information with the Laredo sector has produced results, particularly in methods of operation used by organized smuggling rings in Nuevo Laredo.

Liaison in the station area results in cooperation and assistance from all enforcement groups. Reports of suspicious activity are of assistance in personnel assignments.

| Apprehension Statistics | | |
|---|---|---|
| FY 1987 | FY 1988 | FY 1989 |
| 7,738 | 4,126 | 3,186 |
| **Narcotics Seizure Statistics** | | |
| FY 1987 | FY 1988 | FY 1989 |
| – | $261,623 | $902,781 |

## Comstock Station

The Comstock station occupies a Service-owned building, which was constructed in 1961. In 1989, the building was expanded to approximately 1,800 square feet. The current on-duty force consists of 1 Patrol Agent in Charge, 2 Supervisory Border Patrol Agents, 4 Senior Border Patrol Agents, and 12 Border Patrol Agents.

The Comstock station area of operation is that portion of [redacted] of a line [redacted] between its junction with the [redacted] and its junction with [redacted] and its junction with [redacted] and S [redacted] and its [redacted]

This territory is on the western part of rolling brush country of the Rio Grande Plain. The deep valleys and gorges of the Pecos and the Devil's River, along with the 90 miles of Rio Grande River dissects the territory. Most of the terrain along Comstock's 90 miles of riverfront is very rugged with bluffs and high canyons overlooking the river. The ranch country is brushy and rocky and underdeveloped.

The adjacent Mexican territory is similar in topography to that along the border in this station area. It is sparsely populated and traversed by few roads, none of which are improved. Within a short distance directly to the southwest, foothills are encountered. Peaks of a mountain range, Serranias del Burro, with maximum altitudes of about 5,380 feet above sea level, are within about 150 miles of the border. This range runs northwest and southeast. It is paralleled further in the interior by two other ranges—Sierra de Huacha and Sierra de la Encantada.

Amistad Dam was completed in 1968 at the junction of the Rio Grande River and the Devil's River. The reservoir has filled to conservation level with a surface elevation of 1,117 feet above sea level. That is considered full, but the dam has a flood level capacity of 1,140 feet elevation.

[redacted].

Comstock is responsible for roughly 90 miles of river frontage. Enforcement is complicated by the [redacted]. The station area, approximately [redacted] square miles, is rocky, brush-covered, and crisscrossed by deep canyons and washes. Large ranches, sheep and goat producers, cover the area and few permanent residents are found there. [redacted]

The terrain in this portion of the sector ranges from rough to impassable. Lack of natural coverage makes it practically

impossible for agents to maintain surveillance of the border without being detected.

Amistad Reservoir is an attraction for sportsmen and tourists. Boat traffic is constant during fair weather and the [redacted]. Miles of shoreline on both sides of the border are accessible by foot traffic.

The area west of the Pecos River, [redacted], is within easy walking distance of the border. This area is remote, practically uninhabited, and very difficult to observe without being observed. The western edge of the station area is perfect for illegal entry by aircraft. Low flying planes are often sighted by ranchers. Many airstrips in the area are capable of receiving light aircraft.

Linewatch, sign-cutting, and traffic check are primary enforcement activities. Railroad sidings are routinely inspected. This duty frequently encounters groups of illegal aliens placed on trains by smugglers operating west of the sector area.

**Del Rio Station**

The Del Rio station is presently housed in "temporary" facilities located directly behind Sector Headquarters, on Qualia Drive. The buildings are modular units joined for a total square footage of 8,400 square feet. The Sector Anti-Smuggling Unit occupies approximately 2,000 square feet with the remainder being occupied by station agents. These facilities were occupied in January 1986.

The current force consists of 1 Assistant Patrol Agent in Charge, 3 Field Operations Supervisors, 10 Supervisory Border Patrol Agents, 19 Senior Border Patrol Agents, and 61 Border Patrol Agents.

The Del Rio station's area of responsibility is that portion of [redacted] of the Rio Grande River serve as the International Boundary between Mexico and the US in the Del Rio station's area of responsibility.

The Del Rio area is rough, brushy terrain and canyon country with a hard, rock surface. The area close to the river has dense cane and

underbrush. The area in Mexico adjacent to Del Rio territory is rough and hilly, but does not have the dense cane.

When first established, the Del Rio station was concerned with aliens entering the US to seek employment on ranches and farms within the station area. This is no longer the trend. Few aliens are now seeking work in the border area. Most are *en route* to metropolitan areas to work in construction or services. Those interested in farm work are destined to Florida or other southeastern states. Many intend to travel by freight train and others intend to travel inland to contact smugglers for transportation. Improved transportation from the interior of Mexico to Ciudad Acuna has made the Del Rio station area the most active in the sector.

[redacted]

The Port of Entry (POE) is situated roughly 1/4 mile from the Rio Grande River. It was constructed away from the boundary because of frequent flooding in the lowlands near the river. The road and walkways from the bridge are fenced, but the Del Rio station must provide constant coverage to prevent aliens from climbing the fence or jumping from the lower portions of the bridge.

The railroad yards and several sidings in the station area are within easy walking distance of the river. [redacted]

[redacted] The river in the station area can [redacted]

Linewatch, sign-cutting, traffic checks and observations, train checks, and anti-smuggling and transportation check are primary enforcement activities.

Ciudad Acuna, the Mexican city adjacent to Del Rio, is now growing rapidly as a result of twin plant facilities established during the last few years. The population is estimated to be 100,000 and young people from the interior continue to arrive in search of factory employment. Both train and bus transportation are available and both terminals in Ciudad Acuna are now inadequate for the increased volume.

Linewatch activity is enhanced by the [redacted] but the Del Rio station, as all other linewatch stations, is operating with much less sensor equipment than is needed.

The [redacted] in Del Rio are a constant source of apprehensions, with most aliens destined to the San Antonio, Houston, Fort Worth, and Dallas areas.

[redacted] Two canines assigned to the station will enhance interdiction efforts.

The ELR/Sanctions, War on Drugs, Criminal Alien Removal, and Prosecution Units are staffed by rotation of station agents.

Participation in the Federal-State-City Alliance Task Force is of extreme importance, having developed a coordinated enforcement program.

| Apprehension Statistics | | |
|---|---|---|
| FY 1987 | FY 1988 | FY 1989 |
| 26,269 | 25,050 | 22,623 |

| Narcotics Seizure Statistics | | | |
|---|---|---|---|
| FY 1987 | FY 1988 | FY 1989 | FY 1990 |
| $1,347,419 | $976,632 | $4,193,600 | More than $75,846,535 |

## Eagle Pass Station

Since June 1984, the station has occupied a [redacted] facility owned by the Service. The office is located on US Highway 277, near the north edge of Eagle Pass.

The current force consists of 1 Patrol Agent in Charge, 1 Assistant Patrol Agent in Charge, 8 Supervisory Border Patrol Agents, 10 Senior Border Patrol Agents, and 57 Border Patrol Agents. The Anti-Smuggling Unit at Eagle Pass consists of 1 Supervisory Special Agent and 4 Special Agents.

Eagle Pass station's area of responsibility is all of [redacted] except that portion from [redacted] to the county line. The station area is approximately [redacted] miles.

The terrain in the area of responsibility has a rolling to broken surface. It is largely brush country covered with mesquite, huisache, black brush, and ceniza and is well suited for cattle ranching. In the more fertile areas, alfalfa fields and truck farms are prominent. The soil is soft and sandy in many places and hard and rocky in others. An irrigation canal parallels most of the station's river frontage. The station has approximately [redacted].

Piedras Negras, the Mexican city adjacent to Eagle Pass, is the largest city in the sector area, with a population estimated at nearly 200,000. A highway leading from Piedras Negras to Nuevo Laredo has opened the area to the south for development and the city is expected to further expand.

[redacted] Piedras Negras is serviced by all means of public transportation. Several organized smuggling groups have operated in Piedras Negras over the years, using public transportation from the interior to staging areas near Piedras Negras. A [redacted]

Other than some agriculture activity in the station area, there is little to attract illegal workers into the local labor market. Most aliens apprehended are destined to metropolitan areas in Texas.

As in most line stations in the sector, there are numerous highways and roads in proximity to the Mexican border. [redacted].

The city of Eagle Pass is situated directly beside the Rio Grande River. Persons entering illegally within the city may immediately evade detection in the residential areas or downtown establishments.

[redacted].

Linewatch, traffic and transportation check, sign-cutting, and train check are the primary enforcement activities. [redacted] Of the 56 miles of border, only about 10 miles is occupied by full-time residents. The remainder is ranchland. Linewatch operations are assisted by the [redacted] allowing agents to respond over a large area, but a shortage of equipment reduces the potential of the system.

Freight train check is effective in the local train yards. Several large groups of smuggled aliens have been apprehended after being placed in sealed cars in Piedras Negras. Train check has proven to be highly productive.

[redacted]

The Station Prosecution Unit and the Criminal Alien Removal Program have become the most welcome enforcement programs to be added in many years. Liaison with Federal, State, and County prosecutors has been of benefit to both criminal and administrative proceedings.

The ELR/Sanctions provisions of the IRCA have reduced the volume of illegal entries through the station area. Locally, employers are generally complying with hiring restrictions. Undocumented employees are rarely encountered and few aliens apprehended indicate they are seeking work in the sector area.

| Apprehension Statistics | | |
|---|---|---|
| FY 1987 | FY 1988 | FY 1989 |
| 10,698 | 9,849 | 9,085 |
| **Narcotics Seizure Statistics** | | |
| FY 1987 | FY 1988 | FY 1989 |
| $482,322 | $271,073 | $3,776,660 |

## Abilene Station

In December 1988, the station was moved to the 1,496-square-foot facility in the Abilene City Hall, 555 Walnut Street, Abilene.

Current on-duty force is one Supervisory Border Patrol Agent, one Senior Border Patrol Agent, and two Border Patrol Agents.

The Abilene station is responsible for eight counties situated in the extreme [redacted] of the sector. [redacted]) contain approximately 7,332 square miles of land primarily used for farming and ranching. There are some low mountains and rolling hills, wooded with mesquite, cedar, and oak, but vast areas are prairies and rolling plains. Abilene, with a population of about 100,000, is by far the largest city in the area, but total population of the eight counties was 213,934 in the 1980 census.

Historically, the area now covered by the Abilene station was provided only short-term attention by sector agents. Details into the northern areas were organized when funding was available and the lack of enforcement presence created a virtual haven for violators who had evaded apprehension at the border. Criminal aliens were not being identified and removed as a result of a lack of regular, on-site communications with local and State officials. Aliens were aware that if they could reach Abilene, [redacted] would provide unrestricted travel to the eastern coastal states. With the added

responsibilities provided by the IRCA of 1986, it has become obvious that occasional efforts in the interior were no longer adequate.

| Apprehension Statistics | | |
|---|---|---|
| FY 1987 | FY 1988 | FY 1989 |
| — | 59 | 506 |
| **Narcotics Seizure Statistics** | | |
| FY 1987 | FY 1988 | FY 1989 |
| — | — | $112,480 |

## Llano Station

The Llano station is housed in a 2,400 square feet leased building located at 211 East Tarrant Street, Llano, Texas.

The current force consists of two Senior Border Patrol Agents and one Border Patrol Agent.

The Llano station is responsible for Burnet, Hamilton, Lampasas, Llano, Mason, Wills, and San Saba Counties, an area of approximately 6,266 square miles. The 1980 census showed 61,102 residents in the seven counties. The country is generally rolling hills and valleys with some rough, tree-covered peaks.

In the past, this region was given only irregular enforcement attention because of the distance from existing stations. A chain of lakes has attracted surges of home and resort construction and the potential for employment of illegal aliens fluctuates with the economy. This potential, the emphasis on the removal of criminal aliens, and the ELR/Sanctions Program created the need for a full-time enforcement presence.

Establishment of liaison with all area enforcement agencies and prosecutors must be pursued continuously to ensure an effective Criminal Alien Removal Program. ELR contacts are progressing well, but the size of the area and the number of employers involved is a time-consuming challenge.

The Criminal Alien Removal Program; location, apprehension and removal of noncriminal deportable aliens; ELR; and development of information relating to smuggling activities are primary programs. The station has also developed a War on Drugs program that has been very well received by school administrators throughout the area.

## Rocksprings Station

The Rocksprings station was established in the summer of 1985. The area of responsibility is the portion of Edwards County north of the intersection of [redacted] and the entirety of [redacted] County, approximately [redacted] square miles. The station occupies 820 square feet of office space in the Edwards County Law Enforcement Building, Austin Street, Rocksprings, Texas. The space is leased from Edwards County.

The present on-duty force of the station consists of one Patrol Agent in Charge, one Supervisory Border Patrol Agent, two Senior Border Patrol Agents, and two Border Patrol Agents.

The town of Rocksprings is located at the intersection of Highways 55 and 377. [redacted] leads directly from near Del Rio to Fort Worth, crossing Interstate 10 at Junction, Texas, to Highway 277 in Sutton County. From there, [redacted] for transit west.

Several groups of smugglers operated in the Rocksprings, Camp Wood, and Del Rio area—they would have large groups guided cross country to pickup or staging areas in the Rocksprings region and would then transport the aliens north. The primary purpose of the opening of this station was to eliminate this problem.

[redacted] is rolling, brush plains with the central portion traversed by deep valleys. [redacted] is rocky, hilly country laced with deep draws and valleys. Very sparsely populated, [redacted] had just over 4,000 residents in the 1980 census and [redacted] just over 2,000. The rough terrain is difficult to patrol and concealment of groups of people or contraband is easily accomplished.

The coverage of the Rocksprings and Junction areas is not as complete as would be desired.

With the establishment of [redacted] north of [redacted], illegal traffic will likely increase in the Rocksprings and Comstock areas. The months of March and April are traditionally the most productive months for illegal alien arrests.

Area patrol, traffic observation, sign-cutting, and farm and ranch check are the primary enforcement activities.

Liaison with local and state agencies has developed outstanding enforcement cooperation. The location of the station office in the

County Law Enforcement Building provides daily exchange of information.

ELR/Sanctions contacts have been effective. Area ranchers are complying with employment requirements. Cedar-cutting crews, notorious for employment of illegal aliens, are rarely encountered with unauthorized workers.

The Criminal Alien Removal Program will be effective in the Rocksprings station area. County and State prosecutors have demonstrated enthusiastic support.

| Apprehension Statistics | | |
|---|---|---|
| FY 1987 | FY 1988 | FY 1989 |
| 3,165 | 2,494 | 1,245 |
| **Narcotics Seizure Statistics** | | |
| FY 1987 | FY 1988 | FY 1989 |
| – | – | $76,000 |

## San Angelo Station

The station offices are located in a [redacted] square-foot building located on Mathis Field in San Angelo. The offices occupy 7,029 square feet of space and the remainder of the building is used for parking, storage of seized vehicles, and a bus garage. The building is leased from the city of San Angelo.

The current on-duty force of the station consists of 1 Patrol Agent in Charge, 1 Assistant Patrol Agent in Charge, 2 Supervisory Border Patrol Agents, 6 Senior Border Patrol Agents, 23 Border Patrol Agents, and 2 Detention Enforcement Officers.

[redacted]

The [redacted]

Population of the area was fixed at 213,910 in the 1980 census. San Angelo, with an estimated population of 80,000, is the largest city in the area.

The terrain of this area is well suited for farms and ranching activity. Flat or rolling plains lay to the west, becoming hilly and

timbered to the east. Oil and gas production is found through much of the area.

Past enforcement efforts in the present San Angelo station area were limited to short-term operational details. These details were expensive and often required detail of agents from other areas of responsibility. Violators working and residing in the northern portions of the sector were well aware that enforcement was sporadic and employers were willing to accept an occasional 4- or 5-day absence from work as illegal employees evaded apprehension. With the aid of smugglers, many illegal aliens apprehended in this area would return to work or residence 1 day after termination of the operation. Although these details often produced impressive numbers, it became obvious that the desired results would not be achieved without permanent personnel in place. The enforcement provisions of the IRCA, particularly Employer Sanctions and the Criminal Alien Removal Program, further conveyed the need for a Border Patrol presence.

Effective communication with enforcement agencies throughout the station area is necessary to ensure the success of the Criminal Alien Program.

A sector-wide interagency intelligence network for identification of criminal aliens, particularly those with drug-related offenses, is expanding.

Transportation check, patrol and traffic observation, location of criminal aliens, ELR, Contacts, and Intelligence programs are primary enforcement activities.

Traffic and transportation checks have been productive. Most apprehended aliens are traveling to specific places of work or are seeking employment. Some of these people are also involved in drug smuggling.

Liaison with court officials has been of benefit to the Criminal Alien Program. Criminal aliens taken into custody are processed subsequent to convictions by local prosecutors.

The ELR/Sanctions program continues to show results. The number of illegal aliens encountered in employment continues to decline in the local area. The outlying portions of the station area are receiving additional attention as manpower permits.

| Apprehension Statistics | | |
|---|---|---|
| FY 1987 | FY 1988 | FY 1989 |
| 748 | 2,419 | 920 |

| Narcotics Seizure Statistics | | | |
|---|---|---|---|
| FY 1987 | FY 1988 | FY 1989 | FY 1990 |
| – | – | – | More than $17,600 |

## Uvalde Station

The Uvalde station presently occupies a 1,700-square-foot building on Garner Field Road in Uvalde. This space has been leased since 1981.

A Service-owned facility of [redacted] square feet is presently being erected at the Uvalde Industrial Park, located at the southeast edge of Uvalde. The building is of metal construction and will be situated on a [redacted] parcel of land purchased from the city of Uvalde.

The current on-duty force consists of 3 Supervisory Border Patrol Agents, 11 Senior Border Patrol Agents, and 19 Border Patrol Agents.

The Uvalde station was established to intercept violators who had evaded apprehension at the border, particularly those entering through the southern portion of the sector. This assignment remains the primary objective of the station and activities have been expanded to allow additional efforts for highway coverage and freight train inspection. Few aliens are seeking employment in the station area, but are using Uvalde as a staging point to contact smugglers and/or board trains for transportation to the interior.

The [redacted] County are mountainous and heavily timbered, offering concealment for groups of aliens or contraband. Residents of these areas are generally cooperative, but illegal activity may go undetected because of the small number of inhabitants.

[redacted]

Uvalde's area of responsibility consists of [redacted] mesquite and arid land shrubs and miscellaneous brush. The northern part of the county is mountainous, and covered with cedar. Nearly all of the Real County is mountainous.

Traffic check and observation, transportation check, sign-cutting, and train check are primary enforcement activities.

The Uvalde station frequently rotates [redacted] assignments on [redacted] in coordination with the Brackettville station. One canine assigned to the station routinely participates in this activity.

Patrol and traffic observation assignments are performed on all highways and secondary roads.

Sign-cutting efforts in the southern part of the station area result in location of aliens *en route* to staging areas and railroad sidings. Routes of travel provide valid anti-smuggling intelligence.

Coordinated train inspection is regularly conducted at Knippa, Texas, east of Uvalde. All eastbound trains are inspected with assistance from [redacted] officers. These inspections permit the Del Rio and Brackettville stations to concentrate on other assignments during the duration of the detail.

The Criminal Alien Removal Program has been established in the station area. City, County, and State enforcement agencies fully support this program and referrals are increasing.

The ELR/Sanctions Program receives full-time attention. Area employers are generally in compliance with provisions, but contacts indicate that some confusion remains.

| Apprehension Statistics | | |
|---|---|---|
| FY 1987 | FY 1988 | FY 1989 |
| 7,668 | 8,154 | 4,051 |
| **Narcotics Seizure Statistics** | | |
| FY 1987 | FY 1988 | FY 1989 |
| $159,839 | $139,378 | $174,760 |

## Recommendations

General recommendations that are common to all of the sectors are given after the San Diego sector write-up. These general recommendations are then followed by sector-specific recommendations.

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# Marfa Sector

## Introduction

The Marfa sector includes 20.3% (332.5 miles) of the total Southwest Border. The Marfa sector has averaged about 10,000 apprehensions per year for the last 2 years. That figure is the lowest for all Border Patrol sectors despite the fact that Marfa has the largest number of miles of border of all the sectors. [redacted] During FY 1990, 89 narcotics seizures occurred at a value of $9,970,000. FY 1991 seizures had already reached 40 at a value of $16,700,000 by July.

## Operational Environment

### Terrain

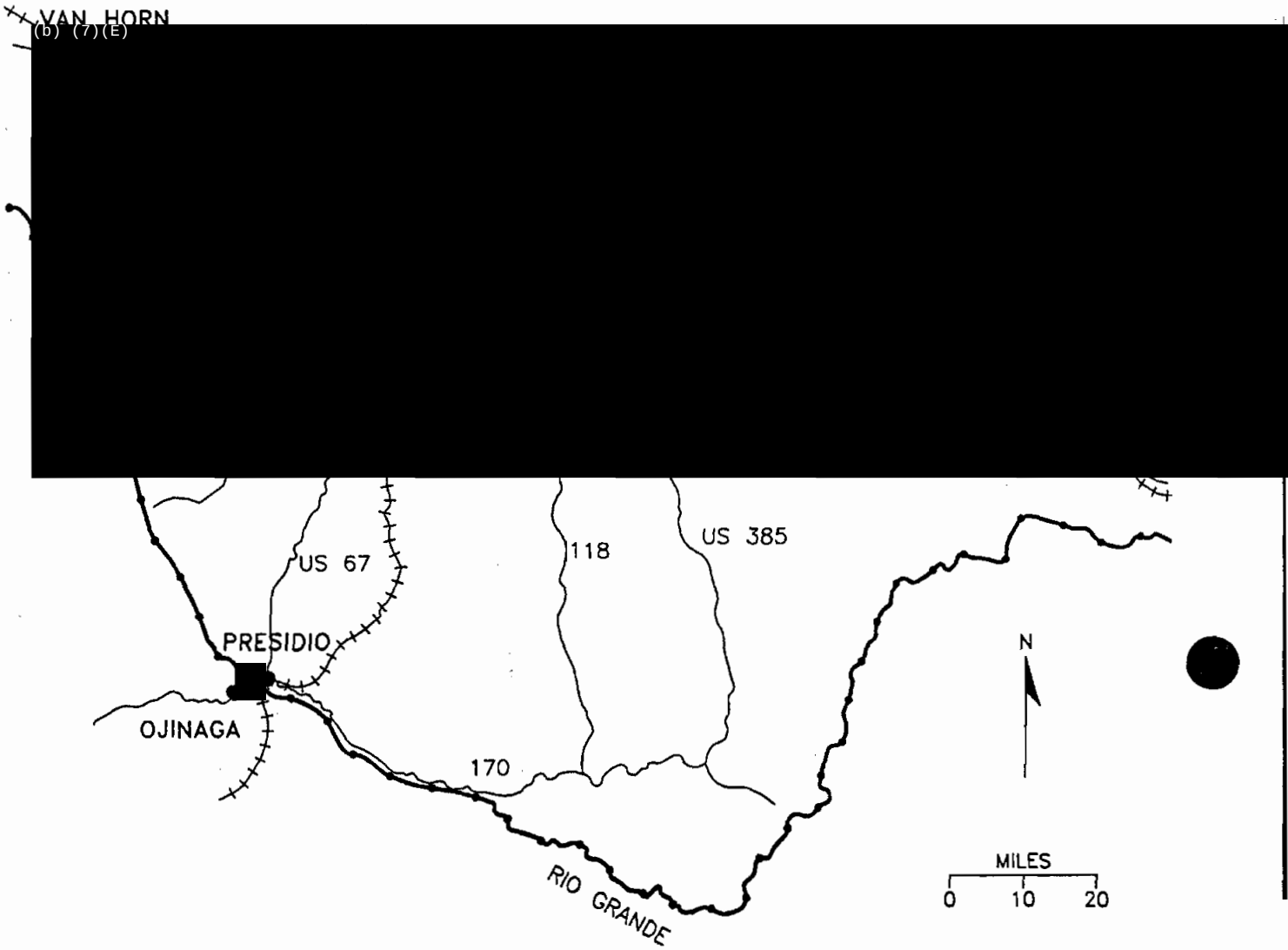
The western edge of the Marfa sector includes the intersection of [redacted]e. There are numerous small Mexican settlements along the Rio Grande River with a large population concentrated near the Texas city of Presidio.

There are 332.5 linear miles (420 river frontage miles) of border in the Marfa sector. Those miles are composed of

| | |
|---|---|
| 232.0 | miles of mountains |
| 48.0 | miles of rolling brushland |
| 22.5 | miles of forest |
| 22.0 | miles of canyons |
| 5.0 | miles of farmland |
| 3.0 | miles of urban flat. |

A map of this sector is shown on the following page.

# MARFA




KEY

INTERNATIONAL BORDER

RAILROAD

CITY OR TOWN

EXISTING CHECKPOINT

PORT OF ENTRY

***Map of the Marfa Sector***

## Climate

The average summer temperatures in the Marfa sector are an average low of 67°F and an average high of 91°F; however, temperatures as high as 102°F have been recorded. Winter temperatures are mild, with average lows of 27°F and highs of 56°F. The average precipitation is 17 inches per year, with an average of 340 days of sunshine per year. There are no unusual storms such as high winds, flooding, sandstorms, or heavy snow that occur in this sector. The average temperature in the winter is 48°F and in the summer is 80°F.

| | J | F | M | A | M | J | J | A | S | O | N | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High (°F) | 54 | 60 | 66 | 75 | 83 | 91 | 92 | 91 | 85 | 75 | 64 | 55 |
| Low (°F) | 25 | 30 | 35 | 45 | 54 | 62 | 66 | 65 | 58 | 47 | 33 | 27 |
| Rainy days | 1 | 1 | 2 | 2 | 2 | 1 | 7 | 8 | 9 | 5 | 1 | 1 |

## Available Resources

The Marfa sector currently has 116 agents and 19 nonagent support personnel. The sector also possesses intrusion detection, communications, information control and display, and assessment equipment (some for day and some for night use). Some of the obsolete equipment has recently been replaced. The new equipment recommended will augment and upgrade the sector's existing physical protection equipment inventory. Mention of most of this equipment is not included; however, in a few cases, specific sensor or camera locations are discussed.

## Threat

[redacted]

Although Marfa is the largest Border Patrol sector along the southern border, it has the fewest illegal crossers. The reason for this is simple: the region is so arid and inhospitable that it is very difficult to cross on foot. In addition, there are no large cities in this sector, and there is no direct route to any large US labor market. The Rio Grande River delineates the border throughout the Marfa sector.

Within the Marfa sector, there are [redacted]s across the Rio Grande River. [redacted]

### *Contact with Suspects*

The information presented in the tables below is the compilation of the Border Patrol agents' contact with illegal aliens and/or drug traffickers and the amounts of drugs confiscated.

| Contact w/Suspects: | Jan '90 | Feb '90 | Mar '90 | Apr '90 | May '90 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 514 | 556 | 703 | 608 | 630 |
| Drug-Related Arrests | 6 | 8 | 15 | 4 | 20 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 10,153.48 | 482.16 | 375.85 | 46.25 | 708.7 |
| Cocaine (oz) | 0.004 | 0.0745 | – | 0.28 | 174.308 |
| Heroin (oz) | – | – | – | – | – |
| Other (oz) | – | – | – | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | – | – | – | – | – |
| Assaults on BP Agents | – | – | – | – | – |

| Contact w/Suspects: | Jun '90 | Jul '90 | Aug '90 | Sept '90 | Oct '90 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 690 | 672 | 708 | 742 | 637 |
| Drug-Related Arrests | 9 | 5 | 3 | 3 | 10 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 23.184 | 10.48 | 1305.5 | 243.5 | 214.50 |
| Cocaine (oz) | – | – | – | – | 484.25 |
| Heroin (oz) | – | – | – | – | – |
| Other (oz) | 0.002 | 0.006 | – | 0.007 | 0.022 |
| Number of Confrontations: | | | | | |
| With Armed Persons | – | – | – | – | – |
| Assaults on BP Agents | – | – | – | – | – |

| Contact w/Suspects: | Nov '90 | Dec '90 | Jan '91 | Feb '91 | Mar '91 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 472 | 478 | 545 | 618 | 826 |
| Drug-Related Arrests | 12 | 15 | 3 | 1 | 6 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 469.018 | 282.797 | 188.5 | 5.0 | 111.437 |
| Cocaine (oz) | 0.003 | – | – | – | – |
| Heroin (oz) | – | – | – | – | – |
| Other (oz) | – | – | – | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | – | – | – | – | – |
| Assaults on BP Agents | – | – | – | – | – |

| Contact w/Suspects: | Apr '91 | May '91 | Jun '91 | Jul '91 | Aug '91 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 1,015 | 818 | 997 | 638 | 842 |
| Drug-Related Arrests | 3 | 1 | 9 | – | 1 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 160.91 | – | 36.01 | 82.70 | 48.6 |
| Cocaine (oz) | – | – | 0.6 | – | – |
| Heroin (oz) | – | – | – | – | – |
| Other (oz) | – | – | – | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | – | – | – | – | – |
| Assaults on BP Agents | – | – | – | – | – |

| Contact w/Suspects: | Sept '91 | Oct '91 | Nov '91 | Dec '91 | Jan '92 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 883 | 617 | 507 | 660 | 600 |
| Drug-Related Arrests | 3 | 10 | 11 | 8 | 14 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 25.6 | 701.26 | 412.996 | 419.359 | 735.55 |
| Cocaine (oz) | – | 0.0035 | – | 0.123 | 0.41 |
| Heroin (oz) | – | 0.0455 | – | – | 37.02 |
| Other (oz) | 0.88 | – | – | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | – | – | – | – | – |
| Assaults on BP Agents | – | – | – | – | – |

| Contact w/Suspects: | Feb '92 | Mar '92 | Apr '92 | May '92 | Jun '92 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 677 | 1,050 | 833 | 1,148 | 1,091 |
| Drug-Related Arrests | 18 | 18 | 11 | 38 | 39 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 584.54 | 712.204 | 851.4 | 2,037.269 | 953.796 |
| Cocaine (oz) | 0.275 | 2.2 | – | 2.65 | 54.0 |
| Heroin (oz) | – | – | – | – | – |
| Other (oz) | 502.0 | 11.6 | – | 28 grams | 4.235 lb |
| Number of Confrontations: | | | | | |
| With Armed Persons | – | – | – | – | – |
| Assaults on BP Agents | – | – | – | – | – |

| Contact w/Suspects: | Jul '92 |
|---|---|
| Number of Arrests: | |
| Illegal Alien Arrests | 1,100 |
| Drug-Related Arrests | 24 |
| Illegal Drugs Confiscated: | |
| Marijuana (lb) | 501.21 |
| Cocaine (oz) | 3.50 |
| Heroin (oz) | – |
| Other (oz) | 20.0 |
| Number of Confrontations: | |
| With Armed Persons | – |
| Assaults on BP Agents | – |

## Sector Operations

Marfa, Texas, located on US 67, the principal highway leading from the Class "A" POE at Presidio, Texas, was selected as Sector Headquarters. It is strategically located across the northward route of travel from the area of northern Chihuahua and Coahuila, Mexico, inland to the agricultural areas of West Texas. [redacted] from all inland stations. Being situated between the international boundary line and [redacted], Sector Headquarters is in a good location to administer to both line and backup stations.

The Marfa sector is composed of [redacted] counties and [redacted] neighboring counties in [redacted] Oklahoma. The operational area in Texas and Oklahoma incorporates 115,000 square miles. The sector is responsible for patrolling approximately [redacted] miles of riverfront along the Rio Grande River, which is the international boundary between the US and Mexico.

The Marfa sector is unique in that it has such a wide spectrum of climate, ranging from sub-zero temperatures in the Amarillo area to

almost subtropical temperatures at Presidio (often the hottest recorded temperature in the nation). The sector also features terrain that varies from dry sandy desert along the west side of the plains area to cedar- and oak-covered hills along the extreme southeast section of the Lubbock station area. The Big Bend area, extending north through the Davis Mountains, is extremely rugged and elevations from 6,000 to 8,000 feet above sea level are not uncommon.

Geographically, the sector consists of the [redacted] and the Big Bend area.

The Marfa sector has demonstrated its flexibility through the years. Stations opened and closed to meet the changing operational situations. Transportation and communication facilities have been updated for greater efficiency. The need for more permanent facilities for office space as well as employee housing in remote areas was recognized and is being provided throughout the sector. Mobile equipment and aircraft have been tested and updated as needed. Light observation type aircraft and helicopters are an integral part of line operation and support farm and ranch check operations.

Vehicles are available to transport aliens to the border from interior points. Bulldozers and other types of tractors and graders are used to construct and maintain drag strips. Four-wheel-drive vehicles have replaced horses in patrolling rough terrain near the border, the only exception being the Big Bend National Park station that uses horses as the need arises.

As the population grew within the surrounding communities and became more mobile, both roving and fixed traffic checkpoints were implemented and established within the sector.

With the upward surge in narcotics smuggling in recent years, the patrol of known routes of travel from the border region has become significantly more important. Drug intervention has become a standard operation of the Marfa sector Border Patrol.

The Marfa sector is responsible for enforcing the Immigration and Naturalization Laws in [redacted] counties and [redacted] Oklahoma counties. The Texas portion of the sector covers 94,359 square miles extending north from the [redacted]

The sector borders on the south with Mexico for 420 miles of contiguous boundary. This is the longest land border to Mexico of any Border Patrol sector. New Mexico borders the northwest area and Kansas the northern border. The nearly 115,000 square miles of sector area is larger by comparison than the area of 39 of our states. It is 433 miles from Sector Headquarters to the station furthest to the north.

The immediate boundary to Mexico begins to the west with rolling plateaus surrounded by mountains. As the Rio Grande River rolls to the southeast of Presidio, the land changes to deep canyons along the river, some as high as 2,000 feet above the river bed.

The harshness and inaccessibility to most of the river for 250 miles through this area requires special enforcement techniques and adjustment of available resources to make an impact on the illegal alien and narcotics traffic that flows through the area. [redacted]

The approximately 115,000 square miles under the jurisdiction and responsibility of the Marfa sector include a wide variety of geography. Industry ranges from agriculture (both farming and ranching) to "high-tech" electronics, manufacturing, service, construction, and petrochemical.

With the passage of the Immigration Reform and Control Act (IRCA) of 1986, additional emphasis was placed upon enforcement efforts in the major metropolitan areas. Employer Sanctions enforcement requires the inspection of all types of businesses to identify the unauthorized worker and the employer not in compliance, the majority of whom are in the major cities.

## Current Operational Problems/Solutions

The Marfa sector is challenged by the increased narcotics trafficking through this area. Agents receive continuous training and support in their fight against drugs and drug dealers. Their mission must be to increase the efforts by encouraging and supporting multi-agency enforcement and cooperation. By so doing, they will be able to control illegal activities in the border area.

## Programs and Activities

The huge area of the Marfa sector provides a full range of Border Patrol programs and activities.

The southern part of the sector is mainly sparsely populated ranch country and the Big Bend National Park. The larger population concentration of the sector is in the northern two-thirds of the sector area where there are a number of larger cities.

The main economy of the Panhandle is based on agriculture with over 2.5 million irrigated acres producing wheat, corn, sorghum, small grains, cotton, and vegetables. Throughout the area, large beef cattle feeding operations have grown, which account for over 60% of the average annual agricultural income in 18 of the area's 26 counties. Total average annual income of the industry in the Panhandle is almost $2 billion. Most of the industry in the Panhandle is related to agriculture with the addition of petroleum production. Fifteen of the 26 counties have significant quantities of oil and gas production. Oil is slowly making a comeback and will probably again become a major factor in the economy of this area. High-paying jobs in the oil and gas field and in related construction continues to attract illegal aliens in spite of the setback the oil industry has been experiencing.

## Station Operations

In an effort to enforce the US Immigration Laws, the Marfa sector is authorized 12 Border Patrol stations. Seven (Alpine, Marfa, Presidio, Sanderson, Sierra Blanca, Big Bend National Park, and Van Horn) are line stations, having responsibility for an assigned section of international boundary.

The bulk of the sector personnel is concentrated in the line stations, the rationale being that the apprehension of illegal aliens as soon as possible after entry and before employment is of paramount importance. The remaining five stations are considered [redacted], however, they produce the majority of the number of illegal aliens apprehensions that are drawn to this populated area from entry points through El Paso and points west, through Del Rio and Laredo, and through this sector.

The six major activities in the line stations are linewatch, traffic check, transportation check, sign-cutting, and farm and ranch check. In addition, programs such as Employer Sanctions, Criminal Alien Program, Drug Education, Public Information, Hiring Boards, and Training are a significant part of the sector's mission.

The six northern stations primarily perform Industry and Transportation Checks and work the Border Patrol Criminal Alien Program (BORCAP). They are also making good criminal cases on fraudulent documents and document vendors.

### Alpine Station

The Alpine station recently established two permanent checkpoints effectively monitoring the major highways coming from the border to the north. These two checkpoints will control illegal alien and narcotics smuggling on the highways through this area and give the proper balance to the linewatch operations.

### Marfa Station

The Marfa Border Patrol station was adjunct to Sector Headquarters until May 1991, when it moved to separate quarters on Highway 67.

### Sierra Blanca Station

With the addition of the Sierra Blanca station, the Marfa sector is responsible for [redacted] The Sierra Blanca checkpoint has historically been a major pipeline for both narcotics and alien smuggling traffic.

Three stations (Alpine, Marfa, and Sierra Blanca) for the most part are [redacted] stations. These stations are responsible for checkpoints on major highway arteries leading away from the immediate border. These checkpoints not only encounter alien smugglers but narcotics smugglers as well.

### Presidio, Sanderson, Big Bend National Park, and Van Horn Stations

Marfa, Alpine, Presidio, Sanderson, Big Bend National Park, Van Horn, and Sierra Blanca stations have jurisdiction over the vast Big Bend region.

### Pecos Station

The Pecos station, along with the Fort Stockton station, is responsible for the Trans-Pecos area.

### Lubbock Station

The Lubbock station is in charge of the [redacted] and the [redacted] of Oklahoma.

### Fort Stockton Station

The Fort Stockton station, along with the Pecos station, is responsible for the [redacted] area.

### Amarillo Station

The Amarillo station has jurisdiction over the [redacted].

### Midland Station

The Midland station is responsible for the [redacted].

These last five stations (Pecos, Lubbock, Fort Stockton, Amarillo, and Midland) are [redacted].

## Recommendations

General recommendations that are common to all of the sectors are given after the San Diego sector write-up. These general recommendations are then followed by sector-specific recommendations.

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# El Paso Sector

## Introduction

The El Paso sector includes 18.5% (299.2 miles) of the total Southwest Border. Most of the illegal aliens are apprehended in the [redacted]. These apprehensions account for about 20% (231,000) of the Southwest Border total, making the El Paso sector second only to the San Diego sector in total numbers of illegal aliens.

Three organizations vital to the border patrol mission—Operation Alliance, the El Paso Intelligence Center (EPIC), and Joint Task Force 6 (JTF-6)—are headquartered in this sector.

## Operational Environment

### Terrain

The El Paso sector begins in the west at the Arizona/New Mexico border. There are 299.2 linear miles of border in the El Paso sector. Those miles are composed of

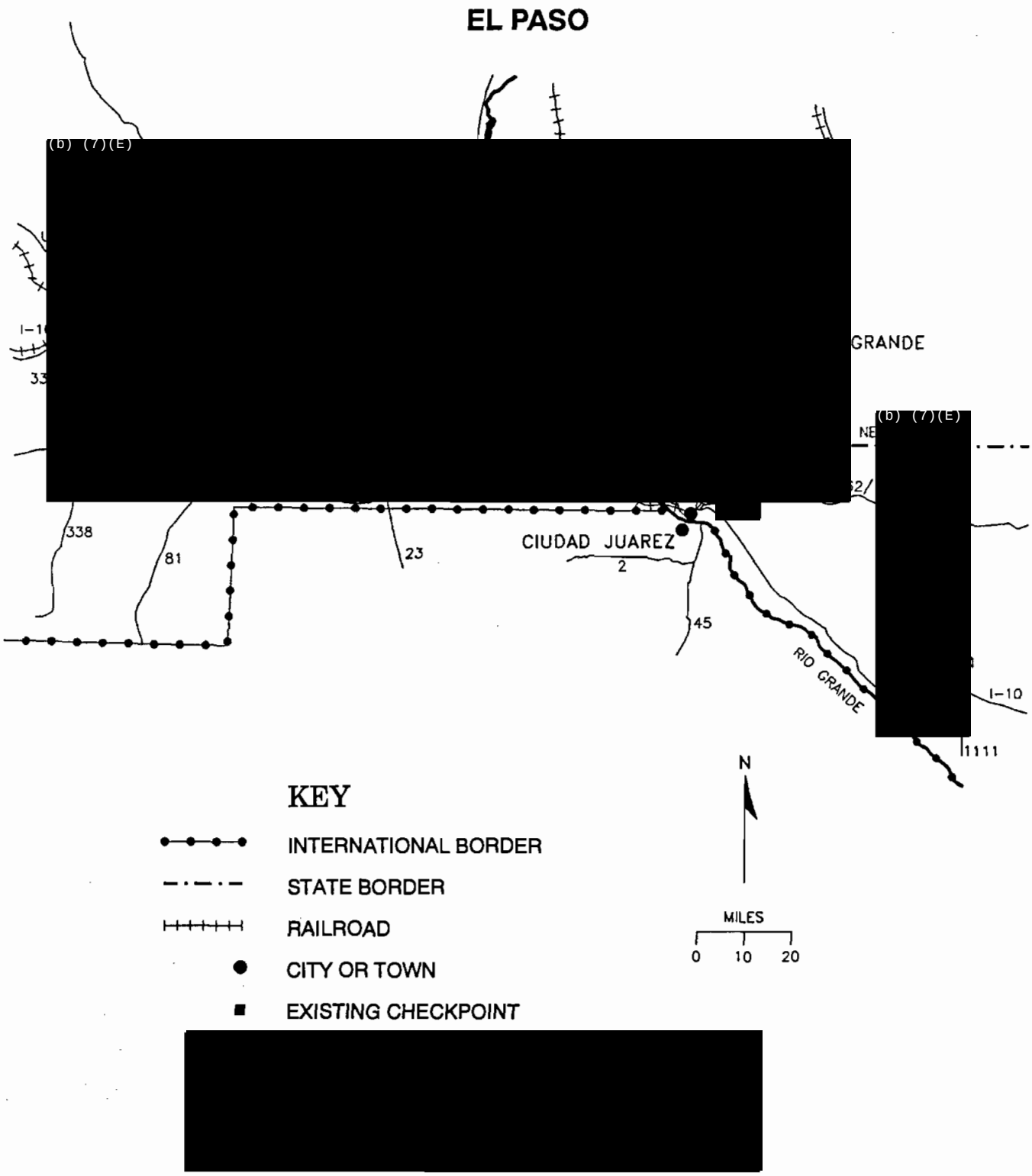
85.7 miles of flat desert
81.5 miles of rolling brushland
70.0 miles of farmland
43.5 miles of mountains
18.0 miles of urban flat
0.5 miles of canyons.

A map of the sector is shown on the following page.

### Climate

The average summer temperatures in the El Paso sector are an average low of 64°F and an average high of 94°F; however, temperatures as high as 106°F have been recorded. Winter temperatures are mild, with average lows of 23°F and highs of 60°F. The area receives an average of 8 inches of precipitation per year, with an average of 350 days of sunshine per year. Flash flood and sandstorms occur occasionally.

| | J | F | M | A | M | J | J | A | S | O | N | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High (°F) | 58 | 64 | 71 | 82 | 89 | 98 | 93 | 91 | 86 | 80 | 67 | 57 |
| Low (°F) | 30 | 37 | 41 | 50 | 58 | 58 | 68 | 66 | 59 | 48 | 38 | 32 |
| Rainy days | 1 | 1 | 1 | 2 | 1 | 2 | 5 | 6 | 7 | 4 | 1 | 1 |




*Map of the El Paso Sector*

This area is part of the northern Chihuahuan desert. The area is characterized by broad, flat to rolling plains at an elevation of 3,500 to 4,000 feet cut by arroyos and small hills.

The climate of the region is characterized by an abundance of sunshine throughout the year, high daytime summer temperatures, very low humidity, scanty rainfall, and a relatively mild winter season.

Rainfall throughout the year is insufficient for any growth except desert vegetation (averaging about 8 inches annually) and is sporadic. Irrigation is necessary for crops, gardens, and lawns. Dry periods lasting several months are not unusual. Almost one-half of the precipitation occurs in the 3-month period of July through September, from brief but often heavy thunderstorms. Drought conditions will persist for some years followed by periods of relatively heavy rain. Flooding is controlled along the Rio Grande River by dams and levees. The ground does not absorb water well and rain spills downhill into arroyos. The result can be flash floods channeled by the arroyos into areas miles away unaffected by the rain itself. Small amounts of snow fall nearly every winter, but snowcover rarely amounts to more than an inch and seldom remains on the ground for more than a few hours.

Daytime summer temperatures are high, frequently above 90°F and occasionally above 100°F. Summer nights are usually comfortable, with temperatures in the 60s. It should be noted that when temperatures are high, the relative humidity is generally quite low. A 20-year tabulation of observations with temperatures above 90°F shows that in April, May, and June the humidity averaged from 10 to 14%, while in July, August, and September it averaged 22 to 24%.

Winter daytime temperatures are mild. At night they drop below freezing about one-half the time in December and January. The Mesilla Valley in the vicinity of El Paso is noticeably cooler, particularly at night, than the airport or the city proper, both in summer and winter. The cooler air in the Valley also causes marked short-period fluctuations in temperatures and dew point at the airport with changes in wind direction, especially during the early morning hours.

Dust and sandstorms are the most unpleasant features of the weather in El Paso. While wind velocities are not excessively high, the soil surface is dry and loose and natural vegetation is sparse, so moderately strong winds raise considerable dust and sand. A tabulation of dust storms for a period of 20 years shows that they occur most often in March and April and are comparatively rare from

July through December. Prevailing winds are from the north in winter and the south in summer.

### *Effect of Climate on Drug Traffickers Courses of Action*

The low humidity in this region is suitable for journeys on foot. Humidity will not constitute an obstacle for an average size person, in good health, backpacking less than 50 pounds for short distances.

The scanty rainfall and high temperatures limit "Slow Go" terrain (passable, but with obstacles that will slow a person, such as bushes and tall grass or forests) and practically eliminates "No Go" terrain (impassable, such as heavy swamps and jungles). The arid, barren terrain and openness along the border puts it in a "Go" category (very passable).

The low humidity in the El Paso sector supports flight operations. A high level of humidity combined with high temperatures can impede takeoff of an aircraft resulting from the pressure placed on aircraft.

The strong winds can slow down, or make a pilot reconsider flying, but will not deter a motivated, skilled pilot.

### *Effect of Climate on Border Patrol Courses of Action*

The humidity is favorable for field operations (*i.e.*, surveillance, running or chases, jumping). The high temperatures and daytime shifts (mainly during the May through August time frame) may cause Border Patrol Agents to become fatigued more easily. Agents are advised to remain in shaded areas whenever possible to avoid heat injuries.

Border Patrol pilots are subject to mission requirements that mean that they can fly in strong wind situations if necessary. Flight operations with unfavorable air currents will usually be postponed until conditions are good. A high level of humidity in conjunction with high temperatures can make the instruments record a higher elevation. For example, a flight operation must be conducted at the peak of a mountain at an elevation of 6,000 feet; with conditions such as those previously mentioned, the instruments can read an elevation of 10,000 feet. Pilots are aware that situations like that can occur and will take the necessary measures for a safe operation.

## Available Resources

The El Paso sector currently has 590 agents and 80 nonagent support personnel assigned. The sector also possesses intrusion detection, communications, information control and display, and assessment equipment (some for day and some for night use). Some

of the obsolete equipment has recently been replaced. The new equipment recommended will augment and upgrade the sector's existing physical protection equipment inventory. Mention of most of this equipment is not included; however, in a few cases, specific sensor or camera locations are discussed.

**Threat**

In the [redacted] This highway provides relatively easy access to the border in this region.

[redacted]

About 20% of illegal aliens apprehended on the Mexico border attempt to cross in the El Paso sector, a volume of illegal alien traffic second only to San Diego's. The El Paso sector covers the western part of the Texas/Mexico border and all of the New Mexico/ Mexico border. In the Texas portion of the El Paso sector, the border is delineated by the Rio Grande River. In New Mexico, the southern border is delineated only by international boundary markers.

Despite the large size of the El Paso sector, approximately 75% of illegal alien apprehensions occur along just 5 miles of border between El Paso and Ciudad Juarez. The Mexico side of this 5-mile strip is a densely populated residential area with houses built right up to the [redacted]. The two cities are separated only by the [redacted] The close proximity of the two large border cities and the [redacted]

A significant portion of the flow to downtown El Paso consists of "day crossers" who work in El Paso as maids, gardeners, day laborers, and kitchen help. The deluge of such day crossers has become so institutionalized, in fact, that some Mexicans make their living by carrying illegal aliens across the river to help them stay dry while entering the US.

The second kind of El Paso border crosser is the Juarez teenager who crosses "on a lark." Though it would at first seem such casual crossings by nonworking minors are a relatively insignificant matter, this is not the case. It is common for El Paso residents living near the border to have laundry stolen off the line, windows broken by rock-throwing youths, and other crimes and misdemeanors committed against them.

The third kind of border entrant has different intentions. This is the illegal alien who crosses the border on his way to Dallas, Houston, Los Angeles, Chicago, or Detroit. These aliens may head north with professional smugglers, by commercial plane or bus, or by illegally boarding trains in the freight yards of West Texas and New Mexico.

### *Contact with Suspects*

The information presented in the tables below is the compilation of the Border Patrol agents' contact with illegal aliens and/or drug traffickers and the amounts of drugs confiscated.

| Contact with Suspects: | Jan '90 | Feb '90 | Mar '90 | Apr '90 | May '90 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 15,865 | 18,232 | 16,935 | 22,382 | 21,787 |
| Drug-Related Arrests | 63 | 73 | 46 | 45 | 63 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 1,150.91 | 863.85 | 781.75 | 434.81 | 1,042.97 |
| Cocaine (oz) | 1.12 | 8,439.04 | 2,890.56 | 5.76 | 694.88 |
| Heroin (oz) | 0.001 | 5.74 | – | 2.13 | 0.76 |
| Other (oz) | – | – | – | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | 8 | 6 | 2 | 7 | 6 |
| Assaults on BP Agents | 1 | 3 | 1 | 1 | – |

| Contact with Suspects: | Jun '90 | Jul '90 | Aug '90 | Sept '90 | Oct '90 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 21,616 | 18,499 | 15,707 | 14,514 | 22,448 |
| Drug-Related Arrests | 91 | 122 | 148 | 110 | 167 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 1,813.39 | 4,925.23 | 5,703.26 | 2,897.89 | 4,940.81 |
| Cocaine (oz) | 878.4 | 6,450.88 | 5,090.56 | 117.28 | 109,480.96 |
| Heroin (oz) | – | 0.2 | – | 0.14 | – |
| Other (oz) | – | – | – | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | 13 | 11 | 9 | 9 | 18 |
| Assaults on BP Agents | 2 | 2 | 2 | 3 | 1 |

| Contact with Suspects: | Nov '90 | Dec '90 | Jan '91 | Feb '91 | Mar '91 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 23,917 | 24,066 | 22,341 | 24,711 | 19,809 |
| Drug-Related Arrests | 139 | 149 | 122 | 87 | 104 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 4,904.07 | 5,492.03 | 3,211.62 | 3,440.32 | 2,444.26 |
| Cocaine (oz) | 494.56 | 74.88 | 0.16 | 794.72 | 27,353.44 |
| Heroin (oz) | 0.02 | – | 0.01 | 0.002 | 0.04 |
| Other (oz) | – | – | – | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | 10 | 8 | 12 | 6 | 6 |
| Assaults on BP Agents | 3 | 1 | 3 | 3 | 5 |

| Contact with Suspects: | Apr '91 | May '91 | Jun '91 | Jul '91 | Aug '91 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 15,301 | 15,616 | 23,214 | 18,647 | 22,012 |
| Drug-Related Arrests | 214 | 131 | 164 | 121 | 186 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 6,756.04 | 3,906.16 | 4,148.55 | 2,942.73 | 2,731.39 |
| Cocaine (oz) | 963.2 | 156.0 | 520.96 | 1,520.96 | 685.92 |
| Heroin (oz) | 57.9 | 89.26 | 0.06 | 0.04 | 6.4 |
| Other (oz) | – | – | – | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | 15 | 9 | 5 | 9 | 12 |
| Assaults on BP Agents | 3 | 2 | 2 | 5 | 3 |

| Contact with Suspects: | Sept '91 | Oct '91 | Nov '91 | Dec '91 | Jan '92 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 21,796 | 22,854 | 20,606 | 18,539 | 19,439 |
| Drug-Related Arrests | 136 | 107 | 87 | 135 | 106 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 2,112.27 | 1,557.47 | 1,075.68 | 1,631.2 | 2,855.42 |
| Cocaine (oz) | 254.44 | 812.96 | 149.28 | 160.16 | 14.56 |
| Heroin (oz) | 0.02 | 15.86 | 4.51 | 0.11 | 0.57 |
| Other (oz) | – | – | – | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | 14 | 10 | 7 | 10 | 11 |
| Assaults on BP Agents | 3 | 5 | 2 | 1 | 4 |

| Contact with Suspects: | Feb '92 | Mar '92 | Apr '92 | May '92 | Jun '92 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 14,995 | 13,193 | 15,911 | 13,436 | 17,984 |
| Drug-Related Arrests | 128 | 149 | 107 | 147 | 134 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 6,587.89 | 8,651.32 | 3,894.82 | 5,286.04 | 4,154.12 |
| Cocaine (oz) | 94.72 | 84.0 | 0.16 | 34.08 | 1,336.48 |
| Heroin (oz) | 17.26 | 0.01 | – | 0.08 | 0.03 |
| Other | – | – | – | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | 10 | 10 | 5 | 15 | 9 |
| Assaults on BP Agents | 3 | 1 | – | 1 | 1 |

## Sector Operations

The El Paso Sector Headquarters staff provides the overall leadership, direction, and support necessary to conduct sector operations.

For the [redacted] in this region. [redacted] and would at least provide an indication of traffic levels. Apprehensions would be [redacted] Depending upon terrain conditions, sign-cutting and aircraft patrols also prove to be useful.

There is one Port of Entry (POE) called Antelope Wells between the Arizona border and El Paso. This POE is sited in a remote desert section served by only dirt roads and a small aircraft landing strip on either side of the border. There are no nearby population centers on either side of the border [redacted], but most likely not as appealing to illegal aliens.

A new POE at Santa Teresa, New Mexico, is planned. This POE is expected to become very busy soon after it is opened. It is anticipated that a large number of illegal aliens will attempt to enter the US near the new POE.

## Recommendations

General recommendations that are common to all of the sectors are given after the San Diego sector write-up. These general recommendations are then followed by sector-specific recommendations.

# Tucson Sector

## Introduction

The Tucson sector includes 16.5% (268.9 miles) of the Southwest Border but accounts for a large fraction of all illicit drugs seized on the border. Since January 1988, this sector accounted for 200,000 alien apprehensions, 350,000 pounds of marijuana, 20,000 pounds of cocaine, and $8.7 million in currency. In FY 1991 alone, the Tucson sector listed 60,500 illegal alien apprehensions (2,000 criminal aliens), 10,000 pounds of cocaine, 91,000 pounds of marijuana, $2.3 million in currency, and 1,250 vehicles seized.

## Operational Environment

### Terrain

There are 268.9 linear miles of border within the Tucson sector. Those miles are composed of

| | |
|---|---|
| 122.9 | miles of mountains |
| 69.6 | miles of flat desert |
| 45.0 | miles of rolling brushland |
| 20.4 | miles of canyons |
| 7.0 | miles of urban flat |
| 4.0 | miles of urban hilly. |

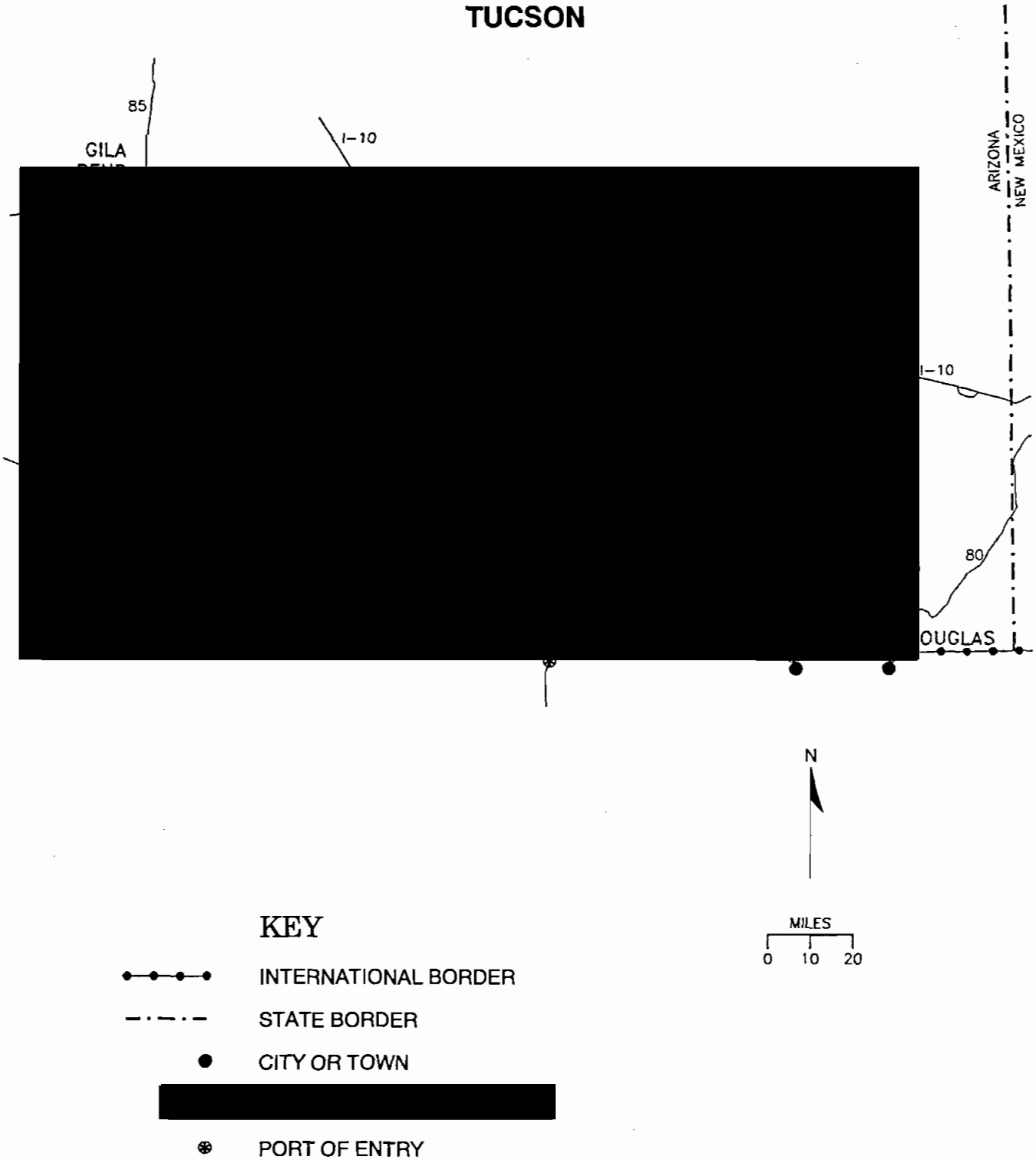
From the western boundary between the Tucson and Yuma sectors (b) (7)(E) [redacted]) to Nogales, a distance of [redacted] miles, the terrain alternates between desert and mountains; [redacted] miles of desert and [redacted] miles of mountains and canyons. From Nogales to the New Mexico border, (b) (7)(E) [redacted] the Tucson and El Paso sectors, the distance is [redacted] miles. This eastern section [redacted] miles) is predominantly brush and ranchland with some desert. The remainder comprises [redacted] miles of mountains, mostly just east of Nogales, and urbanized border town areas.

A map of this sector is shown on the following page.

### Climate

Average summer temperatures in the Tucson sector are a low of 71°F and a high of 100°F; however, temperatures as high as 110°F have been recorded. Winter temperatures are mild, with an average low of 41°F and a high of 68°F. Average precipitation is 13 inches per year, with an average of 340 days of sunshine per year. There are no unusual storm conditions (such as high winds, flooding, sandstorms, or heavy snow) that occur in this sector.

# TUCSON




***Map of the Tucson Sector***

| | J | F | M | A | M | J | J | A | S | O | N | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High (°F) | 66.3 | 67.3 | 75.5 | 85.5 | 91.4 | 105.7 | 97.6 | 95.9 | 95.5 | 88.9 | 76.1 | 63.6 |
| Low (°F) | 27.3 | 38.3 | 47.0 | 53.9 | 59.0 | 71.6 | 72.3 | 69.3 | 68.8 | 57.3 | 47.0 | 38.5 |
| Rainy days | 2 | 2 | 2 | 1 | 1 | 2 | 6 | 4 | 3 | 2 | 1 | 2 |

## Available Resources

The Tucson sector currently has 243 agents and 46 nonagent support personnel assigned. Available electronic equipment includes 150 seismic sensors, 225 magnetic sensors, and 70 infrared sensors supported by 650 transmitters, 5 fixed repeaters, 25 portable repeaters, 7 base receivers, and 10 portable receivers. Equipment for tracking and assessment purposes includes 20 night vision goggles, 7 starlight scopes, 1 Long Range Infrared System (LORIS) unit, 4 hand-held thermal imagers, and 4 low-light-level Closed Circuit Television (CCTV) cameras.

About 5 miles of chain link barrier fencing is in place in the populated areas around the Ports of Entry (POEs). Most of this is single fencing with many holes. Some steel landing mat strips have been added to the fencing in Nogales, primarily as a vehicle barrier. [redacted]

## Threat

The sector includes six POEs located at Nogales, Mariposa (Nogales West), Douglas, Naco, Sasabe, and Lukeville. The majority of the Tucson border is either mountainous or rugged terrain characterized as north/south canyons. The total of these two classifications can be considered natural barrier or traffic channelizer. The remainder of the sparsely populated area is composed of desert and brushland that provides only minimal barriers to illegal crossing. The remaining 11 miles are the heavily populated hilly urban area at Nogales and flat urban areas at Douglas and Naco.

Like much of the rest of the southern border, the terrain in the Tucson sector is very inhospitable, consisting of desert and mountains where daytime summer temperatures regularly exceed 100°F. Most of the border in this sector is delineated by cattle fences and border markers, with little effective fencing of any kind.

Although there is significant illegal alien traffic in the vicinities of the Nogales and Douglas POEs, most of the illegal border crossings in the Tucson sector are related to drug traffic. At least three major drug organizations are known to be operating in this area:

- The Rafael Caro-Quintero organization is engaged in the trafficking of cocaine, marijuana, and heroin. The organization maintains a primary distribution point in Caborca, Sonora, 50 miles south and 30 miles west of Sasabe, and an access to the Gulf of California at Puerto Peñasco, 50 miles south and 35 miles west of Lukeville.

- The Jose Luis Carino organization transports cocaine and marijuana into western Arizona for the Caro-Quintero group.

- The Yolanda Molina de Hernandez organization smuggles cocaine and marijuana into eastern Arizona and Texas from its base in Agua Prieta, across the border from Douglas.

These groups smuggle large drug shipments through POEs in vehicles equipped with [redacted], and between POEs in vehicles, backpacks, and horse caravans. They are well armed with automatic weapons; use sophisticated communications, scanners, and surveillance equipment; and operate networks of spotters and informants. The organizations have extensive real estate holdings both in Mexico and the US including numerous ranches on both sides and residential and commercial property for staging and distribution.

As an indication of both tonnage and determination, a seizure in May of 1990 in the Naco area netted 3,192 pounds of cocaine, two AK-47 automatic weapons, and a pistol. In October 1990, 4,400 pounds of cocaine were seized west of the Mariposa truck POE at Nogales. The drugs were in 100-pound burlap bags carried by a 40-horse caravan.

The illegal alien traffic is much more casual and less threatening. Very few aliens are armed, and they are not likely to engage in armed confrontation with the Border Patrol agents. They are, however, not reluctant to hurl rocks at patrol vehicles and place barricades on patrol roads.

### *Contact with Suspects*

The information presented in the tables below is the compilation of the Border Patrol agents' contact with illegal aliens and/or drug traffickers and the amounts of drugs confiscated.

| Contact w/Suspects: | Jan '90 | Feb '90 | Mar '90 | Apr '90 | May '90 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 3,859 | 3,619 | 5,473 | 4,352 | 4,608 |
| Drug-Related Arrests | 71 | 53 | 67 | 46 | 45 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 15,568.4 | 8,919.66 | 10,006.3 | 8,766.84 | 9,014.15 |
| Cocaine (oz) | 5.07 | 186.372 | 1.5625 | 3,203.25 | 554.001 |
| Heroin (oz) | – | 8.4 | – | – | – |
| Other (oz) | – | – | – | 0.0044 | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | 1 | 4 | – | 3 | 2 |
| Assaults on BP Agents | 2 | – | 1 | 4 | – |

| Contact w/Suspects: | Jun '90 | Jul '90 | Aug '90 | Sept '90 | Oct '90 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 4,398 | 5,070 | 5,858 | 5,241 | 3,869 |
| Drug-Related Arrests | 43 | 29 | 26 | 25 | 63 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 4,815.34 | 2,441.27 | 3,131.06 | 4,127.89 | 7,246.76 |
| Cocaine (oz) | 531.34 | 289.2 | 13.02 | 16.685 | 6,352.94 |
| Heroin (oz) | 7.34 | 0.03 | – | – | 0.14 |
| Other (oz) | – | – | – | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | 3 | 2 | 1 | 3 | 4 |
| Assaults on BP Agents | 6 | 1 | 1 | – | 1 |

| Contact w/Suspects: | Nov '90 | Dec '90 | Jan '91 | Feb '91 | Mar '91 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 3,086 | 2,958 | 3,665 | 4,283 | 4,779 |
| Drug-Related Arrests | 117 | 100 | 80 | 62 | 72 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 18,148.4 | 15,742.5 | 13,500.8 | 6,130.85 | 12,394.9 |
| Cocaine (oz) | 292.41 | 421.184 | 344.24 | 40.3643 | 118.432 |
| Heroin (oz) | 0.6 | 2.37 | – | 5.11 | 0.459 |
| Other (oz) | – | – | – | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | 3 | 5 | 7 | 6 | 5 |
| Assaults on BP Agents | 3 | 3 | 4 | 4 | 1 |

| Contact w/Suspects: | Apr '91 | May '91 | Jun '91 | Jul '91 | Aug '91 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 6,619 | 6,974 | 6,853 | 5,694 | 6,353 |
| Drug-Related Arrests | 60 | 39 | 28 | 19 | 18 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 7,601.10 | 3,826.12 | 2,230.23 | 1,447.45 | 1,042.72 |
| Cocaine (oz) | 1.394 | 688.378 | 222.47 | 487.745 | 476.852 |
| Heroin (oz) | 0.25 | 2.87 | 10.6 | – | – |
| Other (oz) | – | 0.25 | 0.44 | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | 6 | 5 | 6 | – | 2 |
| Assaults on BP Agents | 3 | 1 | 1 | 3 | 4 |

| Contact w/Suspects: | Sept '91 | Oct '91 | Nov '91 | Dec '91 | Jan '92 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 5,259 | 4,585 | 3,507 | 3,441 | 6,299 |
| Drug-Related Arrests | 27 | 91 | 63 | 81 | 90 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 1,433.96 | 12,317.5 | 10,346.8 | 8,875.31 | 10,959.7 |
| Cocaine (oz) | 620.322 | 20.52 | 6.4644 | 682.7 | 1.3 |
| Heroin (oz) | – | – | – | – | – |
| Other (oz) | – | – | – | 0.06 | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | 4 | 8 | 1 | 9 | 3 |
| Assaults on BP Agents | 5 | 2 | 2 | 2 | 5 |

| Contact w/Suspects: | Feb '92 | Mar '92 | Apr '92 | May '92 | Jun '92 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 7,486 | 10,040 | 7,480 | 5,929 | 4,759 |
| Drug-Related Arrests | 77 | 100 | 69 | 60 | 59 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 8,802.39 | 12,175.1 | 8,731.22 | 5,719.82 | 8,215.67 |
| Cocaine (oz) | 0.63 | – | 267.45 | 2.46 | 786.453 |
| Heroin (oz) | – | – | – | 35.2 | – |
| Other (dosage units) | – | – | 1,988 | – | 0.71 (oz) |
| Number of Confrontations: | | | | | |
| With Armed Persons | 2 | 3 | 3 | 2 | 3 |
| Assaults on BP Agents | – | 1 | 5 | 1 | 2 |

## Sector Operations

The Tucson sector is responsible for 269 miles of border and encompasses all of Arizona (except for [redacted] Counties), a total of approximately 89,000 square miles.

The Tucson sector comprises six "line" stations at Ajo, Tucson, Nogales, Sonoita, Naco, and Douglas, and four interior stations at Gila Bend, Phoenix, Casa Grande, and Willcox. Eighty-eight percent of the Tucson sector manpower is assigned to the line stations.

Border Patrol operations within the sector are supported by garage, communications, electronic, data center, and staging facilities. An Air Operations Branch and a Special Operations function, composed of Anti-Smuggling, Vehicle Seizures, and Intelligence Units, provide an invaluable measure of support for the Border Patrol mission.

Anti-Smuggling and Prosecution units are responsible for investigating and presenting for prosecution criminal violators of immigration laws, specifically the organized, commercial smuggling of aliens into the US. The Sector Intelligence Unit is responsible for developing and providing tactical and strategic information reports to the sector staff and field stations.

The southern border of Arizona has been dubbed "Cocaine Alley" because of the amount of narcotics that is smuggled through that area. Officers assigned to narcotics units concentrate efforts on the interdiction and investigation of narcotics smuggling organizations. This enforcement effort, and the new Drug Demand Reduction Program to educate the youth of America in the evils of drug use, are important parts in this nation's multiple approach to the war on drugs.

The Border Patrol Criminal Alien Program (BORCAP) is in full operation, resulting in increased prosecutions and removal of criminal aliens. BORCAP agents also locate aliens who have failed to heed their deportation dates and expel them from the country.

The Employer Labor Relations Unit (ELR) is also active with Border Patrol agents enforcing the provisions of the IRCA.

## Station Operations

### Ajo Station

Ajo station currently has an authorized force of 22: 1 Patrol Agent in Charge, 2 Supervisory Patrol Agents, and 19 Border Patrol Agents. Ajo opened a new station facility in February 1989, with enlarged areas for alien holding, covered parking, and corrals for two station horses.

The Ajo station area is in the [redacted] County, encompassing the [redacted] of the Tohono O'odham (formerly Papago) Indian Reservation, the [redacted], the [redacted], and most of the [redacted] The approximately 3,000 square miles of the Ajo area is rugged, isolated low desert terrain. Scattered villages on the Indian Reservation, the small city of Ajo, and the communities of Why and Lukeville are the only populated portions. The majority of the area is accessible only by four-wheel-drive vehicles, all-terrain vehicles (ATVs), horseback, or foot traffic. Ajo agents are frequently called upon for search and rescue missions, seeking both illegal aliens and citizens lost in the hot, dry, unforgiving desert.

Activities of the Ajo station are mainly sign-cutting, tracking, and traffic observation. The horses have proven a valuable asset in tracking operations both in the wilderness area where vehicles are not allowed and on the Tohono O'odham Indian Reservation.

Traffic observation is conducted on major highways leading out of the border area seeking vehicles smuggling aliens and narcotics. The Indian Reservation is a major pipeline for smuggling both [redacted].

***Lukeville to Yuma Sector Boundary*** [redacted]

[redacted] to the Lukeville POE, Mexico [redacted] On the US side of the border are the Cabeza Prieta National Wildlife Refuge and the Organ Pipe Cactus National Monument. North of these is the Luke Air Force Base Gunnery Range before Interstate Highway 8 is encountered, about 50 miles north of the border. There are very few roads in this area. [redacted], which is probably available for sign-cutting and response. At [redacted] On the Mexico side of the border across from Lukeville is the town of Sonoita. Considering the rarity of improved roads in this part of Mexico, it is noteworthy that from Sonoita, [redacted]

[redacted] A well-established trail clearly connects [redacted]

***Lukeville toward Sasabe***

From the Lukeville POE to the Sasabe POE, a distance of 80 miles, the US side of the border is dominated by the Tohono O'odham Indian Reservation. The reservation covers 62 miles (78%) of this border segment. The terrain again alternates between desert and mountains; 56 miles of desert and 24 miles of canyons and mountains.

On the US side of the border on the Tohono O'odham lands are four improved roads that eventually connect to [redacted], which [redacted]

- [redacted]
- [redacted]

**Tucson Station**

The Tucson station has an authorized force of 62, with 1 Patrol Agent in Charge, 1 Assistant Patrol Agent in Charge, 8 Supervisory Patrol Agents, and 52 Border Patrol Agents. The Tucson station has 73 miles of border.

The Tucson station's area encompasses the metropolitan area of Tucson, the [redacted] Tohono O'odham Indian Reservation, and the rugged mountains along the [redacted]. The approximate 4,000 square miles of Tucson station area is rugged, isolated, barren terrain. From the low desert of the Indian reservation to the rocky, jagged peaks of the mountains, most of Tucson's territory is accessible only by four-wheel-drive vehicles, by ATVs, on horseback, or on foot.

The primary duties of the Tucson station are linewatch, city patrol, transportation check, and traffic observation, supported by canines and two of the sector's fast pursuit vehicles. Agents conduct city patrol and transportation checks of the bus station and international airport as well as freight train check apprehending many aliens already past the initial border area. [redacted]

[redacted] are a major factor in stemming the flow of aliens and narcotics. Because Tucson is [redacted] seeking smuggling loads of both illegal aliens and narcotics.

Tucson station agents are involved in the Employer Sanctions Program and BORCAP, as well as a multi-agency task force combating narcotics. In the [redacted] where [redacted] in combating the serious, nighttime narcotics smugglers.

***Ajo Station Boundary to Sasabe***

- [redacted]
- [redacted]

At the Sasabe POE, [redacted]

On the [redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]

[redacted]

- [redacted]

- [redacted] to the Sasabe POE consists of [redacted] miles of desert and [redacted] miles of mountains. For the [redacted] There are about seven recognizable trails that cross the border in the mountains leading to Sasabe. [redacted] have [redacted] and reasonable access by a road from the south.

**Nogales Station**

The present authorized strength of the Nogales station is 84 agents: 1 Patrol Agent in Charge, 1 Assistant Patrol Agent in Charge, 8 Supervisory Patrol Agents, and 74 Border Patrol Agents. Nogales is the largest station in the Tucson sector.

The Nogales' area covers approximately 1,200 square miles. The areas to the west and east are rugged mountains accessible only by foot, horseback, or ATV in many portions. The Santa Cruz Valley, flanked by rough and rocky mountains, contains residential areas intermixed with agriculture. Nogales' sister city, Nogales, Sonora, is a major population center and [redacted]

The primary functions of the Nogales station are linewatch and city patrol, supported by traffic observation and sign-cutting. Agents also perform the tasks of ELR and BORCAP.

Nogales has three of the five canines in the Tucson sector. Two of the sector's Roadrunner fast-pursuit vehicles patrol [redacted] north from Nogales seeking vehicles loaded with aliens or narcotics. Nogales station is involved with Metro, an interagency narcotics task force working the Nogales area.

Nogales is the only station in the [redacted]

### *Sasabe to Nogales (37 miles)*

The US side of the 37 miles of border between Sasabe and Nogales is mostly in the Coronado National Forest. This border segment is entirely mountainous. For about 15 miles east from Sasabe, there is [redacted].

About [redacted] miles east of Sasabe, the road on the Mexico side approaches to within [redacted]. At that point an [redacted].

Between Sasabe and [redacted], other [redacted]

In the remaining [redacted] miles east to Nogales, there are [redacted]

### Sonoita Station

The Sonoita station was created in late 1988 to provide coverage in the area of [redacted]. Because of the distance to [redacted], Arizona, neither Naco nor Nogales could cover the area adequately, and the alien and narcotics trafficking was increasing. One Patrol Agent in Charge and eight Border Patrol Agents currently are assigned to the Sonoita station.

Located at the junction of State Routes 82 and 83, Sonoita is a [redacted]

[redacted]. The Sonoita station area is remote, rugged, and sparsely populated, with the small towns of Sonoita and Patagonia the principal residential areas. Fort Huachuca military base and [redacted].

The duties of the Sonoita agents are linewatch, sign-cut, and traffic observation. Much information has been gained from other law enforcement agencies and residents in the local area. Sonoita is right in the middle of "Cocaine Alley" with the numbers of narcotics apprehensions rising. Horses as well as four-wheel-drive vehicles are used in the back country seeking smugglers of both aliens and narcotics.

***Nogales to Naco (59 miles)***

Of the 59 miles of border between Nogales and Naco, the first 40 miles are mostly mountainous. The Santa Cruz river crosses the [redacted]. In this area, about [redacted] miles east of the [redacted]. An abandoned [redacted]. About [redacted] Naco is where the border patrol road being constructed by military units from JTF-6 begins and continues east. At the [redacted] of Naco, a [redacted] From this point east to Naco, the terrain is brushland and ranchland. This [redacted]-mile stretch of border is [redacted]

**Naco Station**

The present authorized strength of the Naco station is 25 agents.

Naco station's area is [redacted] of Douglas at [redacted] west to [redacted] encompassing approximately 1,100 square miles. The mountainous Naco station terrain, [redacted]

[redacted].

Multiple activities are conducted by the Naco agents, from sign-cut and linewatch along the border to traffic observation and city patrol in the populated areas. Because Naco has become a major route for narcotics smuggling, the Naco station has become active in the Cochise County Border Alliance Group (BAG), a multi-agency narcotics interdiction effort. Naco station agents continue to intercept substantial quantities of marijuana and cocaine, responsible for a 502.55-pound cocaine bust in June 1989.

***Naco to Douglas (23 miles)***

The distance from Naco to Douglas is about 23 miles. The first 10 miles east of Naco, to the lime plant at Paul Spur, is quite hilly, after which the terrain is flat. The [redacted]

**Douglas Station**

This station shares the US/Mexico border with the city of Agua Prieta, Sonora, Mexico, a city with a population over 30,000. Douglas station is manned with 1 Patrol Agent in Charge, 1 Assistant Patrol Agent in Charge, 7 Supervisory Patrol Agents, and 54 Border Patrol Agents.

Douglas agents patrol the most [redacted] an area of approximately 1,500 square miles. The terrain is high desert, the Sulphur Springs Valley agricultural area, the southern part of the Chiricahua Mountains, with the city of Douglas as the primary population center. [redacted]. Douglas shares part of the area that has gained the nickname of "Cocaine Alley" because of the volume of narcotics seizures and the notoriety of the area.

A new highway from Hanos, Chihuahua, to Agua Prieta, Sonora, was completed early in the 1980s. This brought an influx of smugglers to the Douglas area. The topography and terrain of the area is [redacted] with extremely rugged mountains throughout.

Douglas agents have one of the most varied duty stations, from linewatch and city patrol, to farm and ranch and traffic observation

up Sulphur Springs Valley, to sign-cutting and tracking. Agents also perform bus check at the Greyhound station and mobile traffic check operations on [redacted]

Under IRCA, Douglas agents check both local businesses and the agricultural activity in the valley. To combat increased narcotics smuggling activity, Douglas agents are included in the BAG, a task force of many local, county, state, and federal agencies in the area.

***Douglas to New Mexico Border*** [(b) (7)(E)] ***)***

This [redacted]-mile border segment is rough to mountainous. An improved road, [redacted]

## Gila Bend Station

Presently, the station's authorized force consists of one Patrol Agent in Charge and five Border Patrol Agents.

The Gila Bend station area encompasses approximately 5,000 square miles bisected by the Gila River agricultural area and Interstate 8. Located southwest of Phoenix, west of Casa Grande, and north of Ajo, Gila Bend is one of the westernmost areas of the Tucson sector. The vast majority of the area is isolated desert with rough, rocky mountains. Several farming communities are located from the Yuma County Line to the Phoenix metropolitan area.

Before IRCA, a substantial amount of Gila Bend activity was in farm and ranch check, but Gila Bend agents are currently delegated to IRCA and ELR. Sign-cut and tracking are done on the US Air Force Gunnery Range, often using motorcycles for desert travel. [redacted].

## Phoenix Station

The Phoenix station currently has an authorized force of 10 agents, 1 Patrol Agent in Charge, and 9 Border Patrol Agents.

Phoenix covers the largest area in the Tucson sector, approximately 34,000 square miles. Phoenix's area covers the major metropolitan areas of Phoenix (with an aggregate population of approximately

two million), and Flagstaff, north to the Utah State Line. This area encompasses central mountains, national forests, and parts of several Indian reservations.

Because of the immense amount of territory and the low number of agents, the Phoenix station relies heavily on liaison with other agencies. Duties include city patrol, transportation check, and liaison. Farm and ranch activities have been replaced with the ELR provided by IRCA.

### Casa Grande Station

Casa Grande station now has 13 authorized Officer Corps positions: 1 Patrol Agent in Charge, 2 Supervisory Patrol Agents, and 10 Border Patrol Agents.

Casa Grande's area encompasses approximately 5,800 square miles of [redacted]. The terrain is predominantly low desert with occasional low mountain ranges. Two major freeways—[redacted]—provide easy access to and from the area.

Casa Grande has traditionally been a farm and ranch check station, but has most recently been quite active in agricultural sanctions and the ELR provisions of IRCA.

One of the largest smuggling rings ever broken was found to be operating in [redacted] It is estimated that the contractors smuggled 11,400 Guatemalans in their operation.

### Willcox Station

Currently, one Patrol Agent in Charge and five Border Patrol agents are assigned to the Willcox station.

Willcox is the second largest station area with approximately 33,000 square miles covering roughly [redacted]. Much of this area is very sparsely populated.

Farm and ranch activities were a primary function of the Willcox station until IRCA. Currently, Willcox agents are performing Employer Sanctions investigations and providing educational training to the local farmers and ranchers, as well as to businesses in the Willcox station area. Traffic observation is performed on [redacted]

## Operational Strategy

The populated areas along the border, particularly the more urbanized population centers at Nogales and Douglas, are the localities where significant illegal alien traffic occurs. Generally, the control measure used against this activity is vehicular line patrol in which the fence line between populated areas on either side of the border is patrolled and watched for aliens coming through holes or over the fence. They are either apprehended at the fence or tracked down near it. In [redacted]

[redacted]

Organized alien and drug smuggling activities tend to be concentrated in the areas between POEs and away from urban scrutiny.

[redacted]

In the desert and brushland area, except for a [redacted] Between Nogales and Douglas, about [redacted] miles of new patrol road has recently been constructed by JTF-6. If this road is continually maintained, it could increase the effectiveness of tracking in this area. Where tracking cannot be done, the expertise of the resident agents and their familiarity with local traffic and routes must be relied upon to spot unusual activity and to select appropriate sensor locations to signal and count traffic.

Sensor activations and/or sign-cutting give strong indications of the route being taken by the traffic, where to deploy agents to intercept and apprehend it, or likely staging areas that can be converged upon; these measures assist in control and containment activities. [redacted]. To some extent, the same is true for illegal aliens. If illegal entry was made to take up residence in the US, then inland population centers away from the heavily patrolled border are the objectives. [redacted]

(b) (7)(E) [redacted]. The amount of traffic that must be dealt with is then reduced to a minimum, and the ability to identify unusual patterns or vehicles is enhanced. Accordingly, the following full-time highway checkpoints would conform to such a strategy:

- (b) (7)(E) [redacted]. This and other minor roads could be [redacted]
- (b) (7)(E) [redacted]. These two checkpoints would catch traffic out of the center of the [redacted]
- (b) (7)(E) [redacted]. This would check traffic from the [redacted].
- (b) (7)(E) [redacted]. This would intercept traffic from the [redacted] This would be a large installation because of the volume of traffic on this route.
- (b) (7)(E) [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted].

Of the 10 checkpoints identified above, all but the one on [redacted] Nogales are relatively small operations. Having to staff five shifts to maintain full-time coverage at all of these stations would occupy nearly the entire staff assigned to the Tucson sector. On the other hand, the alternative would be to place fewer but larger checkpoints on the Interstates after the above routes have

joined them. To intercept east/west and northbound traffic at the Interstate level and to cover smaller but significant highways that could be used for smuggling, at least six checkpoints, all larger than suggested above, would be required.

Because it is not possible to interdict the bulk of alien and drug smuggling traffic at the border itself, what will be required to gain control of illegal border traffic in this sector is an intercept strategy that passes all traffic out of the area through the scrutiny of experienced agents. Sensors and tracking at the border line will serve to alert the enforcing agencies to changes in traffic patterns, locations, and intensity. Patterns can also be observed in the sensor data which, in conjunction with real time intelligence, can be used to identify likely staging areas and mustering points and to direct operations against them. They will also provide a more confident count of total traffic with which to measure operational effectiveness.

## Recommendations

General recommendations that are common to all of the sectors are given after the San Diego sector write-up. These general recommendations are then followed by sector-specific recommendations.

# Yuma Sector

## Introduction

The Yuma sector includes 7.2% (118.2 miles) of the total Southwest Border and accounts for 6% (67,000 in 1987) of the total apprehensions of illegal aliens per year. In the [redacted] 89% of the apprehensions are made. In the same zone, the Yuma sector personnel make 90% of their drug arrests. This is quite understandable because nearly 80% of the sector is composed of rugged mountains, sand dunes, and flat desert, which includes the Luke Air Force Base bombing range.

## Operational Environment

### Terrain

This sector has extremely hostile natural geographical features. There are 118.2 linear miles of border within the Yuma sector. Those miles are composed of

51.6 miles of flat desert
28.5 miles of mountains
22.8 miles of farmland
11.7 miles of sand dunes
3.6 miles of rolling brushland.

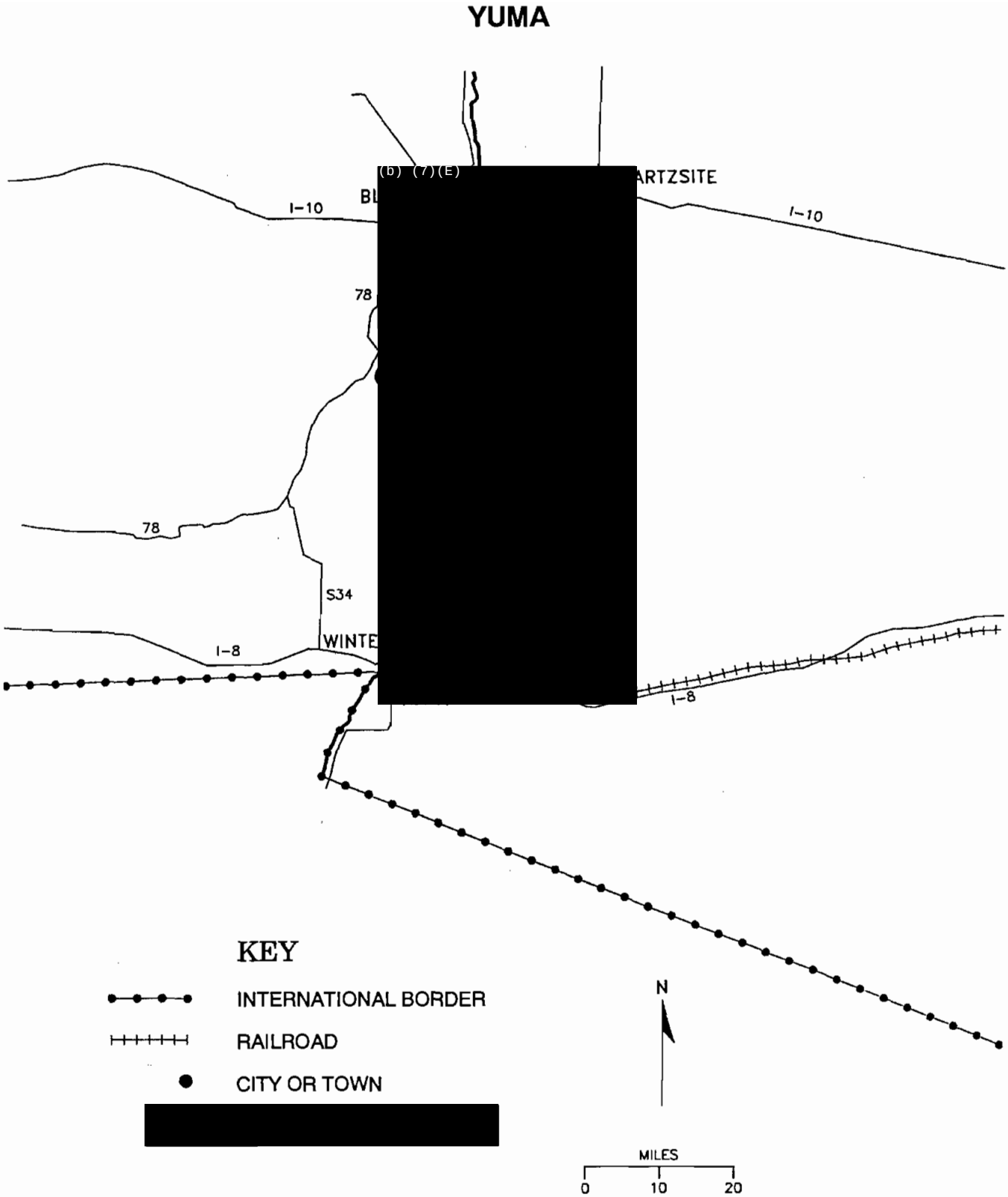
The Yuma sector contains almost no fencing. The Colorado River delineates approximately 12 miles of border south of Yuma, but [redacted]

The terrain within the Yuma sector is extremely hostile. Every year illegal aliens are found either dead or extremely dehydrated in the desert. The Border Patrol serves an important role along this stretch of border in deterring crossers who might otherwise come to harm in their attempts to cross the desert into the US.

A map of this sector is shown on the following page.

### Climate

The average temperatures in the Yuma sector are a low of 78°F and a high of 105°F; however, temperatures as high as 110°F have been recorded. Winter temperatures are mild with an average low of 46°F and high of 69°F. The precipitation is 3.1 inches per year, with an average of 345 days of sunshine per year. Flooding is possible in January and July and sandstorms are possible in June, July, and September.




*Map of the Yuma Sector*

| | J | F | M | A | M | J | J | A | S | O | N | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High (°F) | 69 | 74 | 79 | 87 | 94 | 103 | 107 | 106 | 101 | 91 | 78 | 69 |
| Low (°F) | 44 | 46 | 51 | 57 | 64 | 72 | 80 | 80 | 73 | 62 | 51 | 44 |
| Rainy days | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | 1 | 1 | 1 | 2 |

## Available Resources

The Yuma sector currently has 184 agents and 36 nonagent support personnel assigned. The sector has 183 sensors spread over 74 miles of the busiest corridors. There are four camera sites in the San Luis area. Other general physical security equipment is used in this sector.

## Threat

Illegal aliens constitute the major threat in this sector, but drug traffic is not insignificant. The populated area of the sector follows the [redacted].

This zone is approximately 24 miles in length (20% of the Yuma sector) and within it occur approximately 90% of the drug arrests and 89% of the apprehensions.

### *Contact with Suspects*

The information presented in the tables below is the compilation of the Border Patrol agents' contact with illegal aliens and/or drug traffickers and the amounts of drugs confiscated.

| Contact w/Suspects: | Jan '90 | Feb '90 | Mar '90 | Apr '90 | May '90 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 2,629 | 2,441 | 3,324 | 3,150 | 3,740 |
| Drug-Related Arrests | 14 | 30 | 26 | 23 | 18 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 36.72 | 215.1 | 1395 | 0.21 | 131.07 |
| Cocaine (oz) | 76.16 | 3.68 | 0.16 | 3.20 | 0.32 |
| Heroin (oz) | 0.01 | 0.14 | 0.001 | 0.02 | 0.02 |
| Other (oz) | 1 | 2.88 | 21.12 | 2.56 | 0.16 |
| Number of Confrontations: | | | | | |
| With Armed Persons | 1 | 5 | – | 1 | – |
| Assaults on BP Agents | – | – | – | – | – |

| Contact w/Suspects: | Jun '90 | Jul '90 | Aug '90 | Sept '90 | Oct '90 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 3,149 | 3,453 | 3,373 | 3,080 | 2,873 |
| Drug-Related Arrests | 17 | 22 | 8 | 19 | 23 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 95.12 | 0.03 | – | 84.02 | 205.8 |
| Cocaine (oz) | – | 0.16 | 0.8 | 3.36 | 0.16 |
| Heroin (oz) | 0.09 | 0.14 | – | 0.02 | 0.58 |
| Other (oz) | 2.72 | 0.48 | 0.8 | 3.52 | 2.24 |
| Number of Confrontations: | | | | | |
| With Armed Persons | – | – | 1 | 2 | 2 |
| Assaults on BP Agents | 1 | – | 1 | 2 | – |

| Contact w/Suspects: | Nov '90 | Dec '90 | Jan '91 | Feb '91 | Mar '91 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 1,869 | 2,255 | 1,851 | 1,798 | 2,538 |
| Drug-Related Arrests | 30 | 56 | 29 | 28 | 10 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 175.85 | 940.28 | 554.13 | 145.62 | 166.23 |
| Cocaine (oz) | 0.32 | 6.88 | 11,440.0 | 1.28 | 0.16 |
| Heroin (oz) | – | 1.0 | 0.01 | – | – |
| Other (oz) | 80.61 | 37.60 | 0.96 | 3.20 | 0.64 |
| Number of Confrontations: | | | | | |
| With Armed Persons | 2 | 2 | 4 | 3 | – |
| Assaults on BP Agents | – | 1 | 2 | 2 | – |

| Contact w/Suspects: | Apr '91 | May '91 | Jun '91 | Jul '91 | Aug '91 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 2,980 | 3,039 | 2,543 | 2,716 | 2,330 |
| Drug-Related Arrests | 22 | 15 | 16 | 25 | 23 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 172.01 | 11.06 | 0.02 | 2.38 | 0.06 |
| Cocaine (oz) | 0.16 | 0.16 | 0.32 | 0.96 | 0.64 |
| Heroin (oz) | 1 | 17.6 | 0.09 | 0.01 | 35.04 |
| Other (oz) | 0.64 | 0.32 | 0.32 | 0.16 | 1 |
| Number of Confrontations: | | | | | |
| With Armed Persons | – | 1 | 3 | 2 | 1 |
| Assaults on BP Agents | – | – | – | – | – |

| Contact w/Suspects: | Sept '91 | Oct '91 | Nov '91 | Dec '91 | Jan '92 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 1,854 | 1,508 | 1,302 | 2,339 | 2,155 |
| Drug-Related Arrests | 13 | 12 | 20 | 50 | 38 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 0.08 | 1,019.57 | 317.1 | 136.08 | 128.45 |
| Cocaine (oz) | 1 | 0.32 | 49.28 | 0.32 | 0.96 |
| Heroin (oz) | 0.01 | 0.04 | 1 | 0.01 | 0.29 |
| Other (oz) | 2.72 | 1 | 1 | 432.16 | 512.96 |
| Number of Confrontations: | | | | | |
| With Armed Persons | 1 | 1 | 2 | – | – |
| Assaults on BP Agents | 1 | 2 | – | – | 3 |

| Contact w/Suspects: | Feb '92 | Mar '92 | Apr '92 | May '92 | Jun '92 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 1,841 | 2,822 | 2,304 | 2,482 | 2,035 |
| Drug-Related Arrests | 34 | 19 | 44 | 61 | 31 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 233.87 | 166.36 | 382.39 | 72.64 | 604.34 |
| Cocaine (oz) | 2,465.12 | 1 | 0.48 | 42.24 | 0.32 |
| Heroin (oz) | 1 | 0.01 | 0.14 | 0.09 | 1.15 |
| Other (oz) | 0.32 | 0.8 | 0.8 | 296.48 | 0.8 |
| Number of Confrontations: | | | | | |
| With Armed Persons | 1 | 1 | 1 | 2 | – |
| Assaults on BP Agents | – | – | – | – | – |

| Contact w/Suspects: | Jul '92 |
|---|---|
| Number of Arrests: | |
| Illegal Alien Arrests | 2,316 |
| Drug-Related Arrests | 29 |
| Illegal Drugs Confiscated: | |
| Marijuana (lb) | 44.51 |
| Cocaine (oz) | 832.0 |
| Heroin (oz) | 2.5 |
| Other (oz) | 16 |
| Number of Confrontations: | |
| With Armed Persons | 3 |
| Assaults on BP Agents | 1 |

## Sector Operations

Yuma Sector Headquarters staff provides the overall leadership, direction, and support necessary to conduct sector operations.

The staff comprises one Chief Patrol Agent, one Deputy Chief Patrol Agent, four Assistant Chief Patrol Agents (one for each organizational area of responsibility), one Intelligence Agent, and one Vehicle Seizure Agent, for a total of eight agents.

### Air Operations

The sector's Air Operations unit is a vital part of the overall operational effort. The fixed wing aircraft are flown daily with one pilot assigned to linewatch duties on the east side and another to linewatch duties on the west side. The pilots also assist in checking the freight yards and railroad sidings west of Yuma.

A third pilot flies either the Cessna Skyline or the OH-6A rotary aircraft on the evening shift. This aircraft is used to assist ground units performing linewatch after dark, to enhance night operations in the freight yards, and to conduct aerial surveillance.

Some of the activities the station is involved in are listed below.

- *Air Operations:* Three pilots per day are assigned to Air Operations, 365 days per year
- *Supervision:* One of the five pilots will be the Air Operations Supervisor.

## Station Operations

### Yuma Station

Yuma is a large border station with responsibility for [redacted] miles of the international boundary. [redacted] miles of the land border lies in the state of California, followed by [redacted] miles of river boundary and another [redacted] miles of land border in the state of Arizona. [redacted] The terrain is flat and sandy and can be crossed anywhere. [redacted]

The Southern Pacific Railroad maintains a major freight yard in Yuma coupled with [redacted] on the outskirts of town. Yuma International Airport has 18 scheduled departures a day and the local bus terminal has 8 departures. AMTRAK stops in Yuma three times per week. Interstate 8 passes through town, and the station

maintains a permanent, (b) (7)(E) [redacted]. Traffic and transportation check are major duties.

Tourism and agriculture are major industries and the Employer Sanctions Unit (ESU)/Employer Labor Relations (ELR) unit keeps track of over 4,000 businesses and agricultural enterprises. The BORCAP unit is responsible for the Yuma County Jail, city jails at San Luis and Somerton, and a 500-bed minimum security state prison located south of town.

In addition to the above duties, one agent per shift is assigned to remain at the station as the alien processor and another is assigned to monitor the low-light-level television (LLLTV) system.

On a five-shift per week basis, two agents are assigned to the local narcotics task force, one is assigned to prosecutions, and another is assigned to the Anti-Smuggling Unit (ASU). Two agents maintain the sensor system and two others are assigned to an interdiction unit that works specific information on narcotics or alien smuggling.

The demand reduction unit consists of two agents that make presentations at schools, at community events, and before civic groups. The unit has also been given assignments outside the sector on numerous occasions and has won a statewide award for their efforts.

Some of the activities the station is involved in are listed below.

- *Linewatch / Sign-Cut:* For logistical purposes, the [redacted] miles of boundary have been divided into [redacted] overlapping areas. Three agents per shift are needed in five of these areas but only two agents in the sixth area.

- *Traffic Check:* A checkpoint located on an interstate requires four agents because of the volume of traffic and agent safety considerations. One of these agents is part of a canine unit.

- *Transportation Check:* Three agents are assigned to the freight yards and sidings and two others to the airport and bus terminals.

- *Alien Processor, LLLTV Observer, and Interdiction Unit:* One alien processor, one observer, and two interdiction agents are assigned per shift.

- *Other Agents:* Six agents are assigned to ESU/ELR, six assigned to BORCAP, two assigned to demand reduction, one assigned to prosecutions, one assigned to ASU, two assigned to

sensor maintenance, and two assigned to the local narcotics task force.

- *Supervisors:* One supervisor per shift is assigned as duty supervisor at the station. A second is assigned the three east side linewatch areas, and a third is assigned the three west side linewatch areas. A fourth oversees traffic and transportation check units.

**Blythe Station**

Blythe is a backup station located approximately 70 miles north of Yuma. Before IRCA, Blythe was primarily a traffic check and farm and ranch check station. [redacted]

[redacted]

[redacted]

The Blythe BORCAP unit has almost been overwhelmed because of the establishment of a 4,000-bed state prison just outside of Blythe. They are also responsible for a smaller minimum security facility located 40 miles west of Blythe.

The ESU/ELR unit stays on the move as their responsibilities include Blythe and Needles, California; Parker, Lake Havasu, Kingman, and Bullhead City, Arizona; and Laughlin, Nevada. A roundtrip drive to Kingman takes 5 hours.

Some of the activities the station is involved in are listed below.

- *Traffic Check:* Three agents, three shifts per day, or nine agents, 365 days per year, are assigned to traffic check.
- *Transportation Check:* One agent per shift, three shifts per day, 365 days per year, is assigned to transportation check.
- *BORCAP:* Four agents are assigned to BORCAP.
- *ESU/ELR:* Four agents are assigned to ESU/ELR.
- *Supervisors:* One Supervisor, Border Patrol Agent oversees the BORCAP and ESU/ELR units. The Patrol Agent in Charge

(PAIC) and remaining Supervisors, Border Patrol Agents supervise all other operations.

## Wellton Station

Wellton is a border station lying approximately 30 miles east of Yuma and is responsible for [redacted] miles of the international boundary. The desert area south of Wellton has one of the harshest climates in the US. The closest straight line walking distance from the Mexico border to a populated area in the US is over 30 miles. During the hottest months of summer, it is physically very difficult to carry enough water to sustain life while crossing this area.

During the 2 years immediately preceding IRCA, Wellton agents and the sector's Desert Area Rescue Team saved 91 lives in this area. The most publicized of these rescues occurred in July 1987 when the entire nation watched as agents searched for a group of people south of Dateland, Arizona. Twenty-four of these individuals were found alive, although two of them subsequently died, and one was found dead upon arrival.

[redacted] is obviously the most important function of Wellton. To avoid loss of life, [redacted].

Wellton also maintains a permanent checkpoint on [redacted]

Some of the activities the station is involved in are listed below.

- *Traffic Check / Observation:* Two agents work at the checkpoint and two others in [redacted]. Four agents per shift, three shifts per day, 365 days per year, are assigned to traffic check/observation.

- *Sign-Cut:* A minimum of two agents are assigned per shift, one shift per day, 365 days per year, to perform sign-cut.

- *Supervision:* One Patrol Agent in Charge and two first-line supervisors are assigned.

## Boulder City Station

This station was established in 1988 to supplement the office of the Las Vegas Officer in Charge after an operational survey found a need for it.

The survey of southern Nevada and northern Arizona law enforcement agencies indicates that they encounter large groups of illegal aliens traveling through the area on the three major routes that run north from the Mexico border. There was also evidence that the local jails were holding numerous criminal aliens. The local investigations office was unable to respond to these needs because of a lack of manpower and other operational priorities.

An operational plan proposed establishing a small station that could respond to local agencies throughout the four county area. The main objective was for these agents to develop alien smuggling and criminal alien cases. Unfortunately, the hiring freeze interrupted the process before it was finished. Nevertheless, the two agents who did enter on duty, working without an office or telephone, have proven the need for this station. When fully staffed, this station will have one supervisor and four journeymen or a total of five agents.

### Summary

The personnel requirements listed above do not address anti-smuggling agent positions, detention officer positions, or nonofficer support positions.

The strategy being used by the Yuma Border Patrol staff includes [redacted] as the need arises, and patrol coverage of walking trails. This strategy is complemented by the use of sensors and cameras and could probably be enhanced by the addition of about 3.5 miles of multiple fence barrier design placed in the San Luis area.

## Recommendations

General recommendations that are common to all of the sectors are given after the San Diego sector write-up. These general recommendations are then followed by sector-specific recommendations.

# El Centro Sector

## Introduction

The El Centro sector includes 4.3% (69.6 miles) of the total Southwest Border and accounts for 4.9% (55,000 in 1987) of the illegal alien apprehensions. The urban area consisting of Calexico on the US side and Mexicali on the Mexico side accounts for most of the illegal aliens as seems typical along the entire border. East and west of the urban centers of Calexico and Mexicali are mountains, desert, sand dunes, and farms.

## Operational Environment

### Terrain

There are 69.6 miles of border within the El Centro sector. Those miles are composed of

29.4 miles of flat desert
18.0 miles of farmland
16.8 miles of sand dunes
3.0 miles of mountains
2.4 miles of flat urban area.

A map of this sector is shown on the following page.

### Climate

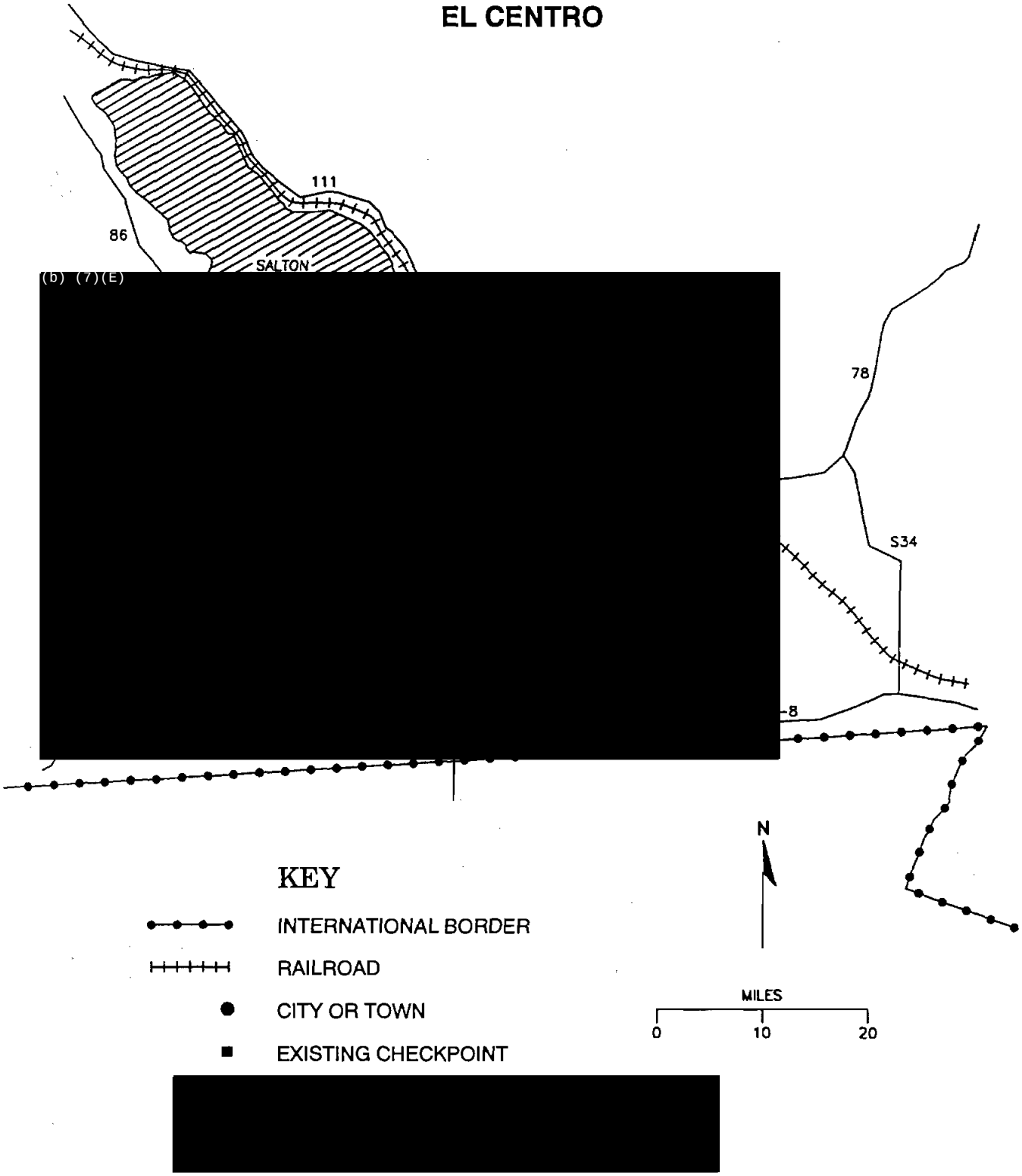
The average summer low temperature in the El Centro sector is 78°F and the high is 106°F, however, temperatures as high as 112°F have been recorded. Winter temperatures are mild, with an average low of 44°F and high of 71°F. On average, 2.44 inches of precipitation fall per year. There is no heavy snow that occurs in this sector. It is possible to have flash floods and sandstorms year-round. The average winter temperature is about 58°F and the average summer temperature is 92°F.

| | J | F | M | A | M | J | J | A | S | O | N | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High (°F) | 70 | 72 | 79 | 88 | 95 | 105 | 108 | 106 | 103 | 91 | 80 | 71 |
| Low (°F) | 43 | 46 | 51 | 58 | 61 | 72 | 80 | 80 | 72 | 63 | 51 | 43 |
| Rainy days | 2 | 4 | 2 | 1 | 1 | 1 | 2 | 3 | 4 | 2 | 2 | .37 |

### Available Resources

The El Centro sector has 213 agents and 48 nonagent support personnel, was authorized to have 360, and has requested 360. As of 1990, they had 266 ground sensors, 147 processor transmitters, 4 fixed repeaters, and 8 portable repeaters. Other general physical security equipment is used in this sector.

# EL CENTRO




***Map of the El Centro Sector***

## Threat

[redacted] respectively. To the east, the same holds true but Mexico Highway 2 drops further to the south (up to 10 miles). [redacted] near El Centro.

The El Centro sector contains the Calexico Port of Entry (POE), which in 1990 admitted almost 30,000,000 persons of which about 22,000,000 were aliens. In 1989, the El Centro Border Patrol apprehended 27,524 persons, of which 149 were involved in known narcotics trafficking. There were 1,800 pounds of marijuana, 7,000 ounces of cocaine, and 60 ounces of heroin seized in 1989. In 1990, there were seven incidents involving a Border Patrol agent confronting armed persons. There were eight assaults on Border Patrol agents in 1990. Of the Border Patrol apprehensions, 14% occurred at inland checkpoints.

### *Threat Along the Border (from west to east)*

[redacted]

The border areas in the Imperial Valley are relatively flat and without much natural vegetation. The persons apprehended in this region are usually seeking employment in the agricultural areas or attempting to reach Los Angeles. While there is drug trafficking in this region as well, the persons attempting entry in this area are less likely to be armed.

In the urban area of Calexico, the agents are sometimes subject to rock-throwing incidents from persons on the other side of the fence that separates the US and Mexico. The abandoned golf course near the border has become a major congregating area for aliens and is relatively dangerous. The truck crossing area near the old golf course is not open at night and the parked vans have become a major drug dealing area.

The All-American Canal forms a barrier for the illegal aliens because the water is too swift for swimmers. [redacted]

[redacted]

The sand dunes in the eastern part of the sector also form a partial barrier. These dunes shift and are sometimes hundreds of feet high. In this region, [redacted] In addition, the sand dunes have become increasingly popular with sports enthusiasts, enabling the aliens to "blend in" with them.

### *Threat Inland from the Border*

The El Centro sector includes [redacted]. If an alien does make it into the US in the Yuma or El Centro sectors, [redacted]. Currently, the El Centro sector conducts train inspections [redacted] in the Indio area. However, the railroad companies have objected to the delays caused by such inspections.

The El Centro sector has checkpoints on roads on both sides of the [redacted] These are major access routes north to [redacted] The areas around the checkpoints have been [redacted]

### *Contact with Suspects*

The information presented in the tables below is the compilation of the Border Patrol agents' contact with illegal aliens and/or drug traffickers and the amounts of drugs confiscated.

| Contact w/Suspects: | Jan '90 | Feb '90 | Mar '90 | Apr '90 | May '90 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 2,606 | 2,503 | 2,584 | 2,215 | 2,733 |
| Drug-Related Arrests | 19 | 20 | 23 | 16 | 17 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 630 | 291 | 85 | 75 | 334 |
| Cocaine (oz) | 2,829 | – | 0.5 | 358 | – |
| Heroin (oz) | – | 0.75 | 0.25 | – | – |
| Other (lb) | – | – | – | 110 | 0.25 |
| Number of Confrontations: | | | | | |
| With Armed Persons | – | 1 | 1 | 1 | – |
| Assaults on BP Agents | 3 | – | – | – | – |

| Contact w/Suspects: | Jun '90 | Jul '90 | Aug '90 | Sept '90 | Oct '90 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 2,616 | 2,886 | 2,838 | 2,323 | 2,410 |
| Drug-Related Arrests | 11 | 10 | 19 | 6 | 10 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 329 | 52 | 180 | 66 | 39 |
| Cocaine (oz) | – | – | 9 | – | 70 |
| Heroin (oz) | 1 | – | – | – | 1 |
| Other (dosage units) | – | – | – | – | 1,073 |
| Number of Confrontations: | | | | | |
| With Armed Persons | – | – | 1 | 1 | – |
| Assaults on BP Agents | 2 | – | – | – | 2 |

| Contact w/Suspects: | Nov '90 | Dec '90 | Jan '91 | Feb '91 | Mar '91 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 2,163 | 1,931 | 2,957 | 2,185 | 2,798 |
| Drug-Related Arrests | 5 | 24 | 33 | 24 | 30 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 561 | 192 | 732 | 379 | 276 |
| Cocaine (oz) | – | 10,080 | 176 | 0.5 | 1 |
| Heroin (oz) | – | 5 | 29 | – | – |
| Other (lb) | 66 | – | – | – | – |
| Other (dosage units) | – | – | 800 | – | 44 |
| Number of Confrontations: | | | | | |
| With Armed Persons | 1 | 1 | – | 3 | 1 |
| Assaults on BP Agents | 1 | – | – | 1 | – |

| Contact w/Suspects: | Apr '91 | May '91 | Jun '91 | Jul '91 | Aug '91 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 2,734 | 3,012 | 2,691 | 2,550 | 2,682 |
| Drug-Related Arrests | 22 | 24 | 10 | 21 | 24 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 206 | 119 | 5 | 1,152 | 32 |
| Cocaine (oz) | 816 | 4 | – | 1 | 7 |
| Heroin (oz) | – | 47 | – | – | 34 |
| Other (lb) | 26 | – | – | – | – |
| (dosage units) | 301 | – | – | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | 3 | 6 | 3 | 6 | 1 |
| Assaults on BP Agents | 2 | 2 | 1 | 5 | 3 |

| Contact w/Suspects: | Sept '91 | Oct '91 | Nov '91 | Dec '91 | Jan '92 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 2,337 | 2,655 | 2,027 | 1,807 | 2,477 |
| Drug-Related Arrests | 12 | 28 | 29 | 15 | 25 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 32 | 767 | 176 | 225 | 506 |
| Cocaine (oz) | – | – | 10,629 | 4,520 | 11,811 |
| Heroin (oz) | – | – | 32 | – | 64 |
| Other (lb) | – | 28 | – | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | 4 | 5 | 2 | 2 | 5 |
| Assaults on BP Agents | 1 | – | 1 | – | 2 |

| Contact w/Suspects: | Feb '92 | Mar '92 | Apr '92 | May '92 | Jun '92 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien Arrests | 2,165 | 2,810 | 2,608 | 2,924 | 2,357 |
| Drug-Related Arrests | 11 | 29 | 46 | 23 | 37 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 2,633 | 901 | 1,053 | 574 | 3,441 |
| Cocaine (oz) | 13,254 | 39,197 | 672 | 27,183 | 13,136 |
| Heroin (oz) | – | – | – | – | 46 |
| Other (oz) | – | – | – | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | 3 | 1 | 3 | 4 | 6 |
| Assaults on BP Agents | 1 | – | – | 1 | – |

| Contact w/Suspects: | Jul '92 |
|---|---|
| Number of Arrests: | |
| Illegal Alien Arrests | 2,756 |
| Drug-Related Arrests | 22 |
| Illegal Drugs Confiscated: | |
| Marijuana (lb) | 1,431 |
| Cocaine (oz) | 38,781 |
| Heroin (oz) | 1 |
| Other (oz) | – |
| Number of Confrontations: | |
| With Armed Persons | 5 |
| Assaults on BP Agents | 1 |

## Sector Operations

The El Centro sector borders the San Diego sector to the west and covers about 26,000 square miles in southeastern California. Much of the sector is sparsely populated desert with the exception of the urban Riverside/San Bernardino area of the east Los Angeles Basin and the agricultural Imperial and Coachella valleys. [redacted]

[redacted] State [redacted] pass on either side of the [redacted] and traffic moving northwest on those routes is monitored by agents from the [redacted]s. A freight train check is performed at [redacted] agents and at [redacted] by Riverside agents. Both locations are major switching stations. Many of the apprehensions on train check are of aliens who entered in other sectors.

The majority of the sector is within the Imperial Valley, a desert area below sea level irrigated by the All-American Canal with extensive agricultural areas.

The All-American Canal forms a natural barrier along the border. It [redacted] at the eastern edge of the Imperial Valley in the sand dune region. The Yuma sector is on the eastern side of the El Centro sector, with an [redacted] region.

A good portion of the [redacted]

[redacted] the fence separating Calexico, California, and Mexicali, Baja California, or to remote desert areas adjacent to the eastern and western mountain ranges. The urban Calexico/Mexicali area is located in the middle of the sector's border and accounts for most of the illegal aliens apprehended.

The number of apprehensions at El Centro has fluctuated over the past few years. This is partly attributed to the Immigration Reform and Control Act (IRCA) and partly to the natural terrain. The relatively low volume of legitimate traffic and the wide-open space would appear to have a deterrent effect on illegal border activity. Total apprehensions for the El Centro sector during FY 1989 were 27,524, down 33% from the 41,179 FY 1988 figure.

The El Centro sector presently consists of headquarters personnel and stations located at Calexico, El Centro, Indio, and Riverside, California.

The El Centro Sector Headquarters adjoins the El Centro station and the INS Service Processing Center at 1111 North Imperial Avenue in El Centro, California. In 1990 approximately 30,000 aliens were apprehended in the El Centro sector. Calexico station personnel accounted for more than half of the sector's total. There are 53 persons assigned to the Sector Headquarters.

[redacted] the border west of Calexico/Mexicali and lie approximately [redacted], respectively. The nonurban areas of the sector are primarily flat desert. In the region from Calexico to the Salton Sea, there is extensive irrigation with large agricultural plots.

The sector duties include linewatch, farm and ranch check, traffic check, transportation check, [redacted], intelligence, anti-smuggling, screening, prosecutions, vehicle seizures, air operations, training, Employer Labor Relations (ELR), drug awareness, and canine programs. Ten persons are assigned to the El Centro air operation.

## Station Operations

### Calexico Station

The Calexico station area of operation consists of approximately 26 miles of international boundary with the Mexican State of Baja California Norte. [redacted]. The city

of Calexico is immediately adjacent to the Baja California capital city of Mexicali, which has a population of just over one million.

The primary function and responsibility of the Calexico station is linewatch. This operation is aided by the use of drag roads and electronic sensors. Some transportation check and [redacted] operations are conducted. A freight train check is performed daily on a train that enters the US from Mexico.

The Calexico station is located within the Imperial Valley's farming zone. The station also provides personnel for farm and ranch check operations.

Last year, Calexico apprehended 17,385 illegal aliens. This represents 63% of the sector total. The majority of these apprehensions were made in linewatch operations.

The station complex is located at the intersection of Andrade Avenue and Eighth Street in Calexico, California. This is a linewatch station, with 75 persons assigned.

## El Centro Station

The El Centro station area of operation is primarily located in the farmland of Imperial County. The area includes several incorporated small cities as well as small unincorporated farm towns.

The primary function and responsibility of the El Centro station is the maintenance of two traffic checkpoints and conduct of linewatch operations in the vicinity of the [redacted]o.

The traffic checkpoints are located on [redacted]. These [redacted]. Northbound vehicular traffic, both privately owned and commercial, is inspected at these checkpoints. The [redacted] checkpoint is located [redacted]. The [redacted] checkpoint is operated by the El Centro sector as a vehicle "roadblock." In addition, [redacted] are maintained on secondary roadways such as [redacted]. Traffic check apprehensions accounted for 49% of the total station apprehensions for FY 1989.

The station has [redacted] International Boundary to patrol in desert and mountainous terrain. This area is monitored by drag roads and electronic sensors. Linewatch apprehensions accounted for 23% of the total station apprehensions for FY 1988.

Additional station functions and responsibilities include farm and ranch surveys, transportation check (airport, bus, and freight train), jail check, and city patrol. These activities accounted for 40% of the total station apprehensions for FY 1989.

In FY 1991, the El Centro station apprehended 6,215 illegal aliens. This represents 23% of the sector total.

There are 93 persons assigned to this station.

## Indio Station

The Indio station comprises about [redacted] square miles, most of which is uninhabited desert wasteland located in Riverside County. The Coachella Valley is within the station area and has about 60,000 acres in cultivation. The Valley also has a large tourist industry in the Palm Springs area.

The primary function and responsibility of the Indio station is transportation check (buses and freight trains). [redacted]. This situation makes Indio an ideal train check station. Transportation check apprehensions accounted for 27% of the station's apprehensions for FY 1989.

Large agribusiness operations are located within the station's area of responsibility. Crops consist of citrus, dates, grapes, and row crops. Farm and ranch check operations are performed during peak seasons on an intermittent basis.

The tourist activity in the Coachella Valley is responsible for attracting a large number of illegal aliens to work in restaurants, gardening services, *etc.* The combined activities of traffic check, city patrol, and jail check account for 73% of the station's apprehensions for FY 1989.

In 1991, Indio station apprehended 985 illegal aliens. This represents 3% of the sector total.

The station complex is located at 45620 Commerce Street in the eastern portion of Indio, California. This is a linewatch station. There are 16 persons assigned to this station.

## Riverside Station

The Riverside station area of operation includes parts of Los Angeles, Riverside, and San Bernardino Counties. Much of the area of the three counties is mountains and high desert. The city of Riverside, located at the northwest end of Riverside County, is easily accessible from the east, west, and south by the extensive

freeway systems of Southern California, a major airport at Ontario, California, and by three major railroads: Southern Pacific, Santa Fe, and Union Pacific. The Southern Pacific freight yards are located in the Colton/Bloomington, California area. The Santa Fe yards are located at San Bernardino and Barstow, California. Several trains arrive daily from the border area freight yards of San Diego and Calexico, California; Yuma, Arizona; and El Paso, Texas.

The primary function and responsibility of the Riverside station is transportation check (air, bus, and freight train) with freight train check accounting for the majority of this activity. Transportation check accounted for 19% of the station's FY 1989 apprehensions, with freight train check accounting for all of transportation check apprehensions.

Most illegal aliens, after traveling north from the border area, feel they are safe from detection and apprehension in this area. Therefore, they seek employment in the numerous citrus orchards, vineyards, light and heavy industry, and virtually every type of business. Although Federal Court injunctions have severely hampered operations within these types of activities, farm and ranch check, jail check, and city patrol apprehensions accounted for 81% of the station's FY 1989 apprehensions. These restrictions have placed emphasis on the interception of illegal aliens before assimilation into the local metropolitan areas.

In FY 1991, the Riverside station apprehended 2,939 illegal aliens. This accounted for 11% of the sector total.

There are 14 persons assigned to the Riverside station.

## Recommendations

General recommendations that are common to all of the sectors are given after the San Diego sector write-up. These general recommendations are then followed by sector-specific recommendations.

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# San Diego Sector

## Introduction

The San Diego sector includes 4.0% (65.7 miles) of the total Southwest Border, but accounts for 45% (473,000 in 1990) of the illegal alien apprehensions per year. Ninety percent of the aliens are apprehended in the first 13 miles, 20% of the total length, east of the coast. There is drug-related drive-through traffic in 5.5 miles of relatively rural area between the Tijuana Airport and the foothills of the San Ysidro mountains to the east of the Brownfield station.

## Operational Environment

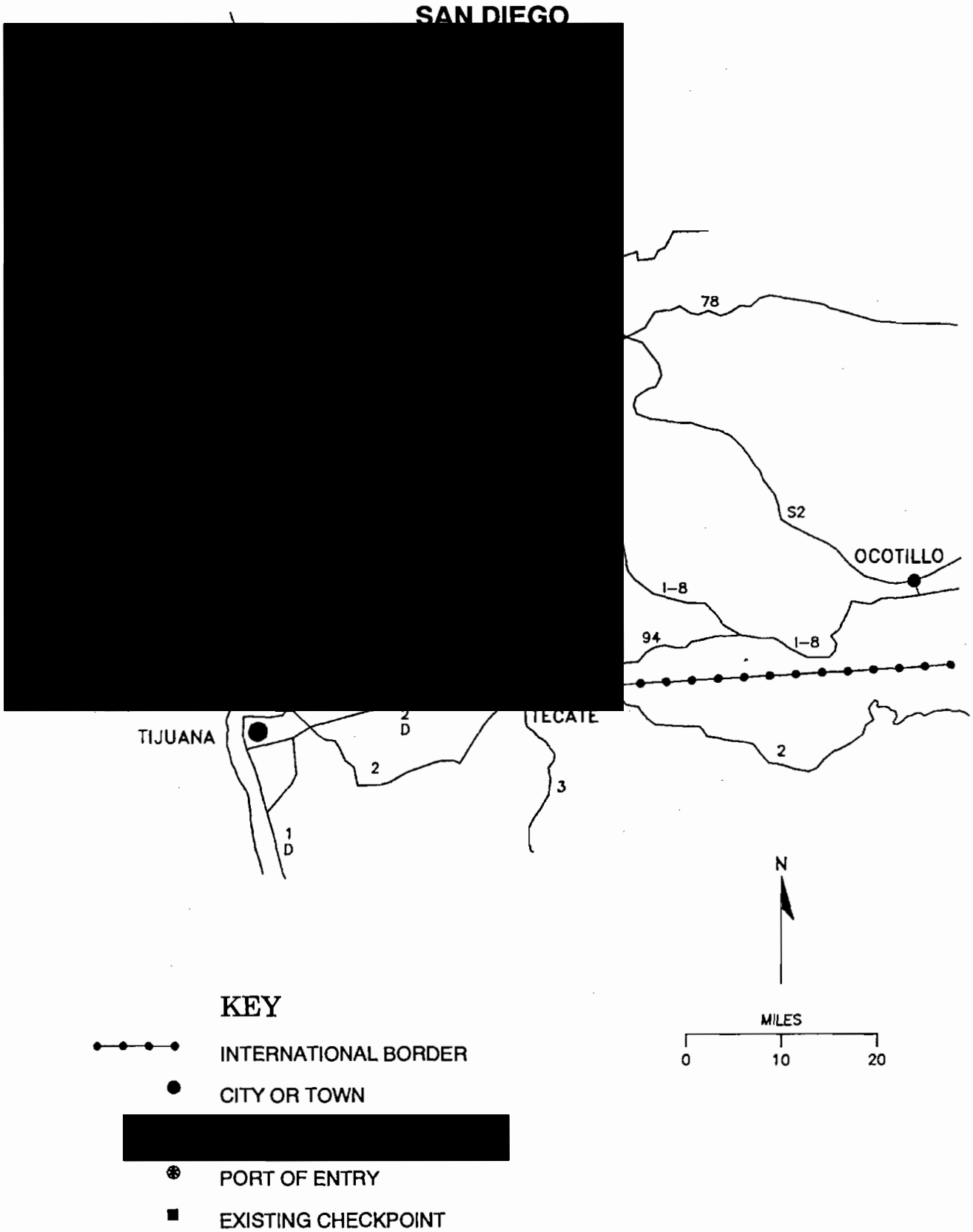
### Terrain

There are 65.7 linear miles of border within the San Diego sector. Those miles are composed of

37.5 miles of mountains
7.8 miles of urban hilly
9.9 miles of rolling brushland
4.5 miles of canyons
2.4 miles of farmland
1.8 miles of flat desert
1.8 miles of urban flat.

A map of this sector is shown on the following page.

The sector has 37.5 miles of rugged mountains with the remaining 28.2 miles divided among desert, canyons, farmland, and rolling brushland. The 13 miles running east from the coast to the foothills of the San Ysidro Mountains is the most concentrated area of illegal entry on the Southwest Border. Almost this entire length is heavily urbanized on the Mexico side, with buildings and roads running right up to the border. At the eastern end of this urbanized area is the General Aberlardo Rodriguez Airport, which serves Tijuana and Tampico. The border itself varies from very hilly for the first 3.5 miles inland from the coast to relatively flat except for the "Soccer Field" area about a mile east of the San Ysidro Port of Entry (POE). On the US side, from the coast 5 miles inland to the Tijuana River flood control levee, the terrain is mostly rolling brushland and farmland.




***Map of the San Diego Sector***

## Climate

The average summer low temperature in the San Diego sector is 62°F and the average high is 72°F, however, temperatures as high as 94°F have been recorded. Winter temperatures are mild, with average lows of 49°F and highs of 67°F. The average precipitation is 12 inches per year. There is no heavy snow that occurs in this sector. The average temperature in the winter is about 58°F and in the summer is 67°F.

| | J | F | M | A | M | J | J | A | S | O | N | D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| High (°F) | 68 | 69 | 65 | 73 | 72 | 73 | 72 | 74 | 75 | 75 | 72 | 65 |
| Low (°F) | 47 | 53 | 55 | 60 | 63 | 63 | 63 | 64 | 64 | 61 | 52 | 49 |
| Rainy days | 7 | 5 | 6 | 4 | 2 | 1 | 0 | 1 | 1 | 2 | 4 | 6 |

## Available Resources

The San Diego sector currently has 820 agents and 115 nonagent support personnel assigned. To assist them in their enforcement duties, they have 380 ground sensors supported by 263 transmitters, 19 fixed and portable repeaters, and 20 night vision devices of various types. Other general physical security equipment is used in this sector.

## Threat

Illegal aliens are the principal enforcement problem in this sector. It has been estimated that as many as 6,000 aliens per night attempt to enter the US illegally in the 7.5 miles of border between the coast and the Tijuana Airport that is covered by the Imperial Beach and Chula Vista stations. Most of this movement is individuals in a human wave that commences at nightfall. There may be drug smuggling embedded in this mass movement, but it is unlikely to be an important component of the traffic.

There is drug-related drive-through vehicle traffic in the 5.5 miles of relatively rural area between the Tijuana Airport and the foothills of the San Ysidro mountains to the east of the Brownfield station.

The current strategy is to spread out along the border in those areas where the human waves are concentrated and to apprehend as many of the aliens as can be handled by agents in vehicles and on horseback.

The most intense area of alien border violations is in the 5.5 miles between the coast and the San Ysidro POE. From the [redacted], the rural area on the US side of the border is about [redacted]. For the next [redacted]

[redacted]. The area [redacted] is highly urbanized, and the large number of aliens crossing [redacted] to get into the cover afforded by San Diego has resulted in a traffic hazard serious enough to cause the closing of traffic lanes to allow the aliens to walk safely in the median.

[redacted] in the area where [redacted] closest to the border from about 0.5 to 1.5 miles west of the San Ysidro POE. This levee area is now brightly lighted by stadium lights at night. The installation of these lights has forced a significant portion of the border traffic to the west away from the lights. The terrain on the US side of the border into which the aliens are now moving includes the [redacted] and to direct the agents into those positions most advantageous for apprehension. [redacted]. A project is under way to replace the ineffective chain link border fence with a 10-foot-high opaque fence made of welded steel landing mat panels. The objective of the new fence is to force the traffic back to the open terrain of Otay Mesa where cover is relatively sparse so that sensors and night vision can be used much more effectively and pursuit is much easier and more effective. We concur with this strategy, but recommend that the concept be extended and hardened.

### *Contact with Suspects*

The information presented in the tables below is the compilation of the Border Patrol agents' contact with illegal aliens and/or drug traffickers and the amounts of drugs confiscated.

| Contact w/Suspects: | Jan '90 | Feb '90 | Mar '90 | Apr '90 | May '90 |
|---|---|---|---|---|---|
| **Number of Arrests:** | | | | | |
| Illegal Alien | 41,751 | 40,335 | 44,862 | 41,916 | 41,718 |
| Drug-Related | 17 | 23 | 23 | 24 | 38 |
| **Illegal Drugs Confiscated:** | | | | | |
| Marijuana (lb) | 56.0 | 12.2 | 1,014.96 | 19.22 | 1,335.92 |
| Cocaine (oz) | 7.23 | 0.489 | 8.48 | 0.387 | 0.432 |
| Heroin (oz) | 0.035 | -- | 5.64 | 6.76 | 12.0 |
| Other (oz) | 9.37 | 1.7 | 14.32 | 154.83 | 6.65 |
| **Number of Confrontations:** | | | | | |
| With Armed Persons | 12 | 12 | 12 | 19 | 17 |
| Assaults on BP Agents | 5 | 8 | 3 | 7 | 4 |

| Contact w/Suspects: | Jun '90 | Jul '90 | Aug '90 | Sept '90 | Oct '90 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien | 34,046 | 42,601 | 52,091 | 45,249 | 35,050 |
| Drug-Related | 26 | 43 | 42 | 47 | 54 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 1,111.2 | 410.86 | 5,889.88 | 12,375.4 | 3,512.9 |
| Cocaine (oz) | 49.76 | 36.16 | 20.16 | – | 5.92 |
| Heroin (oz) | 12.35 | 0.42 | 6.0 | 0.28 | – |
| Other (oz) | 56.0 | 29.25 | 136.24 | 6.27 | 7.82 |
| Number of Confrontations: | | | | | |
| With Armed Persons | 51 | 33 | 17 | 13 | – |
| Assaults on BP Agents | 11 | 11 | 8 | 10 | 11 |

| Contact w/Suspects: | Nov '90 | Dec '90 | Jan '91 | Feb '91 | Mar '91 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien | 33,687 | 32,736 | 41,573 | 43,121 | 56,245 |
| Drug-Related | 41 | 39 | 15 | 36 | 52 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 681.98 | 2,872.56 | 1,604.40 | 712.62 | 635.90 |
| Cocaine (oz) | 5.92 | 0.48 | 0.13 | 355.10 | 10,507.74 |
| Heroin (oz) | 40.6 | 22.4 | 6.01 | 109.32 | 33.34 |
| Other (oz) | – | – | – | – | – |
| Number of Confrontations: | | | | | |
| With Armed Persons | 9 | 3 | 4 | 5 | 7 |
| Assaults on BP Agents | 12 | 4 | 10 | 9 | 4 |

| Contact w/Suspects: | Apr '91 | May '91 | Jun '91 | Jul '91 | Aug '91 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien | 56,495 | 55,016 | 50,028 | 46,953 | 47,925 |
| Drug-Related | 60 | 38 | 46 | 33 | 46 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 1,614.45 | 764.17 | 1,007.34 | 256.08 | 6,364.29 |
| Cocaine (oz) | 5.36 | 40.53 | 0.11 | 30.02 | 5.60 |
| Heroin (oz) | – | – | 50.40 | – | – |
| Other (oz) | 5.87 | 0.88 | 0.46 | 1.99 | 64.74 |
| Number of Confrontations: | | | | | |
| With Armed Persons | 11 | 4 | 6 | 5 | 5 |
| Assaults on BP Agents | 7 | 11 | 6 | 14 | 10 |

| Contact w/Suspects: | Sept '91 | Oct '91 | Nov '91 | Dec '91 | Jan '92 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien | 41,625 | 34,517 | 37,723 | 33,354 | 61,212 |
| Drug-Related | 34 | 56 | 64 | 44 | 67 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 4,768.89 | 5,623.01 | 1,709.51 | 1,894.71 | 2,620.78 |
| Cocaine (lb) | 16.88 | 39.98 | 0.42 | 24,296.64 | 0.736 |
| Heroin (oz) | – | – | 4.62 | – | 0.133 |
| Other (oz) | 114.95 | 59.575 | 8.266 | 0.01 | 11.696 |
| Number of Confrontations: | | | | | |
| With Armed Persons | – | 5 | 7 | 4 | 5 |
| Assaults on BP Agents | 17 | 4 | 10 | 4 | 6 |

| Contact w/Suspects: | Feb '92 | Mar '92 | Apr '92 | May '92 | Jun '92 |
|---|---|---|---|---|---|
| Number of Arrests: | | | | | |
| Illegal Alien | 50,499 | 56,932 | 53,210 | 55,305 | 46,629 |
| Drug-Related | 79 | 71 | 78 | 53 | 70 |
| Illegal Drugs Confiscated: | | | | | |
| Marijuana (lb) | 4,893.40 | 5,358.12 | 2,756.66 | 2,354.20 | 3,599.87 |
| Cocaine (oz) | 34,885.58 | 8,081.54 | 2,090.18 | 8,304.14 | 24,688 |
| Heroin (oz) | 0.889 | 0.09 | 0.331 | 18.67 | 100.01 |
| Other (oz) | 1.26 | 126.37 | 1.877 | 0.693 | 0.302 |
| Number of Confrontations: | | | | | |
| With Armed Persons | 6 | 7 | 6 | 5 | 4 |
| Assaults on BP Agents | 7 | 10 | 9 | 9 | 14 |

| Contact w/Suspects: | Jul '92 |
|---|---|
| Number of Arrests: | |
| Illegal Alien | 44,274 |
| Drug-Related | 35 |
| Illegal Drugs Confiscated: | |
| Marijuana (lb) | 2,668.974 |
| Cocaine (oz) | 0.32 |
| Heroin (oz) | 11.375 |
| Other (oz) | 0.292 |
| Number of Confrontations: | |
| With Armed Persons | 3 |
| Assaults on BP Agents | 7 |

A summary of narcotics seizures for the years 1987 through 1990 is given below:

| Narcotics Seizures | | | |
|---|---|---|---|
| Year | Type | Amount | Value |
| 1987 | Marijuana | 12,133 lb | $ 8,682,000 |
| | Cocaine | 1,106 lb | 13,458,000 |
| | Heroin | 3 oz | 31,000 |
| | Amphetamine | 33 oz | 3,000 |
| | Steroids | 132,000 units | 87,000 |
| | | | $ 22,261,000 |
| 1988 | Marijuana | 12,558 lb | $ 4,907,000 |
| | Cocaine | 668 lb | 6,474,000 |
| | Heroin | 2 oz | 8,000 |
| | Methamphetamine | 256 lb | 5,953,000 |
| | Steroids | 203 units | 50,000 |
| | Other | | 32,000 |
| | | | $ 17,424,000 |
| 1989 | Marijuana | 17,218 lb* | $ 8,614,000 |
| | Cocaine | 2,290 lb | 29,293,000 |
| | Heroin | 7 oz | 38,000 |
| | Methamphetamine | 36 lb | 301,000 |
| | Steroids | 4,588 oz | 45,000 |
| | Other | | 859,000 |
| | | | $ 39,150,000 |
| 1990 | Marijuana | 48,160 lb* | $ 24,252,000 |
| | Cocaine | 184 lb | 1,280,000 |
| | Heroin | 43 oz | 136,000 |
| | Other | 422 lb | 1,386,000 |
| | | | $ 27,054,000 |
| *Includes the harvest of plants | | | |

## Sector Operations

The San Diego sector is one of nine sectors located along the 2,000 miles between the US and Mexico and one of 21 Border Patrol sectors nationwide. The San Diego sector has historically been the most active area of Border Patrol operations. During FY 1990, 1,046,420 illegal aliens were apprehended along the US/Mexico border, 45% of which (or 473,323) were apprehended by San Diego Border Patrol Agents.

The San Diego sector encompasses over 7,000 square miles, including all of San Diego County and substantial portions of Orange and

Riverside Counties and shares 66 miles of international boundary with the Mexico state of Baja California. Tijuana, with a burgeoning population approaching 2,000,000 residents, and Tecate, a smaller city of 50,000, border the US in the sector's area of responsibility.

Seven stations are strategically located throughout the sector to afford maximum enforcement effort. Seventy percent of the sector's enforcement personnel are deployed at four "line" stations, engaged in immediate border responsibilities; 23% perform traffic and transportation check duties; and the remaining agents staff "backup" stations, performing city patrol and area control.

Border Patrol operations within the sector are supported by garage, communications, electronics, and staging facilities. The Air Operations branch and a special operations function, which includes anti-smuggling, prosecutions, and intelligence units, provide an invaluable measure of support.

The Air Operations branch employs four helicopters to provide coordination and illumination for ground activities.

Anti-smuggling and prosecution units are responsible for investigating and presenting for prosecution criminal violators of immigration laws, specifically the organized, commercial smuggling of aliens into the US. The sector intelligence unit is charged with developing and providing tactical and strategic information to the sector staff and field stations. The unit also supports the anti-smuggling program with data analysis.

## Operational Strategy

The illegal alien traffic in the metropolitan San Diego area is the major factor driving operations in the San Diego sector. The strategy outlined here is aimed at gaining control of this traffic. The basis for the strategy is the design and fielding of a multiple fence barrier system. The underlying concept is to delay the charge of the aliens and to confine them to a narrow isolation zone where pursuit and apprehension can be more effective. This physical barrier and the resultant tight patrol strategy will also serve as a deterrent that will eventually reduce the attempted illegal entries to a much smaller number.

Another important aspect of this concept is that control of the illegal aliens through this area must be gained in an orderly fashion. An abrupt change in effectiveness that results in greatly improved apprehension efficiency without a corresponding decrease in total attempted entries will totally saturate the deportation and detention facilities as well as the judicial capacity of the sector. A barrier system with accompanying tight line patrol can be advanced across the frontier at a rate that the staff and facilities can absorb

until the main stream of traffic is effectively shut down. The eventual objective is to totally discourage the casual aliens, and divert the determined aliens to open terrain or channels where they can be controlled.

When control of the illegal alien traffic is gained, the law enforcement resources of the Border Patrol can be re-allocated to gain control of alien and contraband smuggling.

## Activities

### *Air Operations*

Air operations is located 5 miles east of Sector Headquarters at the Brownfield Airport on Otay Mesa. It has an authorized duty force of 16 pilots and 4 aircraft mechanics. The San Diego sector pilots and aircraft are highly effective in deterring and detecting the illegal entry of aliens and contraband into the US and coordinating the arrests by ground units.

### *Anti-Smuggling Unit*

The anti-smuggling unit comprises an authorized force of 27 special agents located in offices in Spring Valley, Kearney Mesa, and Carlsbad. The special agents use a variety of techniques (such as surveillance, informants, and smuggling ring infiltration) to develop cases that lead to the conviction of alien smugglers.

### *Border Patrol Criminal Alien Program*

The Border Patrol Criminal Alien Removal Program (BORCAP) identifies aliens who have been convicted of serious state and federal crimes and places them into the formal deportation process. Criminal aliens are identified through apprehensions and liaison with other law enforcement agencies throughout the area.

### *Canine Corps*

The sector has 10 canine units, deployed primarily at the traffic check stations. Each unit consists of a Border Patrol Agent and a Belgian Malinois dog. The sector canine units assist in detecting hidden narcotics and/or aliens, locating lost or abandoned articles involved in crime, and performing search and rescue missions. The canine units also play an active role in the sector's Drug Awareness Program.

### *Drug Awareness Program*

The drug awareness program has 35 sector agents trained in giving drug demand/reduction presentations. The program provides

factual information on the hazards of drug use to parents, community groups, and school-age children. The presentations use agents in uniform, videos, and canine units. During FY 1990, over 560 county schools were visited, reaching over 47,000 students.

### *Employer Sanctions*

The employer sanctions program enforces the Immigration Reform and Control Act of 1986 (IRCA), which made it unlawful for employers to knowingly hire aliens who are in the country illegally. Employers who violate the Act are subject to civil fines.

Since 1987, agents have made over 28,000 educational visits to employers. Over 290 employers have been fined and 306 warnings have been issued for violations. A total of over $2 million in fines have been levied, the largest being over $300,000.

The enforcement of the IRCA has brought about the proliferation of counterfeit documents, which are used by aliens to illegally obtain employment. Sector agents identified over 7,500 counterfeit documents used for employment in 1990.

### *Horse Patrol*

The sector has a complement of 10 horses to be used for the horse patrol program. The horse-mounted agents patrol in rough terrain where vehicle use is impractical. The unit is active in search and rescue efforts throughout the area.

The number of aliens apprehended by the Border Patrol in the San Diego sector alone has increased to slightly less than one-half million in 1990. Approximately 75% of that number is attributed to the "linewatch" stations of Imperial Beach, Chula Vista, Brownfield, and Campo.

## Sector Support

### *Communications Center*

The communications center operates and monitors the sector radio communications network 24 hours per day. It provides remote information access to the Immigration and Naturalization Service (INS), National Crime Information Center, and Department of Motor Vehicles computer databases and provides field agents information regarding intrusions detected by remote sensing devices.

### *Electronics*

The electronics support group maintains all communications equipment, which includes over 650 mobile radios, 700 walkie-talkies, and 21 base stations. It maintains the sector's sensor system, comprised of numerous intrusion devices strategically located along the border. This group is responsible for maintaining sector infrared and starlight night vision devices.

### *Facilities Maintenance*

The facilities maintenance personnel offer a wide variety of services, including road maintenance, heavy equipment operation, building construction and repair, and electrician and plumbing services.

### *Information Systems*

The information systems group provides technical support and training for several hundred sector computer users. The application areas include word processing, finance and accounting, and criminal case tracking.

### *Intelligence Program*

The intelligence program gathers, correlates, analyzes, and evaluates data received from diverse sources in order to provide staff and operational personnel with meaningful intelligence information. It is staffed by six intelligence agents who maintain liaison with local, state, and foreign agencies.

### *Prosecution Program*

The prosecution program coordinates and provides guidance regarding all administrative and criminal casework. Prosecution cases prepared at the station level are submitted to the unit for review and presentation to the US Attorney. The group maintains close liaison with the US Attorney and provides case research and investigation for all Border Patrol trial cases. It is staffed by seven prosecution agents.

### *Staging Facility*

The primary function of the staging facility is to meet the transportation and temporary detention needs of the seven Border Patrol stations located within the sector. Sector staging is located within the headquarters complex and is a short-term (72-hour) holding facility capable of housing [redacted] for 3 hours or less in addition to [redacted] for overnight detention.

### *Training Facility*

The training facility is responsible for training programs offered to sector personnel, in addition to all post-academy training of Border Patrol agent trainees. It is located in Spring Valley and is staffed by three training officers and a number of detailed agent/instructors.

### *Vehicle Maintenance Facility*

The vehicle maintenance facility is responsible for the maintenance and repair of the sector's vehicle fleet, which includes over 750 patrol, support, and heavy equipment-type vehicles. It is located within the Sector Headquarters complex. The garage includes 10 repair bays, a body and paint area, engine and transmission rebuilding, front-end alignment, and a tire shop.

### *Vehicle Seizures Program*

The vehicle seizures program is located within the Sector Headquarters complex. The program is responsible for the processing and ultimate seizure action of vehicles confiscated by the seven stations in the sector for the transportation of illegal aliens. The unit is staffed by seven Border Patrol agents and seven clerical assistants.

Seizures included 7,345 vehicles with a total value of $14,392,000 in FY 1990.

## Station Operations

### Imperial Beach Station

The Imperial Beach station is located 3 miles west of Sector Headquarters. The station has an authorized duty force of 210 agents.

The Imperial Beach station's area of responsibility encompasses both urban and rural areas of Imperial Beach, Coronado, and parts of San Diego. The station is responsible for the border area for [redacted]

The primary station activities include linewatch, city patrol, employer sanctions, and the criminal alien removal program.

### Chula Vista Station

The Chula Vista station is located within the Sector Headquarters complex in San Ysidro. It has an authorized duty force of 218 agents.

The Chula Vista station's area of responsibility encompasses a large urban area extending from the international border through San

Ysidro into San Diego. The station's immediate border responsibility is approximately 1 mile extending to the [redacted]

The primary station activities include linewatch, city patrol, transportation check (AMTRAK, San Diego International Airport, and bus terminals), employer sanctions, and the criminal alien removal program.

### Brownfield Station

The Brownfield station is located 5 miles east of Sector Headquarters on Otay Mesa. It has an authorized duty force of 203 agents.

The Brownfield station's area of responsibility encompasses mesa, rugged canyon, and mountainous terrain. The immediate border area begins 1 mile east of the San Ysidro POE and extends 8 miles east.

The primary station activities include linewatch, sign-cut, city patrol, employer sanctions, and the criminal alien removal program.

### Campo Station

The Campo station is located in Campo, 60 miles east of Sector Headquarters. It has an authorized duty force of 51 agents. This station has one substation, Boulevard Substation, located 20 miles east of Campo, which has an authorized force of 10 agents.

The Campo station's area of responsibility encompasses a particularly rugged mountainous area extending 40 miles to the west from the Imperial County Line.

The station activities include linewatch, sign-cut, employer sanctions, and the criminal alien removal program.

## Traffic Check Stations

### San Clemente Traffic Check Station

The San Clemente traffic check station is located on Interstate 5, 70 miles north of the border. It has an authorized duty force of 135 agents.

The San Clemente station's area of responsibility includes the northwest corner of (b) (7)(E) [redacted] and the southwestern portion of Orange County. Agents at this traffic check station perform traffic check operations on [redacted] apprehending northbound

illegal aliens. As many as 6,000 vehicles per hour pass through the station's inspectional lanes.

The station's activities include traffic check, city patrol, train check, employer sanctions, and the criminal alien removal program.

### Temecula Traffic Check Station

The Temecula traffic check station is located in the city of Temecula, [redacted] of the border. The station operates two traffic checkpoints: [redacted]. It has an authorized duty force of [redacted] agents.

The Temecula station's area of responsibility covers over [redacted] square miles that includes the [redacted] The station performs traffic check operations on [redacted] and [redacted] As many as 1,500 vehicles per hour pass through the station's [redacted] checkpoint.

## Area Control/Backup Stations

### El Cajon Backup Station

The El Cajon backup station is located in the city of El Cajon, 27 miles northeast of Sector Headquarters. It has an authorized duty force of 42 agents.

The station's area of responsibility includes over 2,000 square miles of urban, rural, and agricultural regions of greater San Diego. The station is responsible for intercepting aliens working in and passing through much of San Diego.

The El Cajon station's activities include frequent support of line-watch stations, city and area control, transportation check, employer sanctions, and the criminal alien removal program.

### San Marcos Backup Station

The San Marcos backup station is located 48 miles north of El Cajon. It has an authorized duty force of 14 agents.

The San Marcos station was established in 1987 in response to increased alien activity in the north San Diego County area and lengthy response times from El Cajon.

## Recommendations

General recommendations that are common to all of the sectors are given in the following section. These general recommendations are then followed by sector-specific recommendations.

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## General Recommendations

Our recommended strategy for improved control of the border is based on two controlling tactics:

- **Border Enforcement:** the use of heavily patrolled multiple barriers on the border to control the large number of illegal aliens in the urban areas of the border

- **Containment:** additional 24-hour, all-weather checkpoints to minimize the quantity of drugs and aliens leaving the border region if they get into the country.

### Border Enforcement

We have suggested a particular type of multiple barrier and some associated cost figures. What is more important than the details of the barrier is its purpose. Any single barrier can be breached if the adversary has an infinite amount of time in which to attack it. Because there is no enforcement on the Mexico side of the barrier against attempted breaching, those desiring illegal entry into the US have unlimited time to accomplish the breach. With multiple barriers, the time to breach those beyond the first barrier becomes finite. [redacted] We have recommended [redacted] with [redacted] Lighting is recommended, but in many areas light levels of only [redacted] is recommended ([redacted] The lights should be mounted on [redacted].

There are some areas in which personnel barriers are not justified, but vehicles may drive across the border. In those areas, a [redacted]

In some areas, [redacted] may not be possible (or practical); likewise, it may not always be necessary to have [redacted].

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Some necessary actions must be taken for this strategy to work:

- [redacted]
- [redacted]

Depending upon the numbers and types of intruders and the area in which the barriers are located, the exact design of the barriers may be varied.

## Objections to the Barriers

Some of the common objections to the barriers are listed below.

### "It makes the United States look like they are unfriendly to the Mexican people."

The barriers are a way of limiting entry of criminal aliens and other illegal aliens. After control is gained, the US could determine from a humanitarian point of view how many aliens could be supported and adsorbed by society and the economy and liberalize the immigration and entry to allow those who have gone through the proper channels to enter. Most people do not think that the banks are unfriendly because alarms, vaults, and barriers are used to limit access to their money. We believe that after control is gained and the intruders learn how hard it is to breach the border in the urban areas, much of the border crime that now occurs on both sides of the border will be eliminated.

### "If you are successful with the barriers, the intruders will go around the end of the barriers or find some other route in which to enter."

We believe that the number of persons who will go around the ends of the barrier will be significantly reduced from those who now cross and are rapidly absorbed into the US urban areas. The reason for believing this is that many that now cross are going back and forth to work or to steal. Some are seeking to have their child born in the US, and some are entering because it is relatively easy and the penalty for trying is minimal. Additionally, there is minimal discomfort for trying. If going around the end means travel through difficult terrain with no place to be absorbed if they are successful, this should serve as

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an additional deterrent. The ends of the barrier could be located so the Border Patrol could have a significant advantage in that area. It is true that truly dedicated persons will attempt to find other routes. We have seen this in some of the shift in drug traffic from Florida to the Southwest Border when the sea and air control increased in Florida. We also have seen an increase in illegal activities on the ground with the advent of better control of the air on the Southwest Border. However, each time that such actions force the intruders to change tactics, the degree of control has increased.

A fundamental principle of security is analogous to a chain in which each link represents a means of entry. One must continue to improve the individual links until they are equally strong. If the equally strong chain (balanced security) is broken, then a new level of security (strength of the broken link) must be established and the process repeated.

[redacted]

## Containment

Containment embraces the idea that even if drugs or illegal aliens successfully make it across the border into a region, they will be contained in that region. This requires more checkpoints and that they be operated as 24-hour, all-weather checkpoints.

### Objections to the Checkpoints

**"Checkpoints, just like Ports of Entry (POEs), are not perfect and some drugs and some aliens will get through the checkpoints."**

Yes, that is true, but using the chain analogy again, intelligence, technology, and procedures can now be implemented to strengthen this link of the chain.

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**"Routes will be found in which there are no checkpoints, or intruders will find a way around the checkpoints."**

This is also true. It is the reason the linewatch, sign-cutting, air surveillance, and the [redacted] will continue to be required; but again, each step strengthens the chain and makes the job of entering more and more difficult. Even the order for establishing the new recommended checkpoints or making existing checkpoints 24-hour, all-weather may have to be determined from experience. To gain that experience, temporary checkpoints may have to be established. Those that are not 24-hour, all-weather checkpoints will have to be observed during the hours of non-operation to determine the priority in which each link must be strengthened.

## Priorities

Other factors that affect the priorities are insufficient personnel to perform the already assigned tasks; inadequate office space, maintenance facilities, and detention facilities; and the lack of adequate vehicles to conduct present operations. We believe that there are critical lower limits, which, if violated, would severely limit the Border Patrol's present level of effectiveness. Therefore, every effort should be made to remain above these lower limits. They are difficult to ascertain because of the different points of view mentioned above, and because all of the present thinking is based on doing business the way it is now being done.

If the number of intruders could really be decreased through the use of the barriers, the need for all of the operations required after an intruder is caught would proportionately decrease. Some of the vehicles that are now being used to travel many miles to remote crossing points could be used to patrol the barriers, and even though there may be more crossings in the remote areas, if the checkpoints are working properly, the majority of those successfully crossing into the region will be caught.

A few prototype barrier locations will need to be established and data taken to absolutely determine how the Border Patrol in that particular sector or station will have to reorganize and restructure their operations. As the barriers and checkpoints are completed, the total number of agents required on the Southwest Border will increase. However, we also believe that as control is gained at the border and the major links of the chain are strengthened, the number of agents can be allowed to decrease through normal attrition to a number not significantly larger than what it is now.

In the short term, in order to have sufficient personnel to staff the barrier patrols and the checkpoints, it may be necessary to decrease

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linewatch and other personnel intensive activities. Because all of the barriers and checkpoints cannot be constructed simultaneously, new staff may be able to be added rapidly enough that this may not be necessary. In any given sector where decreased linewatch might be necessary, there would probably be a decrease in the amount of conventional detection and surveillance equipment. Obviously, more effective detection and surveillance equipment would help in this situation, but that is also true in the present situation, and it is expected that such equipment will start to be employed as soon as it becomes available. (The only real hope that improved detection equipment will become available is the work being sponsored by INS Research and Development (R&D) at Lawrence Livermore National Laboratory. (INS is now in the second year of a development cycle [concept, prototype, specifications, manufacturer different from prototype developer, manufacturing iterations] of a typical 4- to 5-year time to yield reasonable quantities of product. A significant portion of this time is due to the requirements of government contractual regulations.) Barriers and checkpoints are well-established, proven entities and can become effective as soon as they can be established. Items that must be considered in establishing the barriers are environmental impact statements; building structures that fully meet Occupational Safety and Health Administration (OSHA) requirements; obtaining easements, ownership, or the authority to use the land for the barriers and checkpoints; and political objections to this strategy.

These recommendations are based upon the things we saw as we visited the sectors, discussions with sector personnel, and questionnaires and surveys conducted by ourselves and others, but most of all by our determination about how a greater control of the Southwest Border can be gained. General background information for these recommendations can be found in Volume 1 and the introductory section of this volume. Sector-specific information can be found in the detailed write-up about each sector. Our study was not extensive enough to cover detailed engineering design of the barriers, but the philosophy of what is recommended is included, and some rough recommendations are made. A detailed study will be required to produce an engineering design, and construction of small sections should be done for evaluation. In some areas, slightly more or less barrier may be required to accomplish its intended purpose. Likewise, in some areas, higher intensity lights may be required.

**In general, we recommend that the first priority is the lighted barriers in the urban areas.**

[redacted] A possible design is for

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[redacted] on the ground. The [redacted]. Because this is an urban area with residences nearby, this level of lighting, which is comparable to street and parking lot lights, was chosen to minimize any adverse reactions from residents on either side of the border.

[redacted]

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[redacted]

- [redacted]

It may also be necessary to condemn and clear property. We have not estimated the cost of such an action.

- [redacted] It is estimated that one full-time person with a mobile welder can keep the fences in most of the sectors repaired. However, until a determination has been made about how frequently the fence is cut, there should be a backup contract placed to assist the normal repair person in the event that the cutting is excessive. In some of the sectors with fewer miles of barriers and/or less aggressive persons desiring to enter the US, it may be expedient to have a part-time welder on contract to repair holes on roughly the time scale suggested for the full-time welders. Such situations are shown on the spreadsheet as 0.5 welder operators. [redacted].

[redacted]

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[redacted]

[redacted] will cost about $1,240,000 per mile. JTF-6 has supplied material and labor for much of the landing mat fence constructed in the San Diego sector and for road building in Tucson and other sectors. If assistance continues to be available from JTF-6, the cost to the INS will be considerably less. Maintenance of the barrier is estimated to be about 5% per year of its installation cost.

Electricity and maintenance of the lights should be about $3,855 per mile per year for electricity and $5,300 per year per mile for relamping the light fixtures. This estimate is based on having a [redacted]. It is estimated that the lights will burn an average of 10 hours each night and the cost of electricity is $0.10 per kilowatt hour. It is also estimated that the bulbs in the fixtures will have to be replaced once every 2 years. Because the lights can be serviced from a ladder from the back of a pickup, there should not be any special equipment required.

[redacted]

The barrier and lighting system should last 30 or more years if it is maintained as recommended.

With the proposed multiple barriers and lighting, the overall effectiveness of the Border Patrol should be increased in that much more of the border will be lighted and very difficult to penetrate.

We are recommending a minimum of a [redacted] Effects caused by the barriers are that the traffic may shift to crossing areas between the barriers. In every case, this will mean that with fewer places for the illegal aliens to hide or be assimilated into the local population, they will be easier to apprehend. If the traffic becomes heavy enough in these areas, additional barriers may have to be constructed.

There is political risk that there will be heavy opposition to the barriers. A good public relations program, which emphasizes the fact that this is not an act of unfriendliness but an act of

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control in order to allow more deserving immigrants and fewer of the criminal aliens, drug traffickers, or other undesirable persons to enter the US, should help to mitigate this problem.

**We recommend that the second priority is the checkpoints.**

The checkpoint philosophy is that of producing containment so that even if drugs or illegal aliens successfully make it across the border into the US, they will be contained in that region. We recommend that checkpoints be operated on a 24-hour basis.

Large checkpoints are located on four lane highways and will require about 30 additional agents to provide six persons on duty at all times. The small checkpoints will be located on two lane roads and require a minimum of 15 additional agents to provide three persons on duty at all times. All of the checkpoints should be capable of 24-hour per day, 7-day per week, all-weather operation. They should all have at least one drug dog on duty at all times. The personnel required to staff the checkpoints should also be at this priority level. If funds for the checkpoints become available before the new personnel are available, existing personnel from linewatch, ranch check, city patrol, *etc.*, should be used to staff the checkpoints.

The land for these checkpoints is usually furnished by the federal, state, or local government that owns the highway. Often, these governments will also provide some paving for pull-off and inspection areas. The cost to establish a large checkpoint is estimated to be $300,000 and $200,000 for a small checkpoint. The estimated maintenance and utilities costs are estimated to be 10% of the station's establishment cost per year for each checkpoint.

**We recommend that the third priority is the railroad inspection zones.**

A fenced and lighted railroad inspection zone is recommended to assist in the train checks. [redacted] Locating the railroad checkpoint next to the highway checkpoint will allow multiple use of both facilities and personnel and will secure one flank of the highway checkpoint from bypassers. Not all of the sectors require railroad inspection zones.

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**We recommend that the fourth priority is the checkpoint and [redacted] sensors.**

[redacted] Their use by the border stations will be for [redacted]. A possible makeup of the sets is:

[redacted]

**We recommend that the fifth priority is to ensure that all of the sectors have adequate communications systems.**

The Border Patrol, in conjunction with the Communication Interoperability Working Group (CIWG), has plans to equip all of the Southwest Border with secure DES-XL radio equipment. This equipment has already been installed in El Paso, and the equipment has been procured for McAllen, Laredo, Del Rio, and Tucson. We understand that equipment is being planned for Marfa and San Diego in the near term, and for the other sectors on the Southwest Border in the longer term. We have recommended some short-range (portable) units for each of the sectors and about $150,000 per sector to supplement long-range communications equipment not provided by the new systems. Marfa has an older communications system that should be replaced as soon as possible. [redacted]

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[redacted] and Laredo's system is in need of being upgraded to ensure reliable coverage. All sectors should verify that their communications systems are adequate before adding to the other physical security equipment. We hope that the new equipment will be such that the funds can be used for other recommended items. These communications systems are still being upgraded so some of the problems may have recently been corrected.

Particular attention should be given to ensuring that agents have emergency communications for their safety.

**We recommend that the sixth priority is to ensure that all of the sectors have adequate transportation.**

The transportation problem was not studied specifically as a physical security problem; however, we did observe that many of the vehicles had more than 100,000 miles on them. In those sectors where we are aware of specific transportation needs, they will be identified. The results of a vehicle survey completed in December 1991 are given in the table below.

### Personnel and Vehicle Data

| Sector | Sector Personnel* (12/31/92) | Vehicles Present (12/31/92) | Vehicles Required** | Vehicles Surplus | New Personnel for Checkpoints | Other New Personnel | Additional Vehicles Required | Net New Vehicles |
|---|---|---|---|---|---|---|---|---|
| McAllen | 376 | 201 | 237 | -36 | 15 | 85 | 57 | 93 |
| Laredo | 368 | 318 | 240 | 78 | 15 | 100 | 65 | -13 |
| Del Rio | 394 | 185 | 244 | -59 | 120 | 90 | 119 | 178 |
| Marfa | 139 | 106 | 98 | 8 | 75 | 55 | 73 | 65 |
| El Paso | 655 | 425 | 412 | 13 | 120 | 140 | 147 | 134 |
| Tucson | 292 | 223 | 187 | 36 | 165 | 70 | 133 | 97 |
| Yuma | 225 | 188 | 147 | 41 | 15 | 60 | 42 | 1 |
| El Centro | 263 | 181 | 160 | 21 | 60 | 70 | 73 | 52 |
| San Diego | 928 | 569 | 559 | 10 | 75 | 52 | 72 | 62 |
| Totals | 3,640 | 2,396 | 2,284 | 112 | 660 | 722 | 781 | 669 |

* These numbers are dynamic. The numbers used in the sector discussions vary slightly from these because they were obtained at a different time.

** Based on the formula: vehicles needed = (1 + number of stations) + (number of personnel x vehicle factor). The vehicle factor = 0.56525. This is a weighted number based upon two officers per vehicle, 33% in for repair, 5% deadlined, 85% of fleet required (based on 10% of the agents unavailable for duty).

The following factors and assumptions are used in developing a dynamic model to assign and monitor the number of vehicles at the sector level.

| Factors | | Assumption |
|---|---|---|
| 1 | Number of personnel | Two officers per vehicle. This is an historical ratio. |
| 2 | Number of vehicles out of services for routine and emergency maintenance. | The average number of vehicles is 33% based on the current age of the fleet. |
| 3 | Number of vehicles deadlined for excessive age or damage. | 5% is the average number of deadlined vehicles. |
| 4 | Maximum portion of the fleet that is required to be available at any time. | 85% of the total fleet is required (assuming 10% of the agents are unavailable for duty). |
| 5 | Weighted vehicle factor. | When Items 1, 2, 3, and 4 are considered, this factor becomes 0.56525 and is used for ease of calculation. |

**Formula:**

**(1 + number of stations) + (number of personnel x vehicle factor)**

**Example:**

**El Paso sector:**

**(1 + 11) = 12 + (655 x 0.56525) = 382.238 vehicles**

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**We recommend that the seventh priority is additional personnel beyond those needed for the checkpoints.**

The Personnel and Vehicle Data table also includes personnel data. We have assumed that the total Border Patrol personnel count cannot exceed 6,000. With 4,349 on roll on December 31, 1991, we calculated that 83.7% of the Border Patrol personnel were assigned to the Southwest Border. Using that ratio, we determined that of the 1,651 persons that it would take to get the total personnel count up to 6,000, 1,382 persons could be assigned to the Southwest Border. With this number, all of the sectors except San Diego were able to be increased at least 20% over their December 1991 count plus the number recommended to staff the new checkpoints. With the lighted barriers in the San Diego sector and with the large number of personnel already there, it was felt that a smaller percentage was sufficient for that sector.

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**We recommend that the eighth priority is to ensure that adequate vehicle and electronics maintenance is being conducted.**

Having equipment that is out of service because of inadequate maintenance is neither efficient nor economic. In some sectors, new vehicles have been unable to be used because personnel were not available to remove vital law-enforcement electronics from the old vehicles and reinstall it in the new vehicles. We have included funding in our recommendation for upgrading each sector's electronics maintenance, calibration, and testing capabilities. It may be necessary to have commercial contracts in place to handle the overload of the Border Patrol electronics and vehicle maintenance personnel.

**We recommend that the ninth priority is acquiring more conventional physical protection equipment.**

Sensors, assessment, and information control and display equipment are important in every sector. In most sectors, we are already detecting more illegal aliens than can be apprehended and processed. If more of this type of equipment and more agents are supplied, the other parts of the system (*e.g.*, transportation, detention, and deportation) become even more overloaded. Because of the important role of this equipment in the present operation of the sectors, we have recommended amounts of equipment close to the number presently employed. We realize that this is considerably less than each sector would desire, but we did not identify any new equipment that was significantly better than the models of equipment now in use. Immigration and Naturalization Service (INS) R&D has under development a new family of "smart" unattended ground sensors. These are now in the prototype stage and a specification is being developed so that commercial sources can be developed using government-owned designs. Likewise, the US Army's Center for Night Vision and Electro-Optics is developing a low-cost uncooled thermal imager that is projected to sell for $10,000 each in volume production, some of which INS R&D has acquired for testing. Other types of assessment equipment (CCTV cameras, recorders, storage media, *etc.*) are getting smaller and cheaper as time passes. Control and Display and Communications equipment are all being handled in a digital rather than the older analog format and are also experiencing rapid advances. For example, the use of satellite communications, voice privacy radios, and Global Positioning System (GPS) tracking systems is expanding. For these reasons, the amount of equipment recommended is closer to that now in use rather than that desired by the sectors. The equipment recommended will serve to replace any obsolete equipment now in use, nearly double that presently available (even

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though this may rapidly decrease to just using the new equipment as the older equipment fails). It will allow increased capability in the areas where this equipment is presently in use until new intrusion patterns develop and new needs are more firmly established as a result of the use of the recommended barriers and checkpoints.

In a few sectors, special situations may dictate that some of the equipment be given priority over other equipment.

Air Operations was not considered in the prioritization process. A separate study on this subject has been conducted for INS and their results are not repeated in this report. Air Operations is a very useful function, but we did not study it in sufficient depth to know what should be recommended. The use of [redacted] devices has been very successful as has surveillance, sign-cutting, *etc.*, accomplished during the daytime. We have concerns that even though the Air Operations function is very important, it may be in decline because of the stringent flight requirements, the fact that the pilots must be Border Patrol agents, and the dependence on surplus military aircraft in which parts are becoming harder and harder to obtain. After some accidents with the Huskys and the establishment of the 500-foot minimum flying altitude, [redacted]. Most of that is now done by helicopters, which are much more costly to operate.

## Contingency

In the sector recommendations that follow, the 25% contingency allocation is not shown. The contingency covers errors in estimating and items that are hard to budget or that may be site-specific, such as cost of environmental impact statements, land acquisition, power line extensions, camera mounting details, *etc.* The master spreadsheet in Volume 1 contains the contingency numbers.

## McAllen Recommendations

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The entire [redacted] the other. This has resulted in a strip population along the border.

The POEs at Hidalgo and Brownsville should have their lighted barrier extended to 2 miles on each side of the POE because of the heavier populations there. This amounts to 18 miles of barrier and lighting recommended for this sector. It is anticipated that these barriers will cause some of the traffic to increase in the South Padre Island area and may require an increase of Border Patrol personnel (the Coast Guard may also increase their help) in that area, perhaps to even later requiring a checkpoint at Port Isabel to monitor traffic leaving South Padre Island.

There are no new checkpoints recommended in the McAllen sector. The sector currently operates three highway checkpoints. These should be full-time, all-weather checkpoints and will require additional personnel and facility modifications to be operational at all times:

- (b) (7)(E) [redacted]
- [redacted]
- [redacted].

These three checkpoints, when operated full time and backed up by the Hebbronville checkpoints of the Laredo sector, effectively intercept all northbound traffic on major highway routes out of the border area. To expand operation of these checkpoints to full-time will require at least 15 additional agents and 6 drug dogs. Input from the sector indicates that this number may not be sufficient.

A fenced and lighted railroad inspection zone is recommended adjacent to the [redacted]. An inspection area should include fences on either side of the track and be long enough to allow the train to slow and stop for inspection and then start again while being wholly inside of the area. Such an area prevents jumping off and subsequent re-boarding of aliens. [redacted] will allow multiple use of both facilities and personnel and will secure one flank of the highway checkpoint from bypassers.

We recommend that all highway checkpoints use easily deployable tactical sensors that annunciate locally. Deployment of these

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sensors on the [redacted].

The sensor procurement recommendations for this sector are detailed in the McAllen portion of the spreadsheet, which is included below. The rank ordering is the same as that given in the general recommendations. A study entitled, *US Border Patrol Craft Feasibility Study,*[1] recommends that two boats be provided for this sector: one 36-foot patrol boat for the Port Isabel station and one 36-foot patrol boat for the Corpus Christi station. If jurisdictional and cross-designation authority could be negotiated, our recommendation is that closer coordination should be developed with the US Coast Guard, and the operations planned for these boats be delegated to them.

1. Resource Consultants, Inc., *US Border Patrol Craft Feasibility Study,* February 4, 1992.

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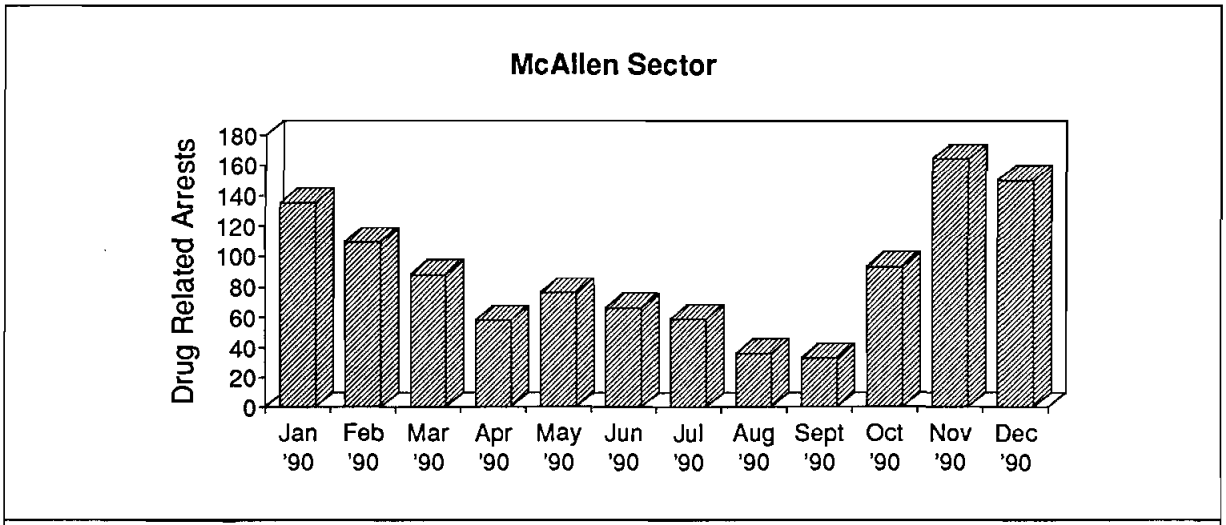
| Equipment Type | McAllen Rcmd | McAllen Ext. Cost | Unit Cost |
|---|---|---|---|
| [redacted] | | 132,000 | $825 |
| | | 49,920 | $260 |
| | | 19,900 | $995 |
| | | 9,345 | $445 |
| | | 16,750 | $1,675 |
| | | 8,400 | $400 |
| | | 14,950 | $1,495 |
| | | 7,350 | $350 |
| | | 6,720 | $320 |
| | | 179,100 | $995 |
| | | 2,340 | $260 |
| | | 24,975 | $4,995 |
| | | 24,950 | $2,495 |
| | | 0 | $1,050 |
| | | 0 | $15,000 |
| | | 9,990 | $4,995 |
| Receiver, Portable | 5 | 14,975 | $2,995 |
| Tactical | 9 | 4,230 | $470 |
| **Subtotal, Detectors** | | **$525,895** | |
| Regular Light CCTV | 15 | 24,000 | $1,600 |
| LLTV - Intensified | 7 | 59,500 | $8,500 |
| [redacted] | | 115,120 | $5,756 |
| | | 50,000 | $5,000 |
| | | 3,000 | $300 |
| | | 560,000 | $56,000 |
| | | 200,000 | $200,000 |
| Video & Sensor Cable | 1000 | 15,000 | $15 |
| **Subtotal, Assessment** | | **$1,026,620** | |
| Voice Comm, Short Range | 100 | 200,000 | $2,000 |
| Voice Comm, Long Range | 1 | 150,000 | $150,000 |
| **Subtotal, Communication** | | **$350,000** | |
| Info Control & Display | 2 | 10,000 | $5,000 |
| [redacted] | | 10,000 | $5,000 |
| **Subtotal, Cntrl & Disp** | | **$20,000** | |
| Checkpoint Shelter, Large | 0 | 0 | $300,000 |
| Checkpoint Shelter, Small | 1 | 200,000 | $200,000 |
| Checkpoint Personnel | 15 | 1,275,000 | $85,000 |
| Drug Dogs (Procurement) | 6 | 24,000 | $4,000 |
| Dog Support (Food & Vet) | 6 | 6,000 | $1,000 |
| [redacted] | 110880 | 3,326,400 | $30 |
| | 95040 | 6,652,800 | $70 |
| | 95040 | 5,702,400 | $60 |
| Vehicle Barrier | 0 | 0 | $35 |
| Lighting | 102960 | 2,574,000 | $25 |
| Patrol Roads | 95040 | 4,752,000 | $50 |
| Mobile Welder | 1 | 25,000 | $25,000 |
| Welder Operator | 1 | 85,000 | $85,000 |
| **Subtotal, Barriers, Etc.** | | **$24,622,600** | |
| Test Equipment | 1 | 100,000 | $100,000 |
| ILS, New Equipment | 1 | 100,000 | $100,000 |
| ILS, Old Equipment | 1 | 100,000 | $100,000 |
| **Subtotal, Support** | | **$300,000** | |
| **Sector Total** | | **$26,845,115** | |

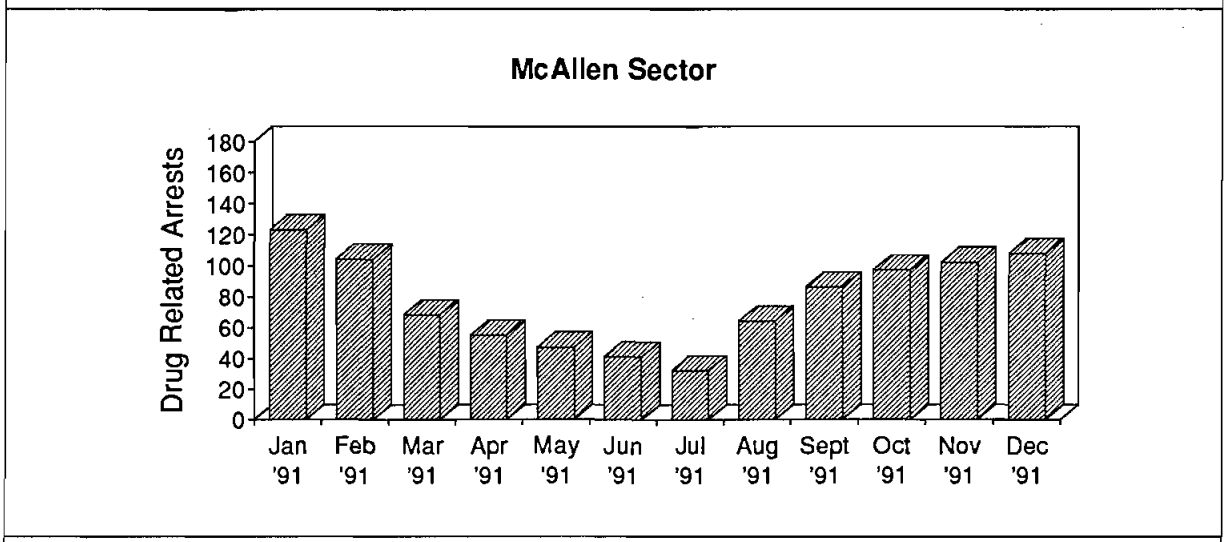
| Recurring Costs | McAllen Ext. Cost | Unit Cost |
|---|---|---|
| 15% of all Detection Assessment and Communications Equipment | $285,377 | 15.0% |
| 50% of Info Control and Display Equipment | $5,000 | 50.0% |
| 10% of the Construction Cost of Check Points for Maintenance & Utilities | $20,000 | 10.0% |
| 100% of Checkpont Personnel Cost and Dog Support | $1,281,000 | 100.0% |
| 5% of Barrier Cost for Maintenance | $1,021,680 | 5.0% |
| 15% of Lighting Cost for Maintenance & Electricity | $386,100 | 15.0% |
| 100% of Welder Operator | $85,000 | 100.0% |
| 25% of Test Equipment for Calibration, Repair and Upgrading of Equipment | $25,000 | 25.0% |
| 100% of ILS Costs | $200,000 | 100.0% |
| Total Recurring Cost for Each Sector | $3,309,157 | |

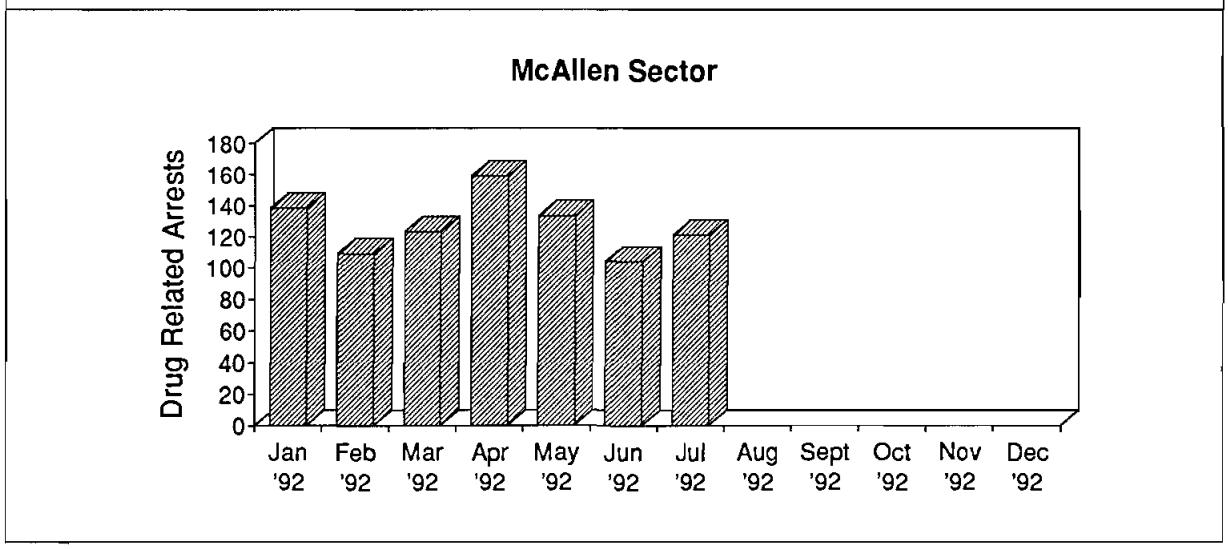
## McAllen Sector Analysis

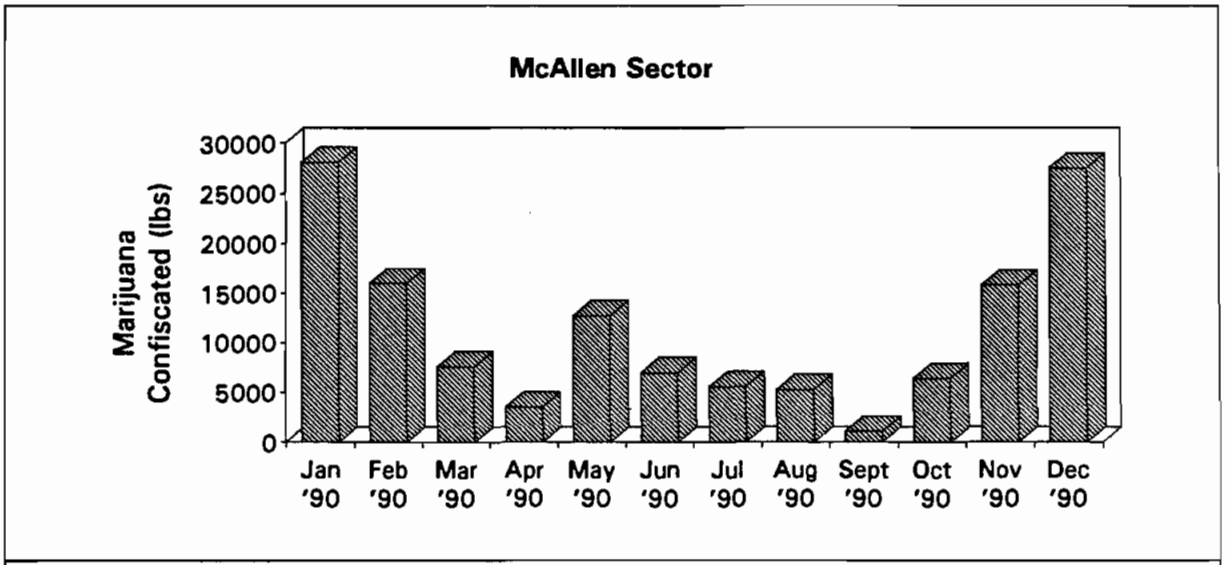
The data given in the McAllen sector discussion of "Contact with Suspects" is plotted on the following charts to show the overall trend of what has been happening in the sector for the years 1990, 1991, and the first half of 1992. For this sector, the number of illegal alien arrests, number of drug arrests, confrontations with armed persons, and assaults on Border Patrol agents was not available on a monthly basis, but was available for each year. Therefore, the data for the year was divided by the number of months being represented. This makes the monthly plot not completely accurate, so they are not included, but useful in computing the averages per month for the year and the presentation of the activities of the total Southwest Border given at the end of this section. Yearly (but not monthly) data was also available on confrontations with armed persons and assaults on Border Patrol agents.

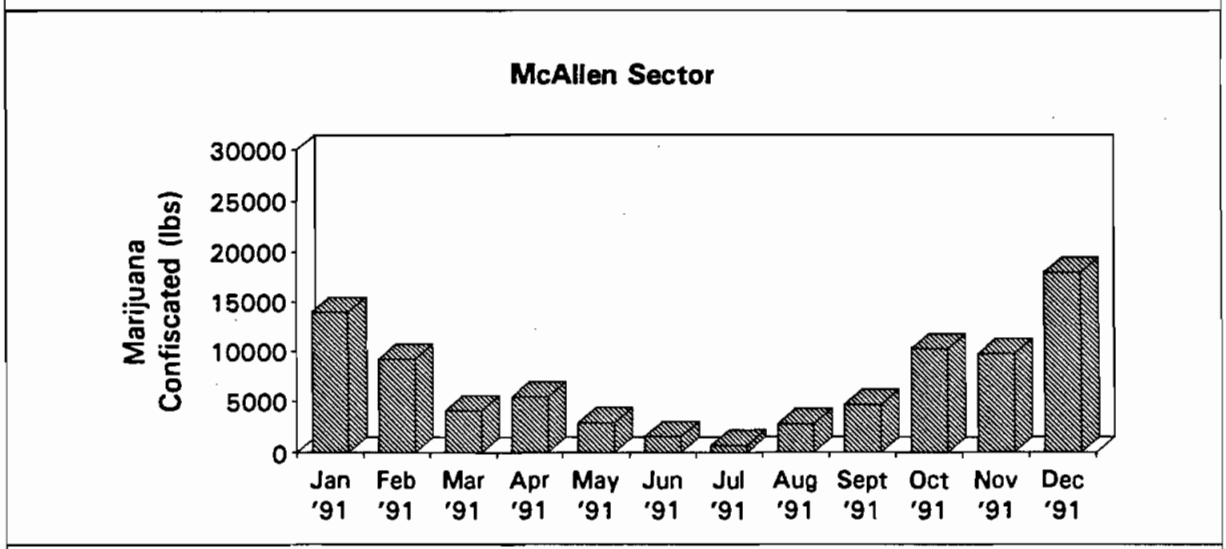
The analysis shows a decrease in overall illegal alien arrests and in the average amount of cocaine confiscated per month, but significant increases in the average number of drug-related arrests, and marijuana and heroin confiscated. The plots of cocaine and heroin show a few months with large activity mixed with many smaller activity months.

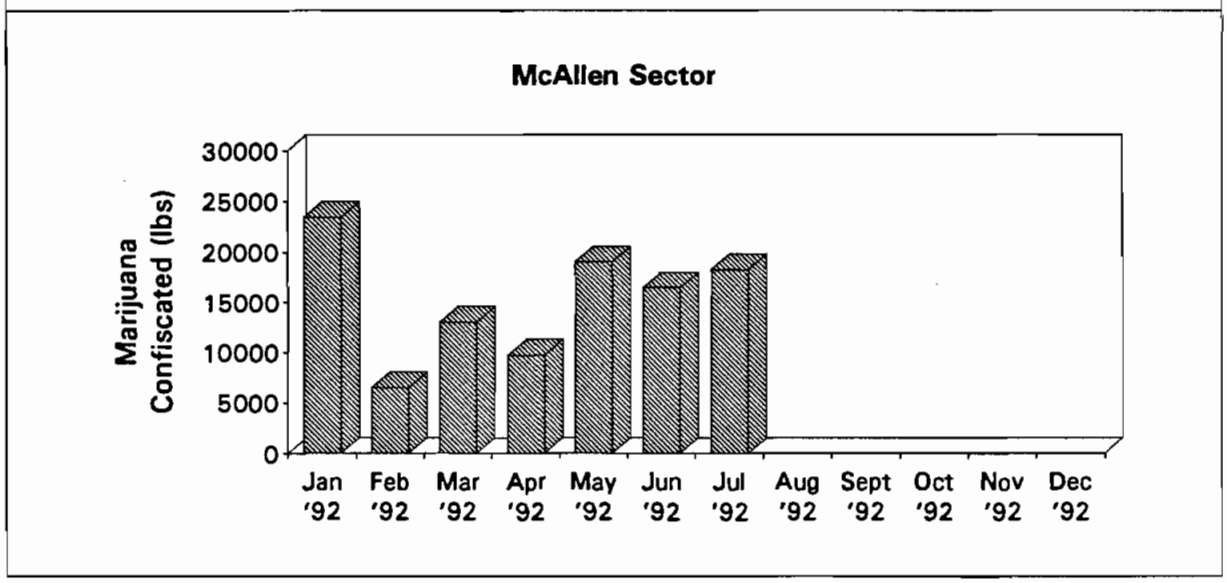

McAllen Sector
Drug Related Arrests
180
160
140
120
100
80
60
40
20
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

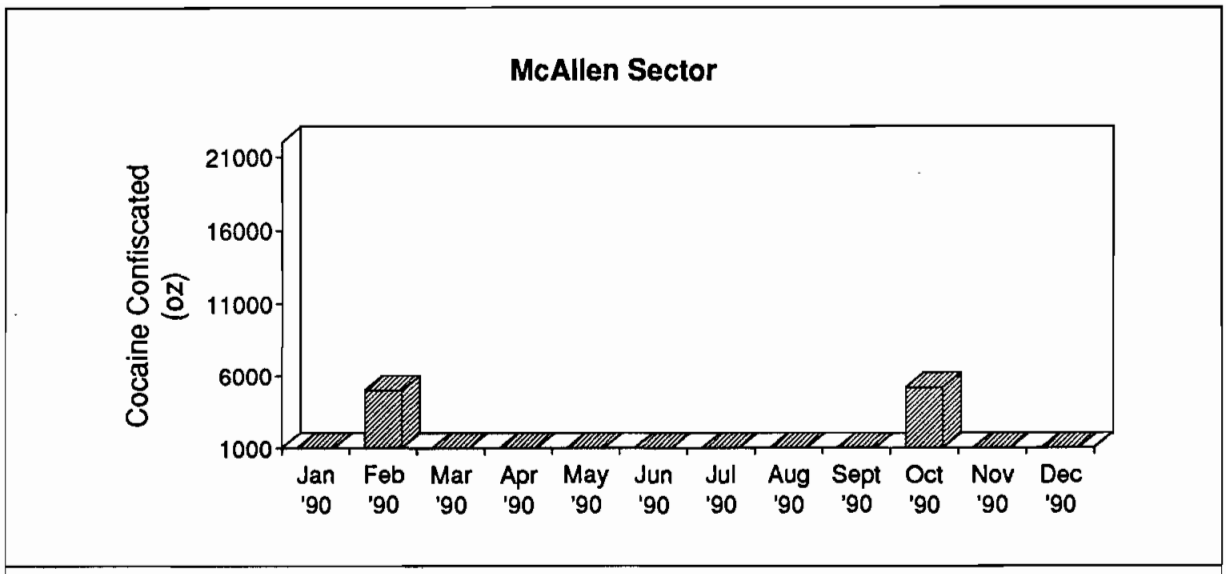

McAllen Sector
Drug Related Arrests
180
160
140
120
100
80
60
40
20
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

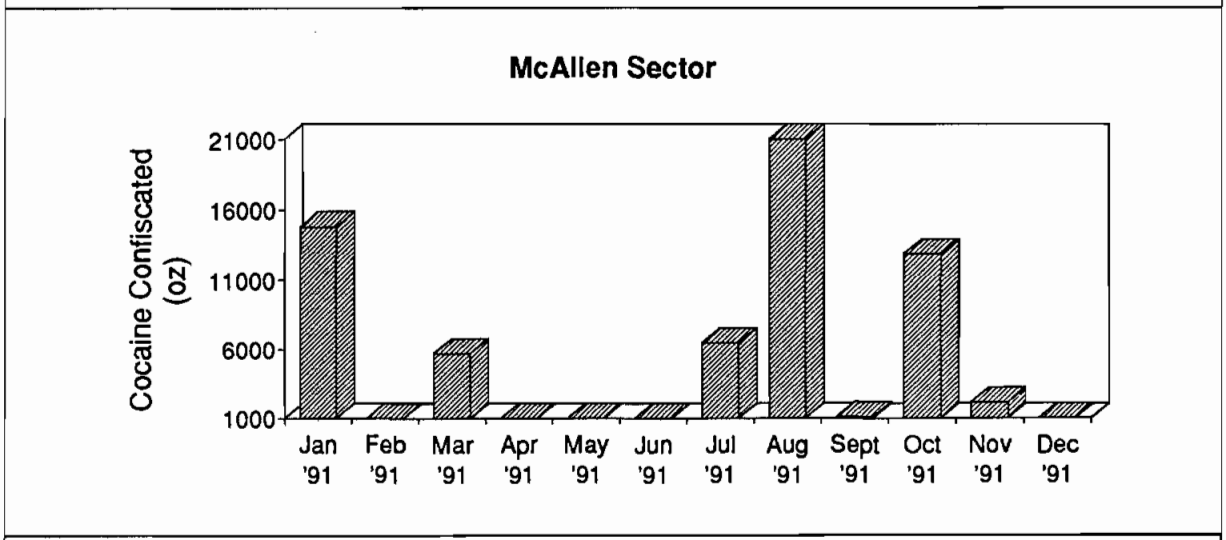

McAllen Sector
Drug Related Arrests
180
160
140
120
100
80
60
40
20
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

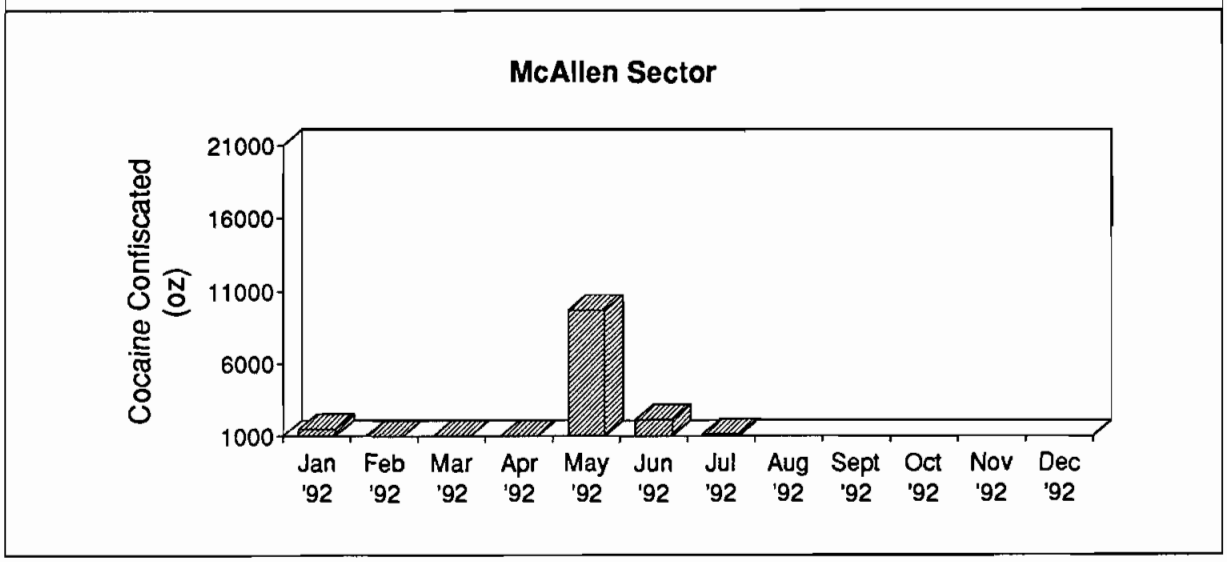

McAllen Sector
Marijuana Confiscated (lbs)
30000
25000
20000
15000
10000
5000
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

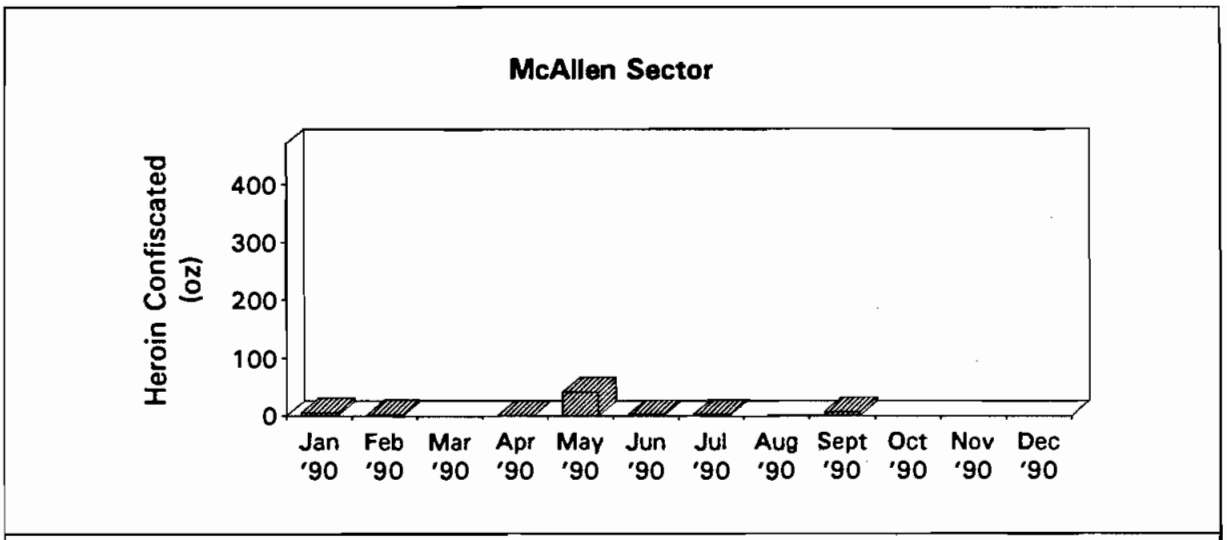

McAllen Sector
Marijuana Confiscated (lbs)
30000
25000
20000
15000
10000
5000
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

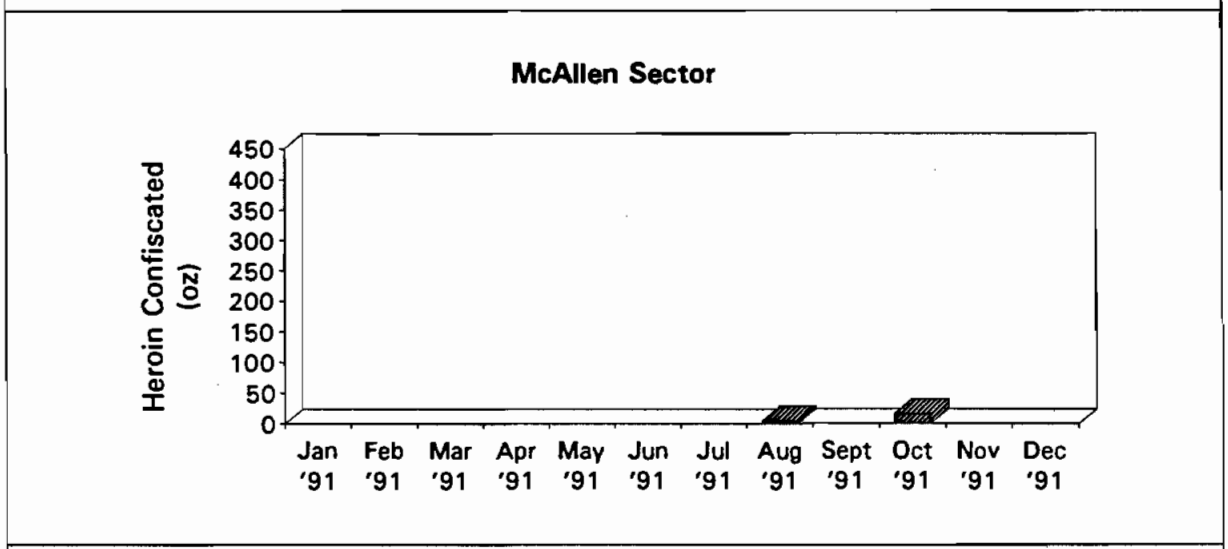

McAllen Sector
Marijuana Confiscated (lbs)
30000
25000
20000
15000
10000
5000
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

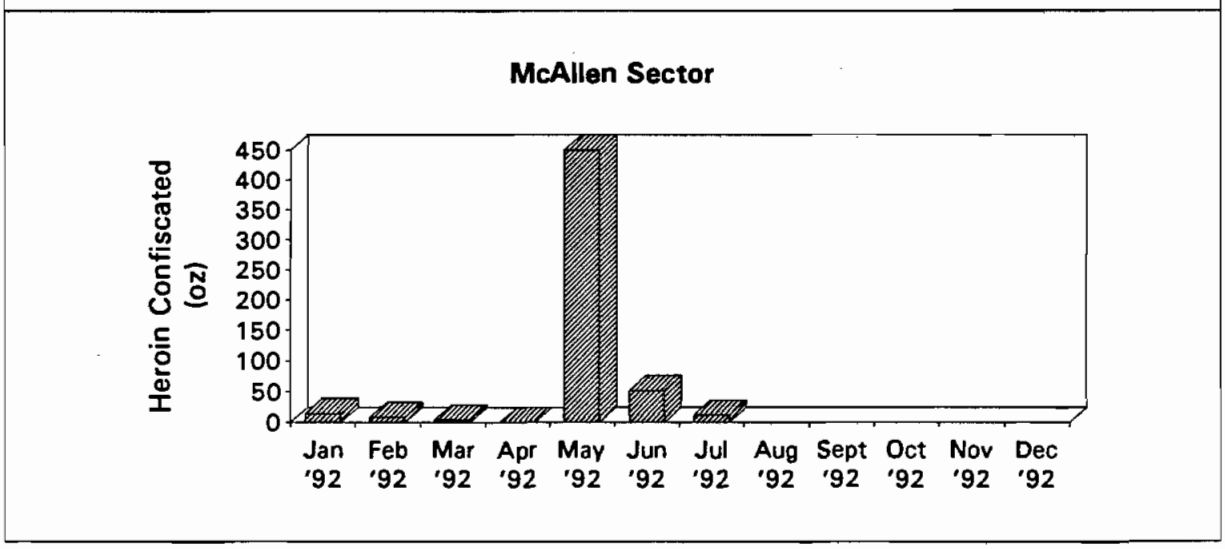

McAllen Sector
Cocaine Confiscated (oz)
21000
16000
11000
6000
1000
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


McAllen Sector
Cocaine Confiscated (oz)
21000
16000
11000
6000
1000
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


McAllen Sector
Cocaine Confiscated (oz)
21000
16000
11000
6000
1000
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92


McAllen Sector
Heroin Confiscated (oz)
400
300
200
100
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


McAllen Sector
Heroin Confiscated (oz)
450
400
350
300
250
200
150
100
50
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


McAllen Sector
Heroin Confiscated (oz)
450
400
350
300
250
200
150
100
50
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

## Laredo Recommendations

Like the McAllen sector, the entire lower section of border in the Laredo sector is characterized by having [redacted]. These border highways have resulted in strip population on both sides of the border. OUO-7

We recommend following the general recommendations for this sector with the exception that marine radars to detect traffic on Falcon Reservoir should be added as Priority 9 and the conventional physical protection equipment will then become Priority 10. The detailed recommendations for the conventional physical protection equipment are given in the Laredo portion of the spreadsheet, which is included below.

The Laredo sector currently operates five highway checkpoints. These should be full-time, all-weather checkpoints and may require additional personnel and facility modifications to be operable at all times. One additional full-time, all-weather highway checkpoint is recommended:

- (b) (7)(E) [redacted].

This additional checkpoint will require a minimum of 15 new agents and 6 drug dogs. In a recent communication with the sector, they suggested that the new checkpoint not be implemented, but that the Hebbronville station could use the 15 people that we recommended for the new checkpoint. Their feeling was that the normal traffic on [redacted] was minimal and would not justify the need for a 24-hour checkpoint operation. We defer to the sector's recommendations as long as the concept of containment is being fulfilled. A possible solution would be to move the [redacted]

[redacted]:

- (b) (7)(E) [redacted]
- [redacted]

OUO-7

Locating the railroad checkpoints next to the highway checkpoints will allow multiple use of both facilities and personnel and will secure one flank of the highway checkpoint from bypassers.

Apprehensions in this sector are on the increase. These increases normally indicate that more undocumented aliens are entering the US to work and take jobs. The personnel and equipment recommended in the general recommendations section and on the attached sheets are expected to solve much of this problem.

OUO-7

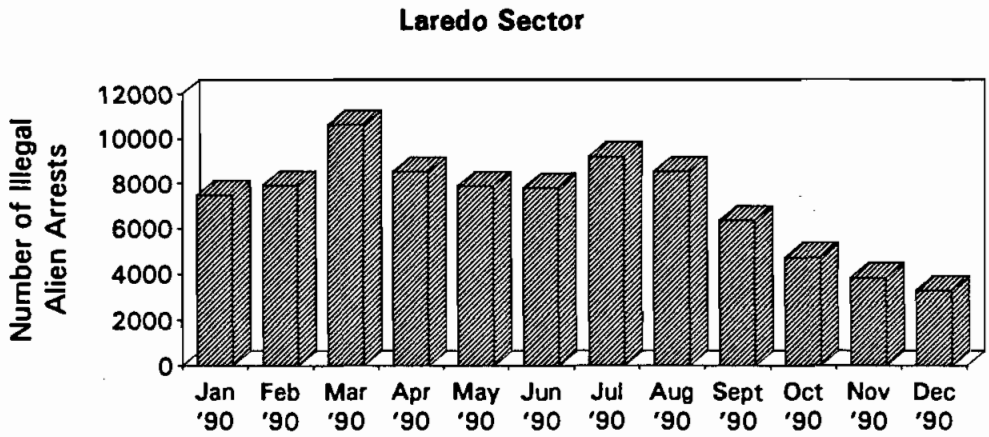
| Equipment Type | Laredo Rcmd | Laredo Ext.Cost | Unit Cost |
|---|---|---|---|
| [redacted] | | 82,500 | $825 |
| | | 81,120 | $260 |
| | | 49,750 | $995 |
| | | 10,680 | $445 |
| | | 41,875 | $1,675 |
| | | 9,600 | $400 |
| | | 0 | $1,495 |
| | | 8,400 | $350 |
| | | 7,680 | $320 |
| | | 99,500 | $995 |
| | | 2,340 | $260 |
| | | 4,995 | $4,995 |
| | | 17,465 | $2,495 |
| | | 0 | $1,050 |
| | | 90,000 | $15,000 |
| | | 4,995 | $4,995 |
| Receiver, Portable | 5 | 14,975 | $2,995 |
| Tactical | 9 | 4,230 | $470 |
| **Subtotal, Detectors** | | **$530,105** | |
| Regular Light CCTV | 0 | 0 | $1,600 |
| LLTV - Intensified | 15 | 127,500 | $8,500 |
| [redacted] | | 115,120 | $5,756 |
| | | 50,000 | $5,000 |
| | | 12,000 | $300 |
| | | 112,000 | $56,000 |
| | | 0 | $200,000 |
| Video & Sensor Cable | 1000 | 15,000 | $15 |
| **Subtotal, Assessment** | | **$431,620** | |
| Voice Comm, Short Range | 75 | 150,000 | $2,000 |
| Voice Comm, Long Range | 0 | 0 | $150,000 |
| **Subtotal, Communication** | | **$150,000** | |
| Info Control & Display | 1 | 5,000 | $5,000 |
| [redacted] | | 5,000 | $5,000 |
| **Subtotal, Cntrl & Disp** | | **$10,000** | |
| Checkpoint Shelter, Large | 0 | 0 | $300,000 |
| Checkpoint Shelter, Small | 1 | 200,000 | $200,000 |
| Checkpoint Personnel | 15 | 1,275,000 | $85,000 |
| Drug Dogs (Procurement) | 6 | 24,000 | $4,000 |
| Dog Support (Food & Vet) | 6 | 6,000 | $1,000 |
| [redacted] | 63360 | 1,900,800 | $30 |
| | 31680 | 2,217,600 | $70 |
| | 31680 | 1,900,800 | $60 |
| Vehicle Barrier | 0 | 0 | $35 |
| Lighting | 47520 | 1,188,000 | $25 |
| Patrol Roads | 31680 | 1,584,000 | $50 |
| Mobile Welder | 0 | 0 | $25,000 |
| Welder Operator | 0 | 0 | $85,000 |
| **Subtotal, Barriers, Etc.** | | **$10,296,200** | |
| Test Equipment | 1 | 100,000 | $100,000 |
| ILS, New Equipment | 1 | 100,000 | $100,000 |
| ILS, Old Equipment | 1 | 100,000 | $100,000 |
| **Subtotal, Support** | | **$300,000** | |
| **Sector Total** | | **$11,717,925** | |

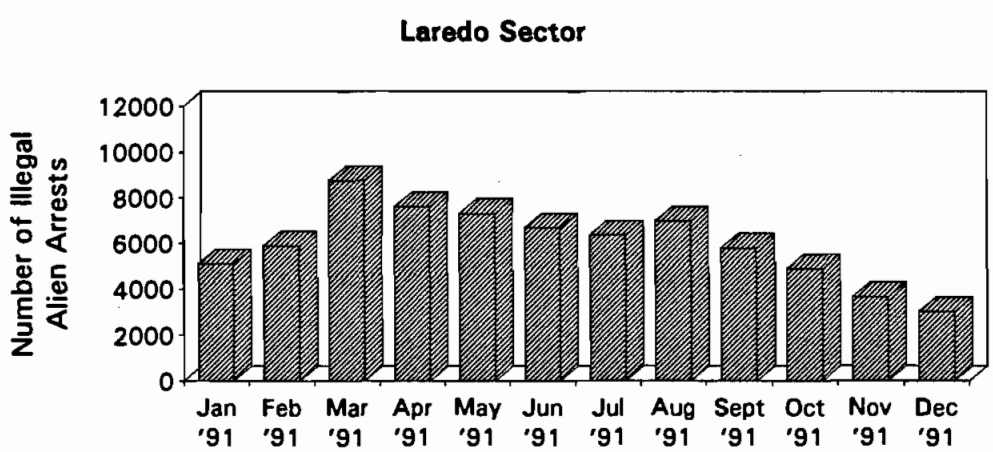
| Recurring Costs | Laredo Ext. Cost | Unit Cost |
|---|---|---|
| 15% of all Detection Assessment and Communications Equipment | $166,759 | 15.0% |
| 50% of Info Control and Display Equipment | $2,500 | 50.0% |
| 10% of the Construction Cost of Check Points for Maintenance & Utilities | $20,000 | 10.0% |
| 100% of Checkpont Personnel Cost and Dog Support | $1,281,000 | 100.0% |
| 5% of Barrier Cost for Maintenance | $380,160 | 5.0% |
| 15% of Lighting Cost for Maintenance & Electricity | $178,200 | 15.0% |
| 100% of Welder Operator | $0 | 100.0% |
| 25% of Test Equipment for Calibration, Repair and Upgrading of Equipment | $25,000 | 25.0% |
| 100% of ILS Costs | $200,000 | 100.0% |
| Total Recurring Cost for Each Sector | $2,253,619 | |

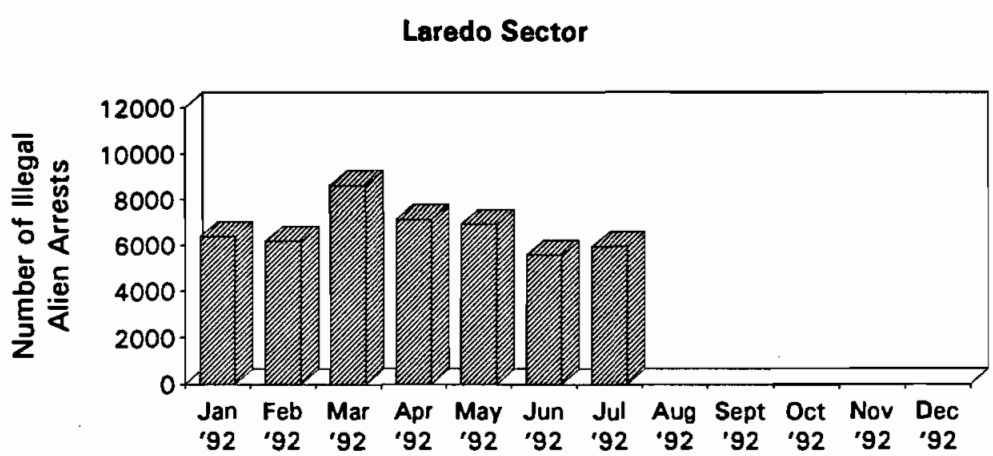
## Laredo Sector Analysis

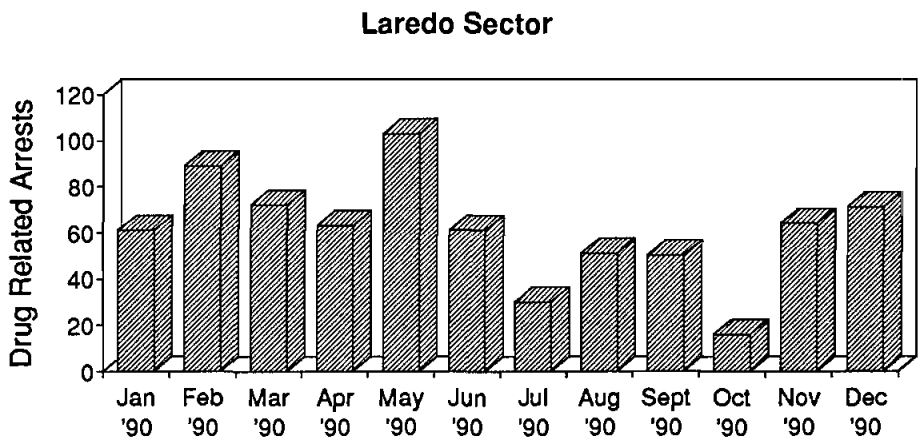
The data given in the Laredo sector discussion of "Contact with Suspects" is plotted on the following charts to show the overall trend of what has been happening in the sector for the years 1990, 1991, and the first half of 1992. The activities of the total Southwest Border are given at the end of this section.

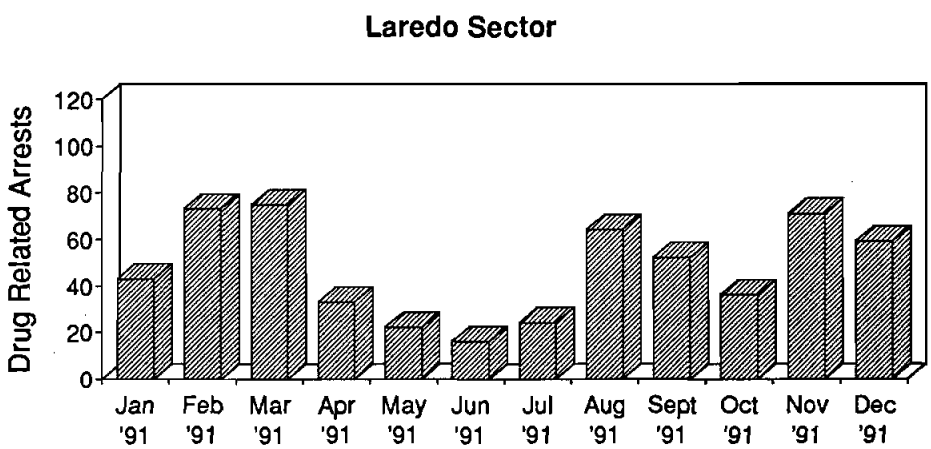
The analysis shows significant increases in the average numbers of alien arrests per month, drug-related arrests, and marijuana and cocaine confiscated. The plots of cocaine and heroin show a few months with large activity mixed with many smaller activity months. The data on confrontations with armed persons and assaults of Border Patrol agents are small averages, but the individual plots show decreases in these areas.

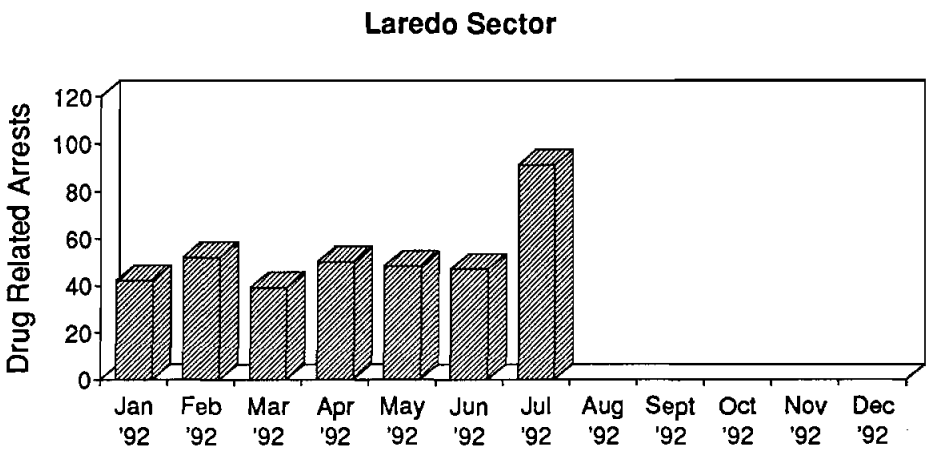

Laredo Sector
Number of Illegal Alien Arrests
12000
10000
8000
6000
4000
2000
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

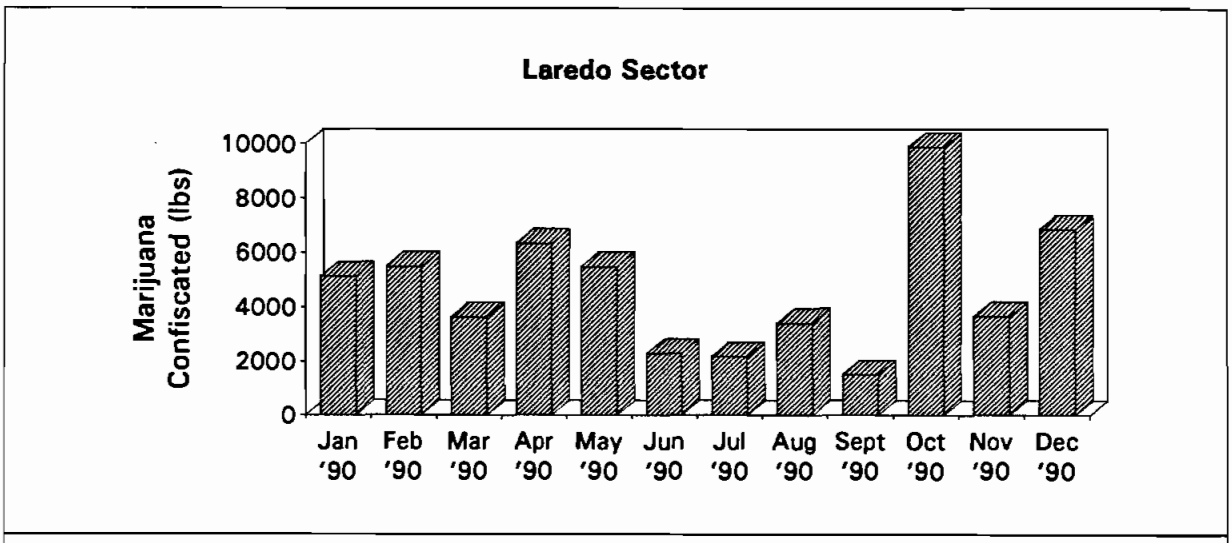

Laredo Sector
Number of Illegal Alien Arrests
12000
10000
8000
6000
4000
2000
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

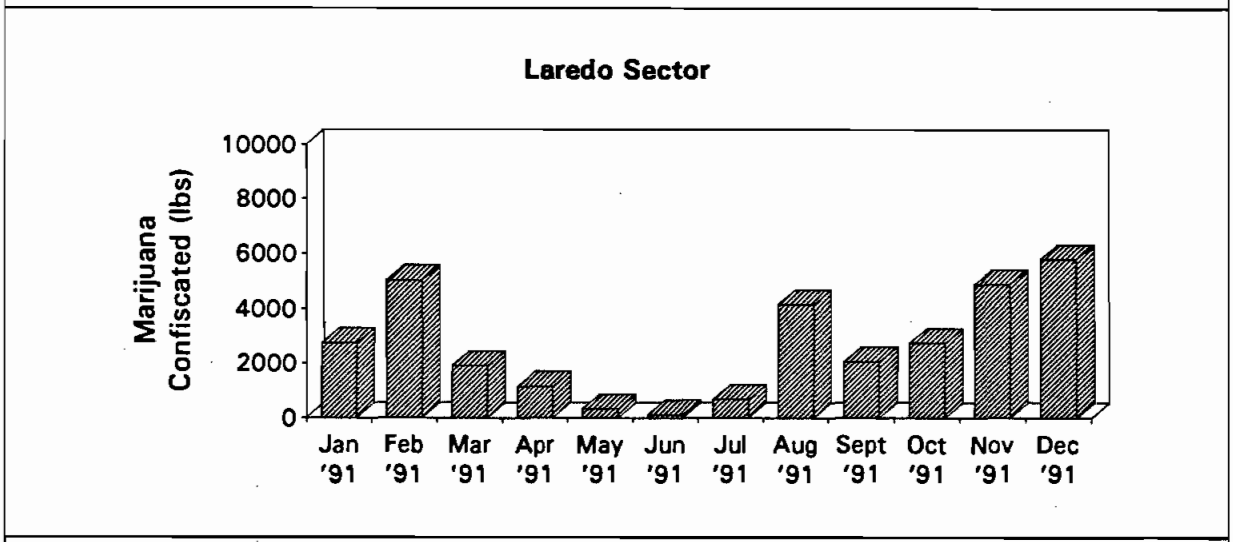

Laredo Sector
Number of Illegal Alien Arrests
12000
10000
8000
6000
4000
2000
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

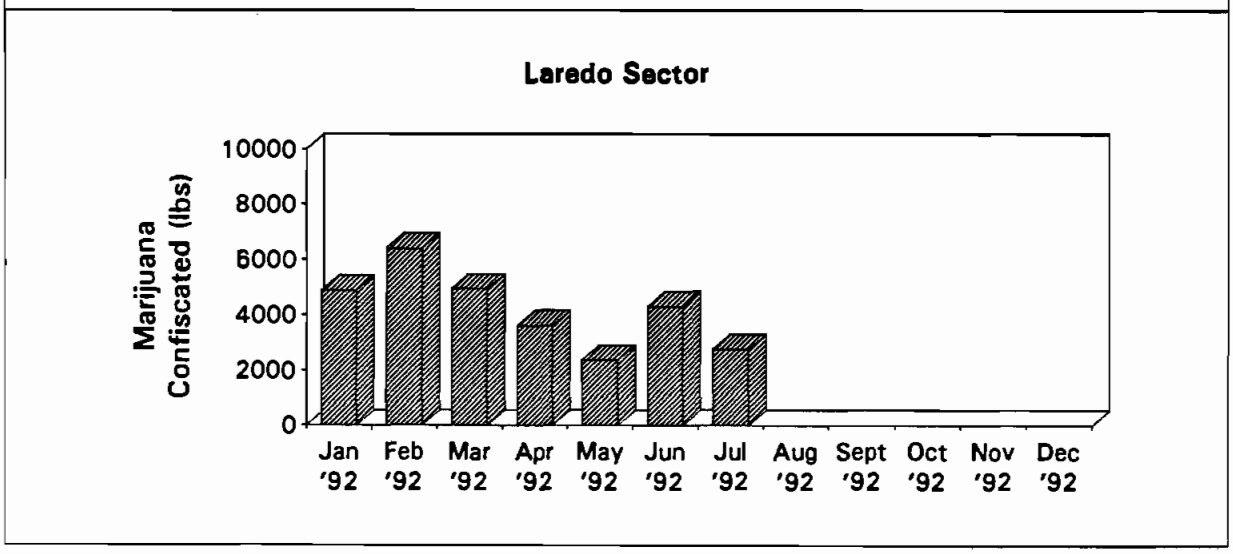

Laredo Sector
Drug Related Arrests
120
100
80
60
40
20
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

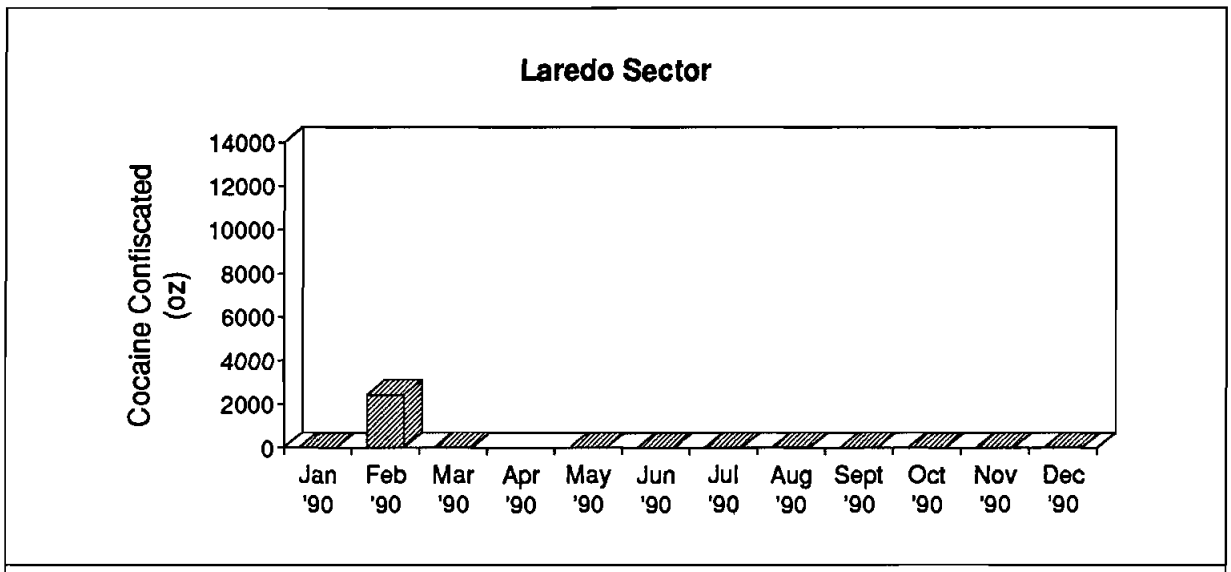

Laredo Sector
Drug Related Arrests
120
100
80
60
40
20
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

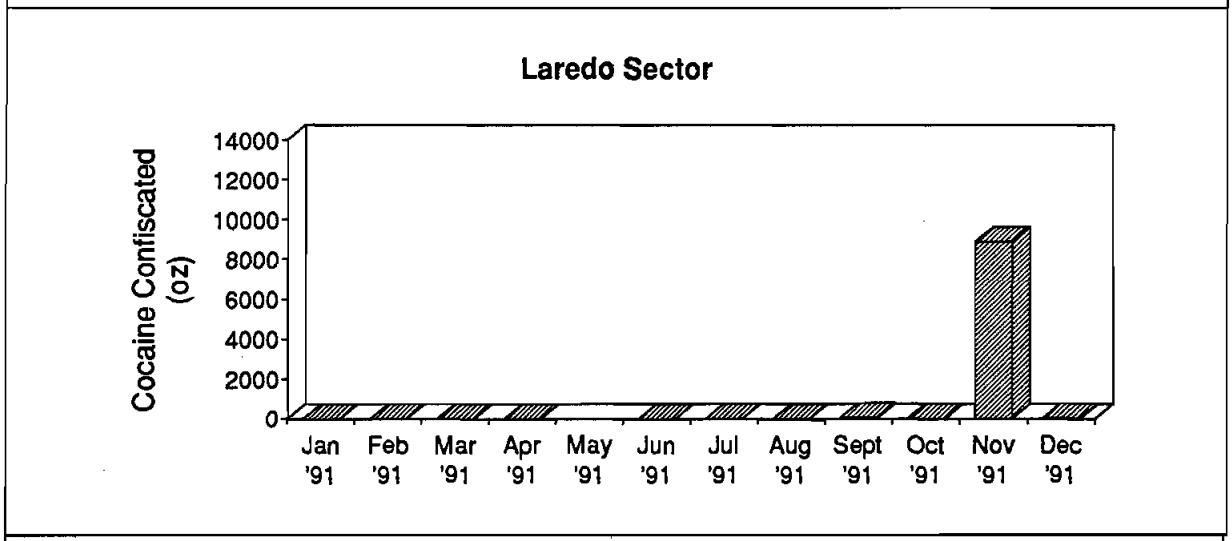

Laredo Sector
Drug Related Arrests
120
100
80
60
40
20
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

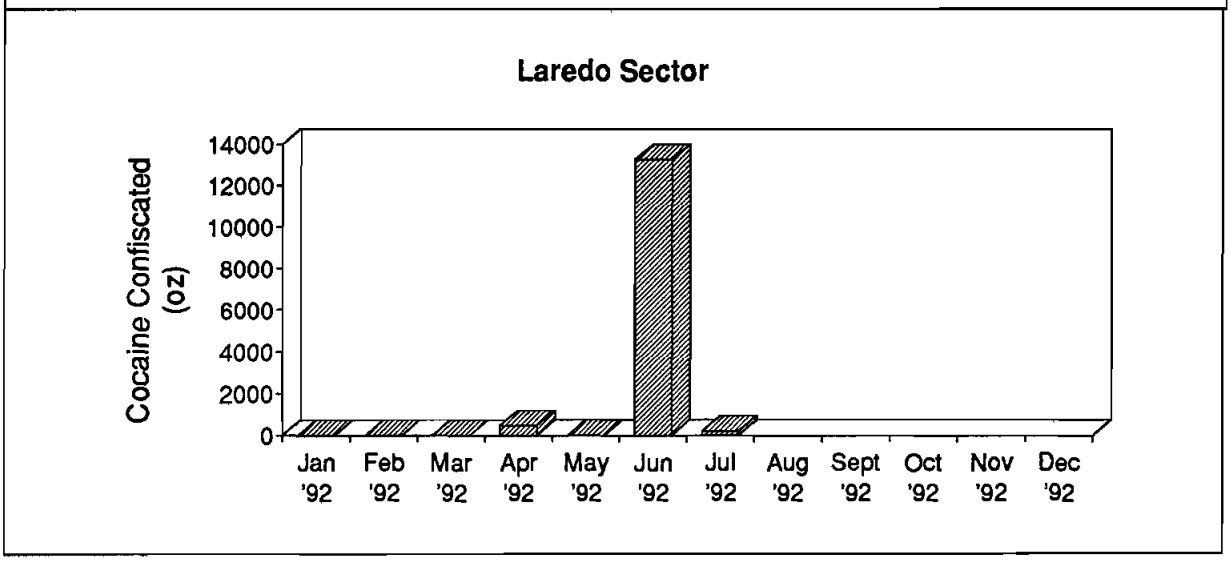

Laredo Sector
Marijuana Confiscated (lbs)
10000
8000
6000
4000
2000
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

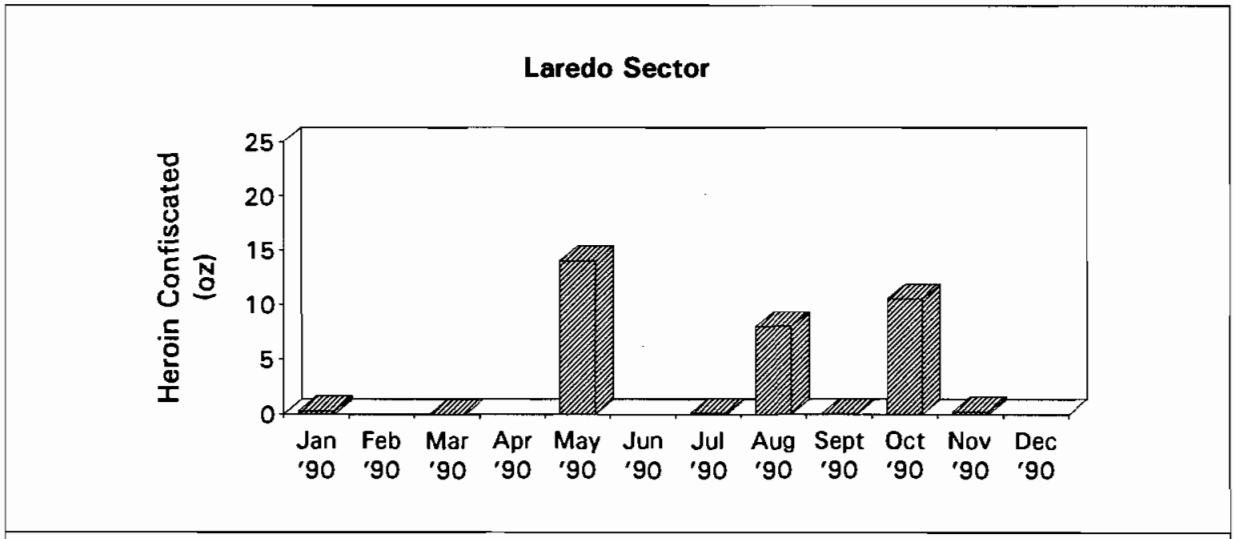

Laredo Sector
Marijuana Confiscated (lbs)
10000
8000
6000
4000
2000
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

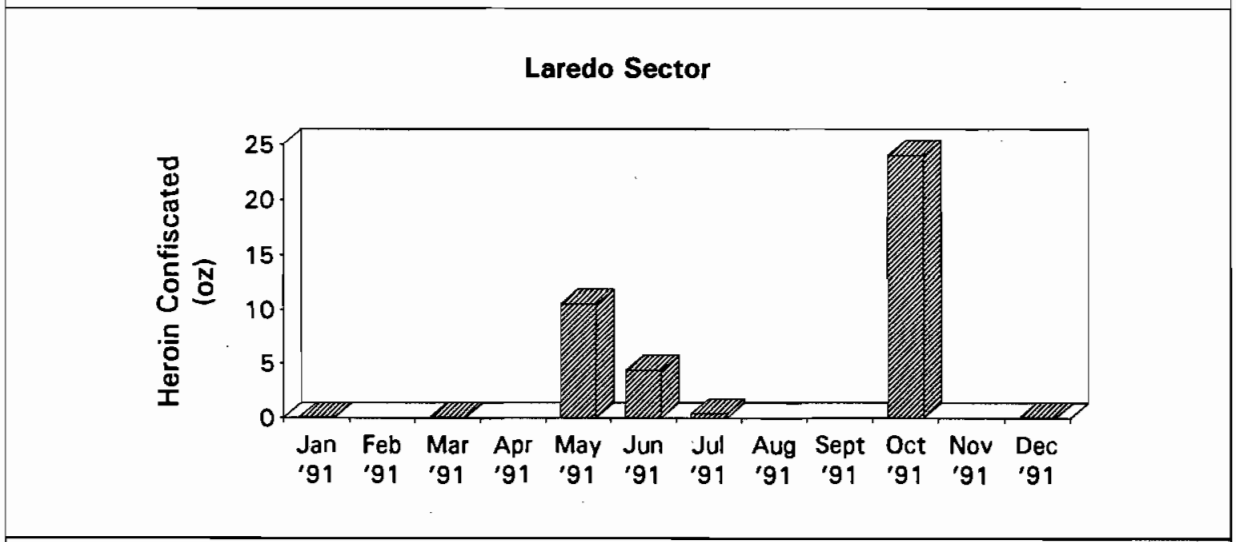

Laredo Sector
Marijuana Confiscated (lbs)
10000
8000
6000
4000
2000
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

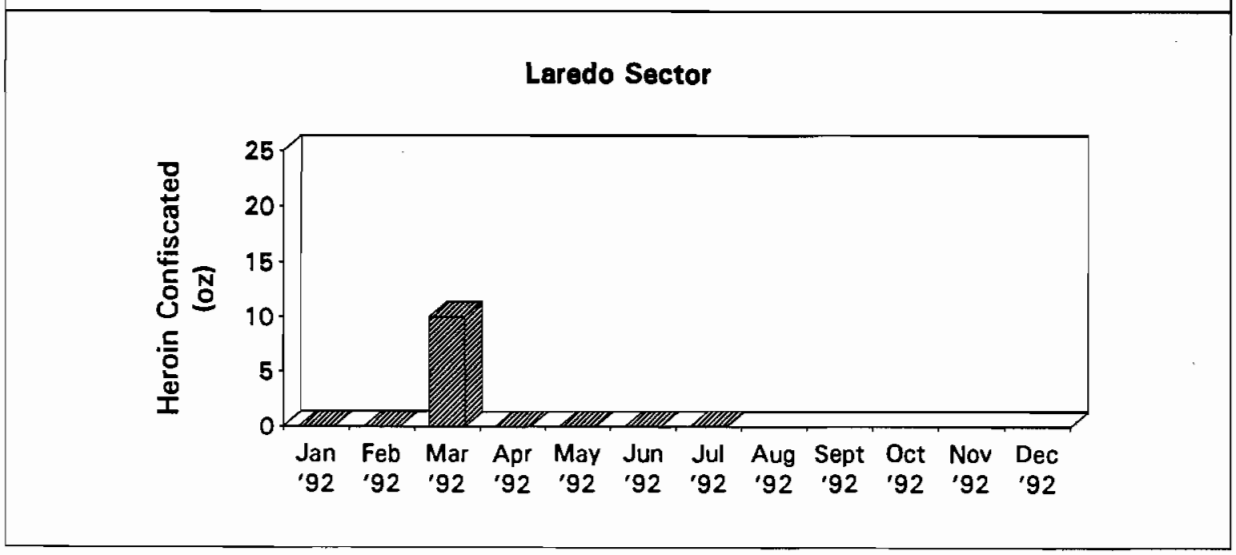

Laredo Sector
Cocaine Confiscated (oz)
14000
12000
10000
8000
6000
4000
2000
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

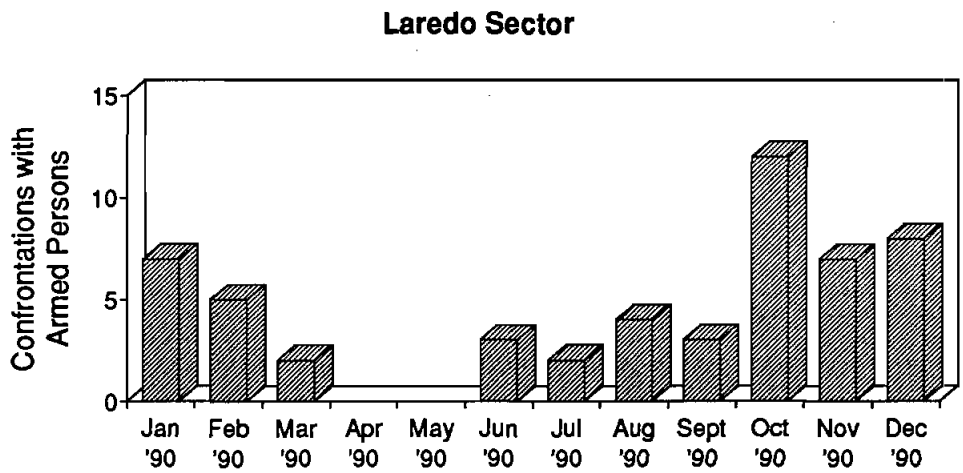

Laredo Sector
Cocaine Confiscated (oz)
14000
12000
10000
8000
6000
4000
2000
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

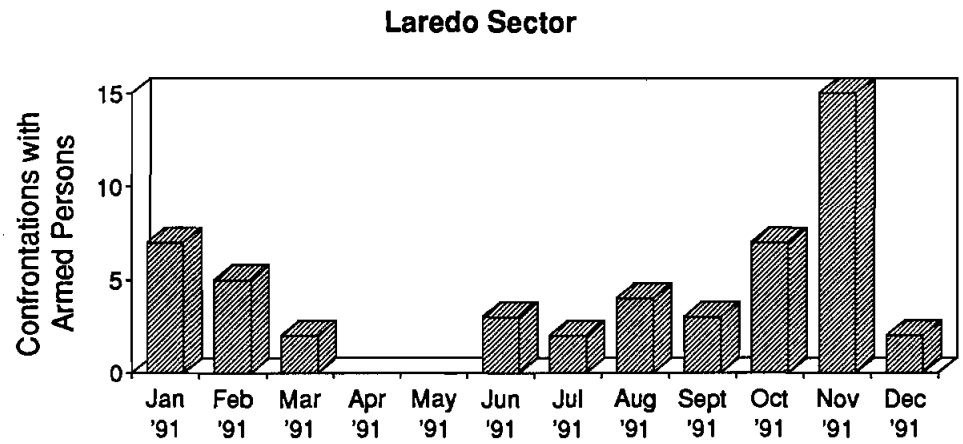

Laredo Sector
Cocaine Confiscated (oz)
14000
12000
10000
8000
6000
4000
2000
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

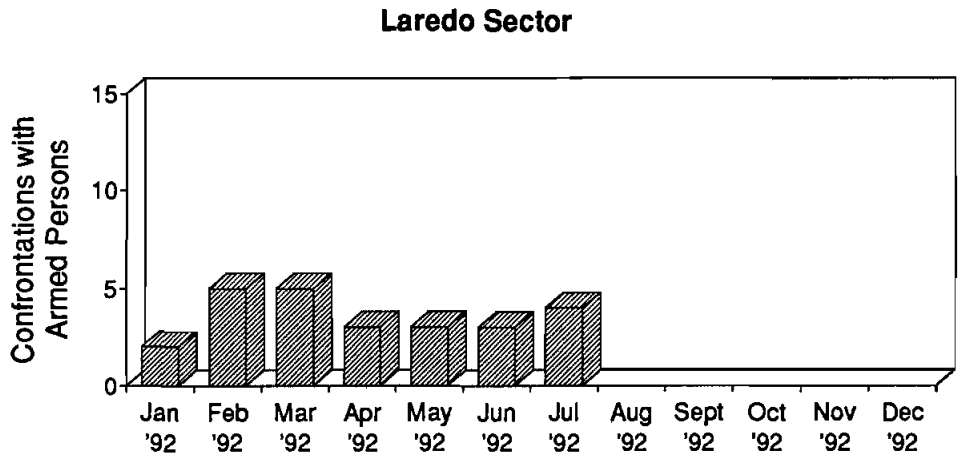

Laredo Sector
Heroin Confiscated (oz)
25
20
15
10
5
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

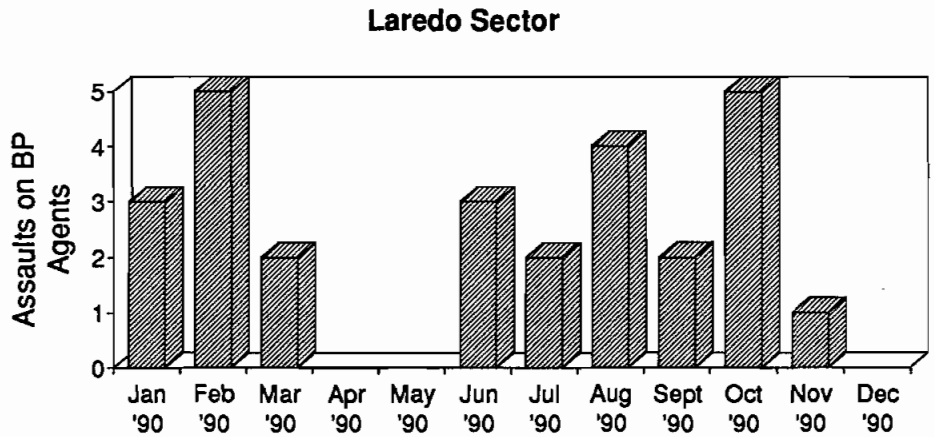

Laredo Sector
Heroin Confiscated (oz)
25
20
15
10
5
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

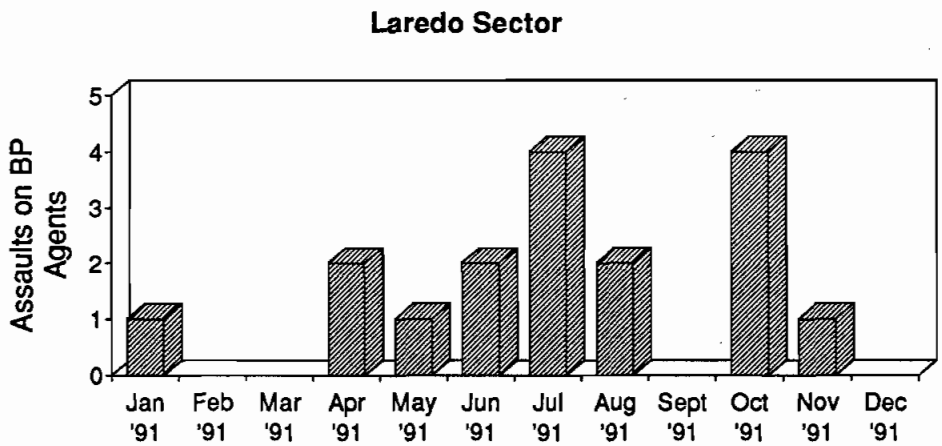

Laredo Sector
Heroin Confiscated (oz)
25
20
15
10
5
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

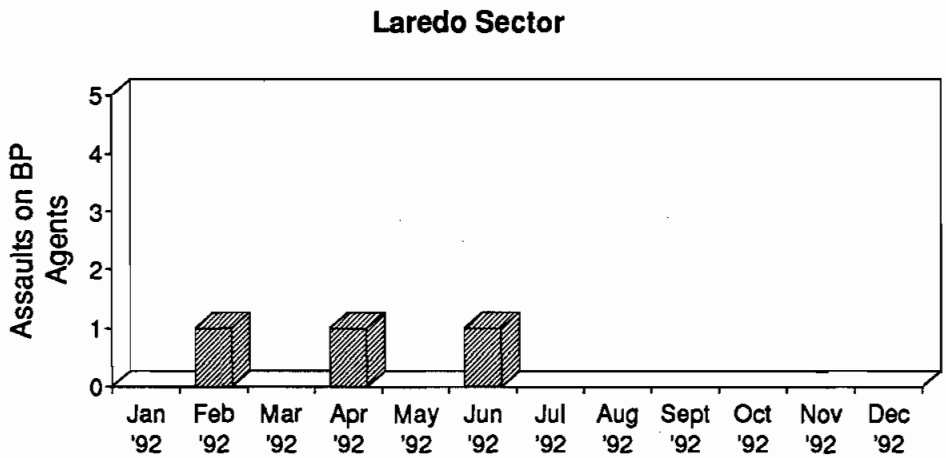

Laredo Sector
Confrontations with Armed Persons
15
10
5
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


Laredo Sector
Confrontations with Armed Persons
15
10
5
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


Laredo Sector
Confrontations with Armed Persons
15
10
5
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92


Laredo Sector
Assaults on BP Agents
0
1
2
3
4
5
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


Laredo Sector
Assaults on BP Agents
0
1
2
3
4
5
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


Laredo Sector
Assaults on BP Agents
0
1
2
3
4
5
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

## Del Rio Recommendations

Del Rio currently operates three full-time checkpoints:

- (b) (7)(E) [redacted]
- [redacted]
- [redacted].

OUO-7

These checkpoints are operated full-time except in very bad weather. Modifications may be required to attain all-weather status. The part-time checkpoint that should be upgraded to full-time, all-weather capability is

- (b) (7)(E) [redacted].

To complete the control of highway routes out of the border region, seven additional full-time, all-weather highway checkpoints are recommended:

- (b) (7)(E) [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

The existing temporary checkpoint southeast of Comstock on US 90 would be redundant if the recommended checkpoint on (b) (7)(E) [redacted] the Marfa sector is in operation. The net gain of eight full-time checkpoints will therefore require 120 additional agents and 48 drug dogs.

A fenced and lighted railroad inspection zone is recommended west of (b) (7)(E) [redacted] checkpoint. Locating the railroad checkpoint next to the highway checkpoint will allow multiple use of both facilities and personnel and will secure one flank of the highway checkpoint from bypassers.

OUO-7

The report, "US Border Patrol Craft Feasibility Study," recommended a [redacted] We have recommended [redacted] that could [redacted] These should be inserted as Priority 9 followed by the more conventional sensors for this sector. The personnel and equipment recommended in the general recommendations section and on the attached Del Rio portion of the spreadsheet are all needed if the border is to be brought under control.

OUO-7

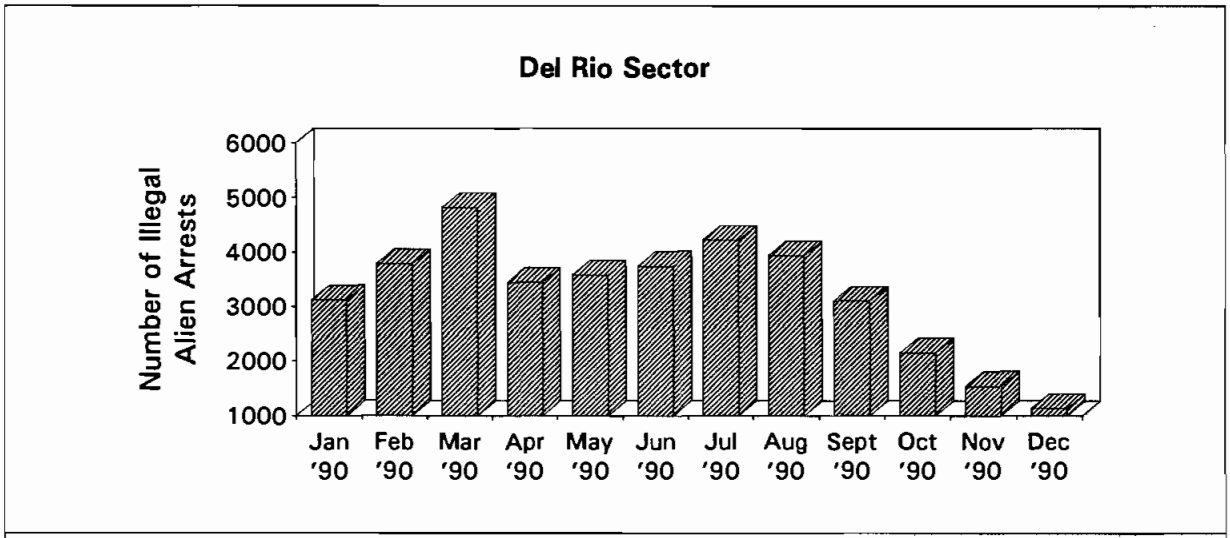
| Equipment Type | Del Rio Rcmd | Del Rio Ext. Cost | Unit Cost |
|---|---|---|---|
| [redacted] | | 41,250 | $825 |
| | | 147,680 | $260 |
| | | 19,900 | $995 |
| | | 19,135 | $445 |
| | | 8,375 | $1,675 |
| | | 17,200 | $400 |
| | | 7,475 | $1,495 |
| | | 15,050 | $350 |
| | | 13,760 | $320 |
| | | 99,500 | $995 |
| | | 4,160 | $260 |
| | | 24,975 | $4,995 |
| | | 12,475 | $2,495 |
| | | 0 | $1,050 |
| | | 90,000 | $15,000 |
| | | 4,995 | $4,995 |
| Receiver, Portable | 5 | 14,975 | $2,995 |
| Tactical | 16 | 7,520 | $470 |
| **Subtotal, Detectors** | | **$548,425** | |
| Regular Light CCTV | 10 | 16,000 | $1,600 |
| LLTV - Intensified | 2 | 17,000 | $8,500 |
| [redacted] | | 115,120 | $5,756 |
| | | 75,000 | $5,000 |
| | | 3,000 | $300 |
| | | 392,000 | $56,000 |
| | | 200,000 | $200,000 |
| Video & Sensor Cable | 1000 | 15000 | $15 |
| **Subtotal, Assessment** | | **$833,120** | |
| Voice Comm, Short Range | 100 | 200,000 | $2,000 |
| Voice Comm, Long Range | 1 | 150,000 | $150,000 |
| **Subtotal, Communication** | | **$350,000** | |
| Info Control & Display | 2 | 10,000 | $5,000 |
| [redacted] | | 10,000 | $5,000 |
| **Subtotal, Cntrl & Disp** | | **$20,000** | |
| Checkpoint Shelter, Large | 0 | 0 | $300,000 |
| Checkpoint Shelter, Small | 8 | 1,600,000 | $200,000 |
| Checkpoint Personnel | 120 | 10,200,000 | $85,000 |
| Drug Dogs (Procurement) | 48 | 192,000 | $4,000 |
| Dog Support (Food & Vet) | 48 | 48,000 | $1,000 |
| [redacted] | 58080 | 1,742,400 | $30 |
| | 42240 | 2,956,800 | $70 |
| | 42240 | 2,534,400 | $60 |
| Vehicle Barrier | 0 | 0 | $35 |
| Lighting | 50160 | 1,254,000 | $25 |
| Patrol Roads | 42240 | 2,112,000 | $50 |
| Mobile Welder | 1 | 25,000 | $25,000 |
| Welder Operator | 1 | 85,000 | $85,000 |
| **Subtotal, Barriers, Etc.** | | **$22,749,600** | |
| Test Equipment | 1 | 100,000 | $100,000 |
| ILS, New Equipment | 1 | 100,000 | $100,000 |
| ILS, Old Equipment | 1 | 100,000 | $100,000 |
| **Subtotal, Support** | | **$300,000** | |
| **Sector Total** | | **$24,801,145** | |

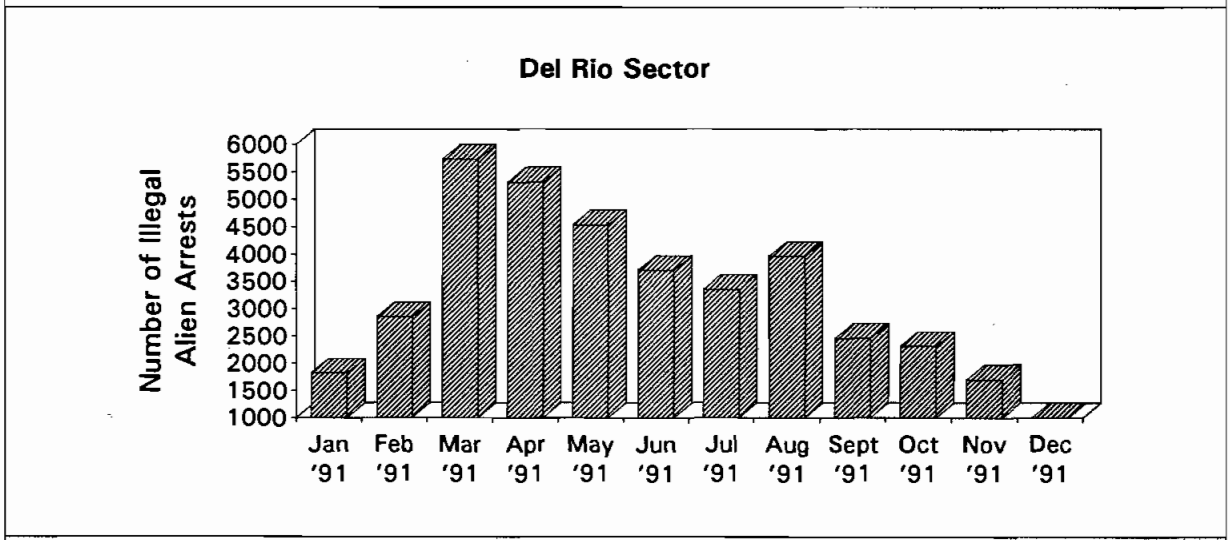
| Recurring Costs | Del Rio Ext. Cost | Unit Cost |
|---|---|---|
| 15% of all Detection Assessment and Communications Equipment | $259,732 | 15.0% |
| 50% of Info Control and Display Equipment | $5,000 | 50.0% |
| 10% of the Construction Cost of Check Points for Maintenance & Utilities | $160,000 | 10.0% |
| 100% of Checkpont Personnel Cost and Dog Support | $10,248,000 | 100.0% |
| 5% of Barrier Cost for Maintenance | $467,280 | 5.0% |
| 15% of Lighting Cost for Maintenance & Electricity | $188,100 | 15.0% |
| 100% of Welder Operator | $85,000 | 100.0% |
| 25% of Test Equipment for Calibration, Repair and Upgrading of Equipment | $25,000 | 25.0% |
| 100% of ILS Costs | $200,000 | 100.0% |
| Total Recurring Cost for Each Sector | $11,638,112 | |

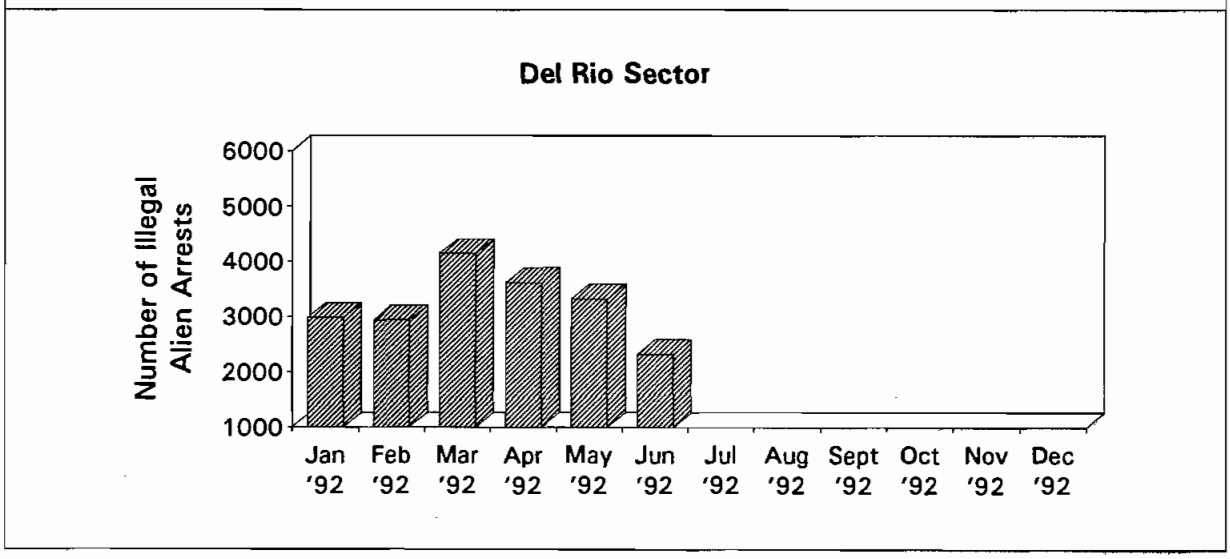
## Del Rio Sector Analysis

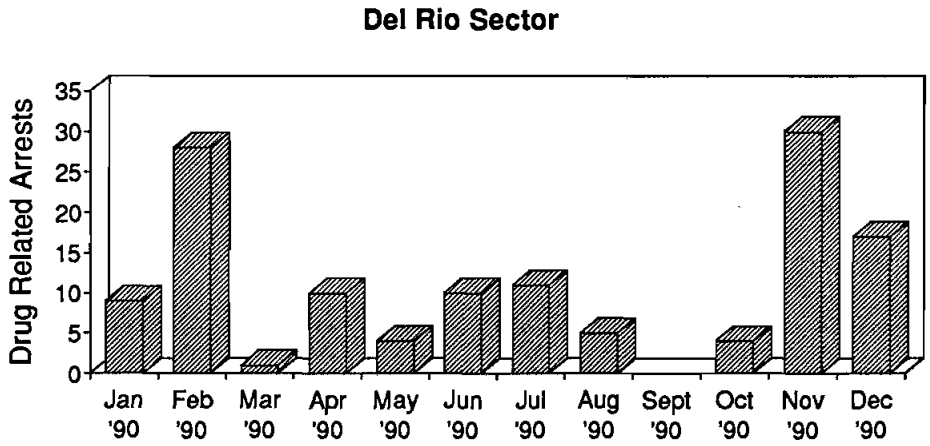
The data given in the Del Rio sector discussion of "Contact with Suspects" is plotted on the following charts to show the overall trend of what has been happening in the sector for the years 1990, 1991, and the first half of 1992. The activities of the total Southwest Border are given at the end of this section.

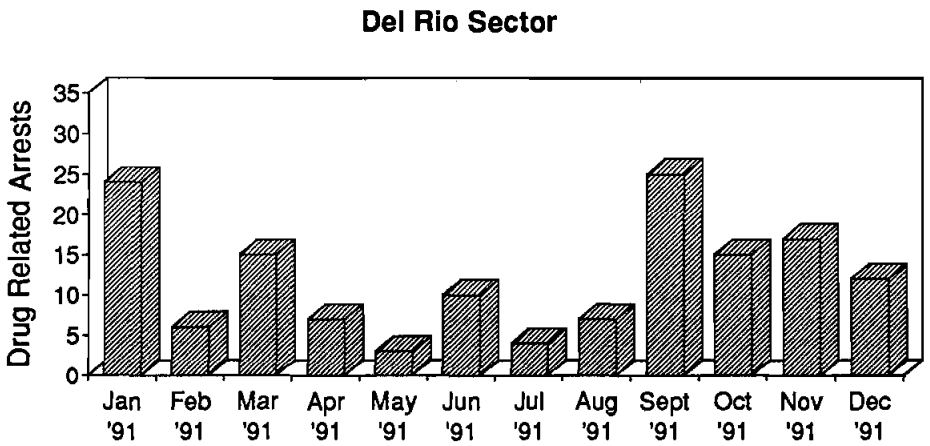
The analysis shows a nearly constant average number of illegal alien arrests and significant increases in drug-related arrests and marijuana and cocaine confiscated. The plots of cocaine and heroin show a few months with large activity mixed with many smaller activity months. The data on confrontations with armed persons and assaults of Border Patrol agents are small averages, but the individual plots show decreases or small changes in these areas.

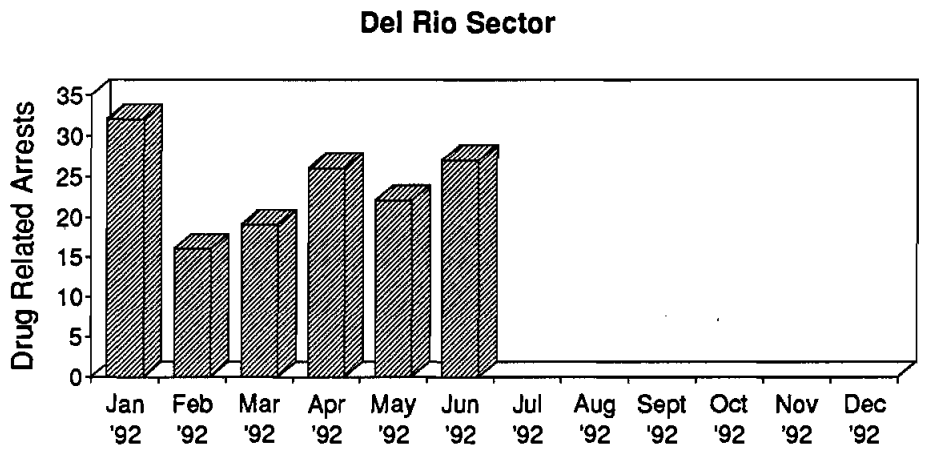

Del Rio Sector
Number of Illegal Alien Arrests
6000
5000
4000
3000
2000
1000
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

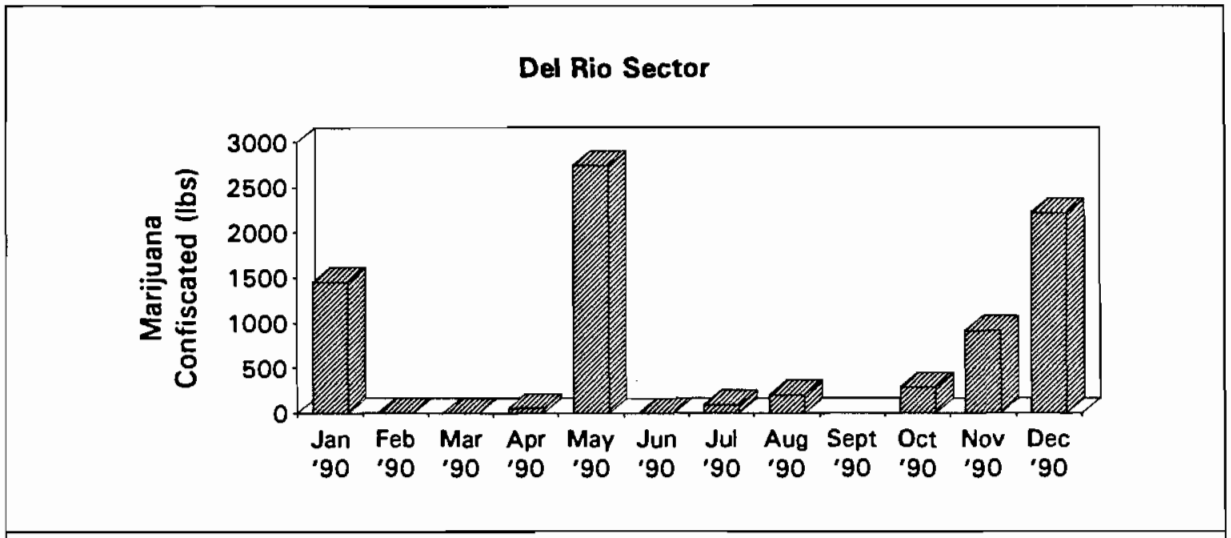

Del Rio Sector
Number of Illegal Alien Arrests
6000
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

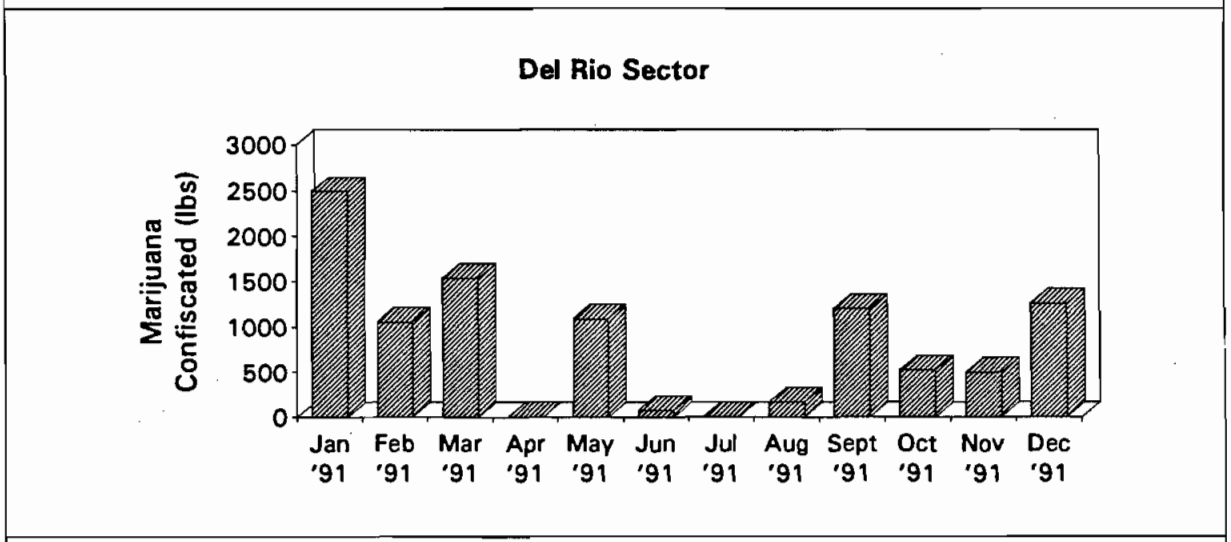

Del Rio Sector
Number of Illegal Alien Arrests
6000
5000
4000
3000
2000
1000
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

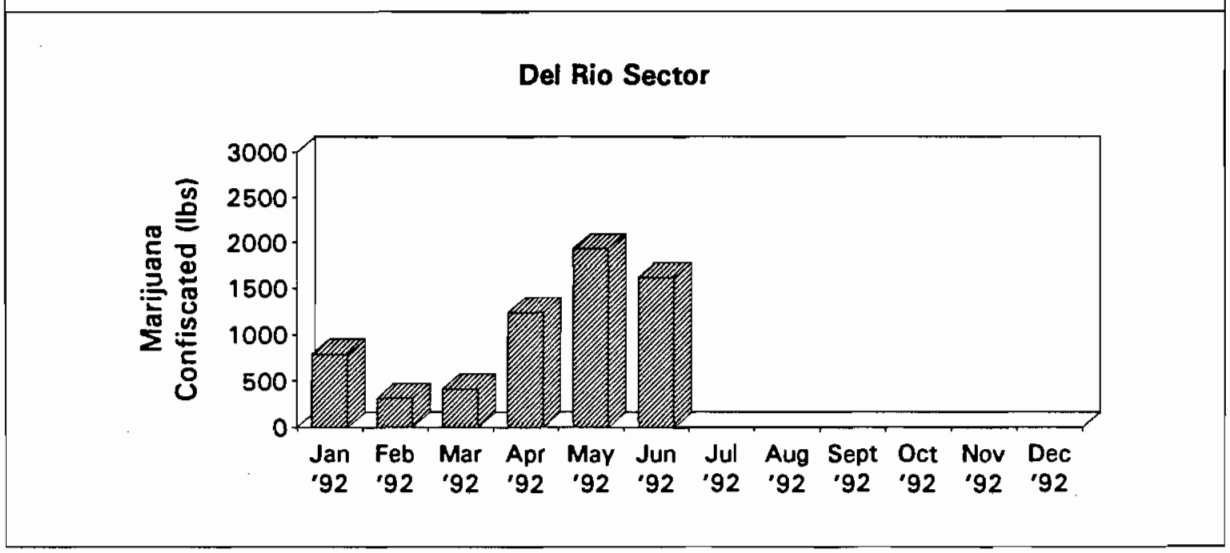

Del Rio Sector
Drug Related Arrests
35
30
25
20
15
10
5
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

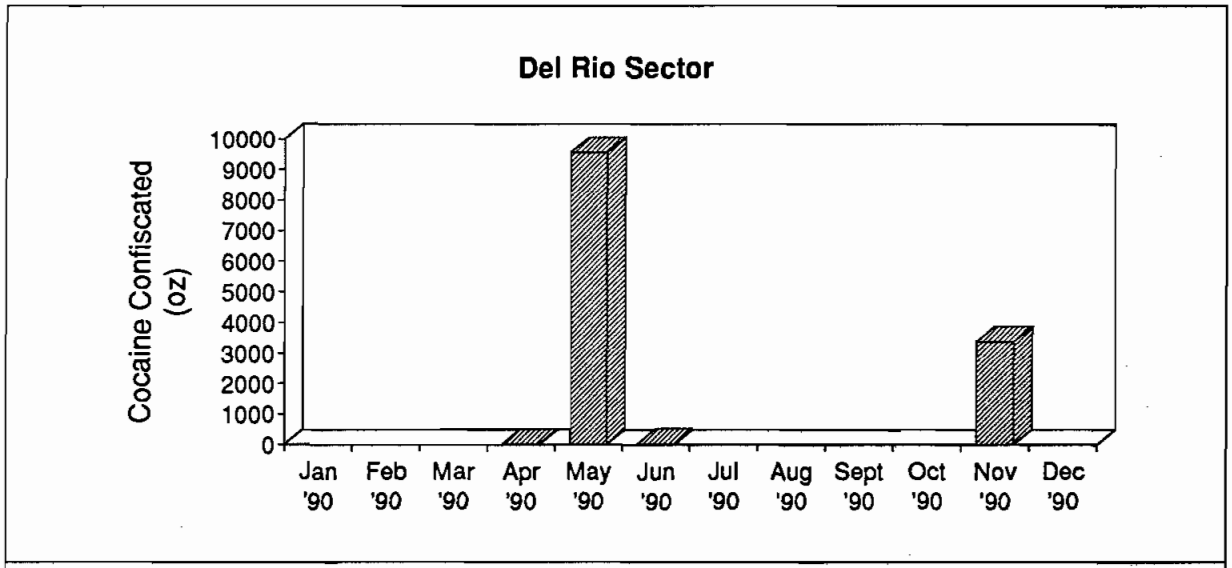

Del Rio Sector
Drug Related Arrests
35
30
25
20
15
10
5
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

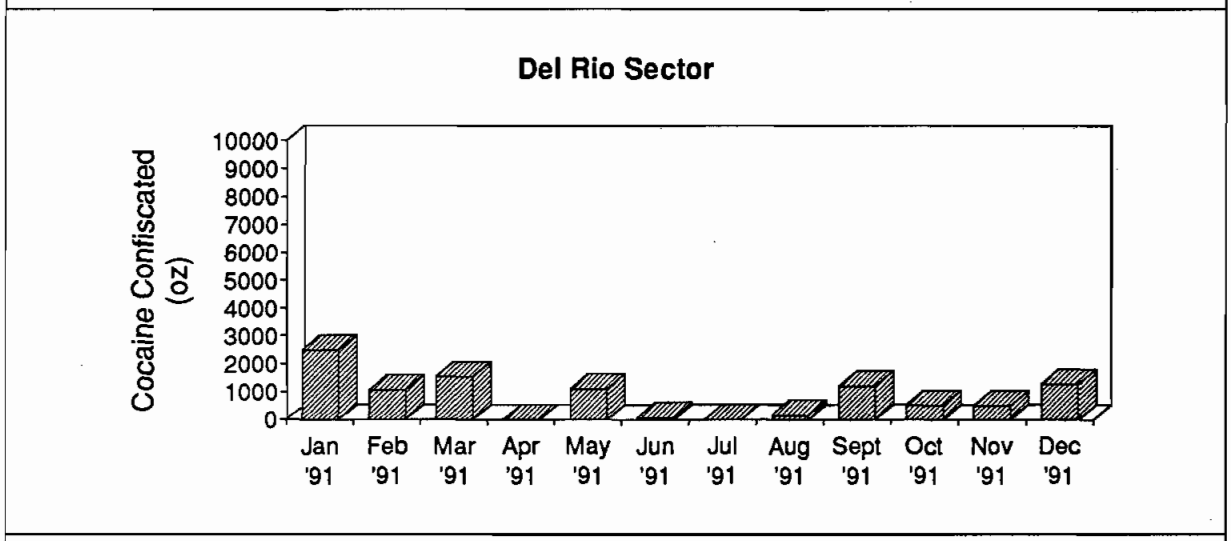

Del Rio Sector
Drug Related Arrests
35
30
25
20
15
10
5
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

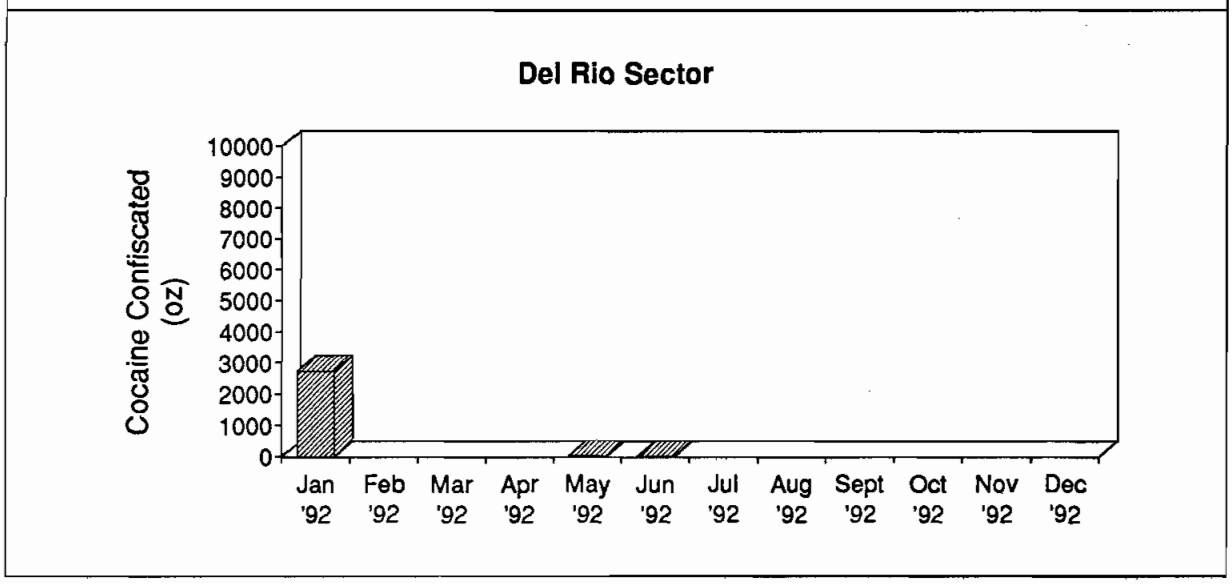

Del Rio Sector
Marijuana Confiscated (lbs)
3000
2500
2000
1500
1000
500
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

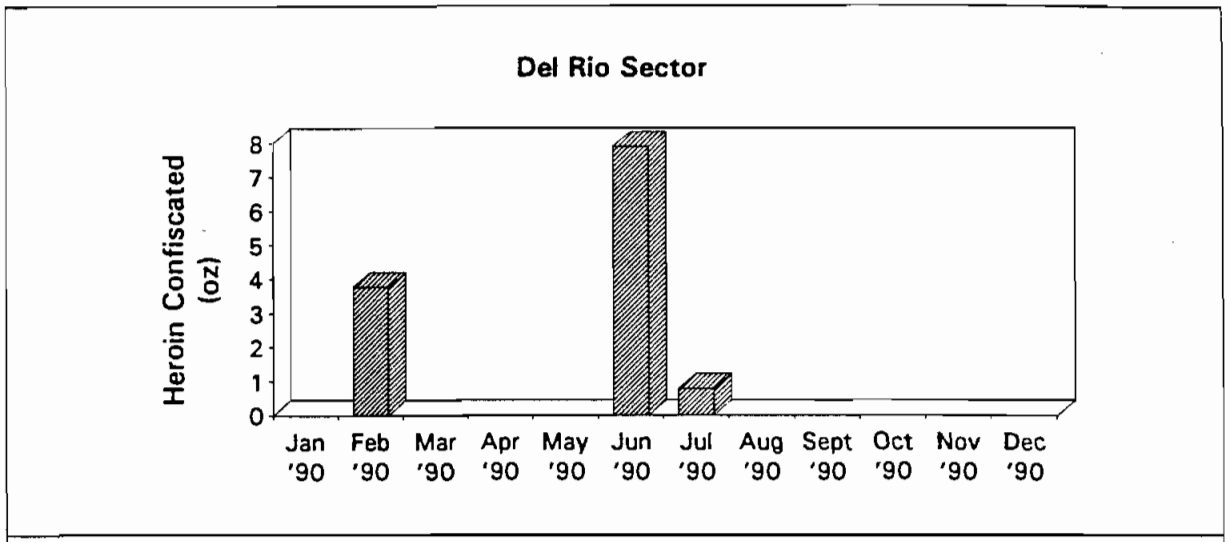

Del Rio Sector
Marijuana Confiscated (lbs)
3000
2500
2000
1500
1000
500
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

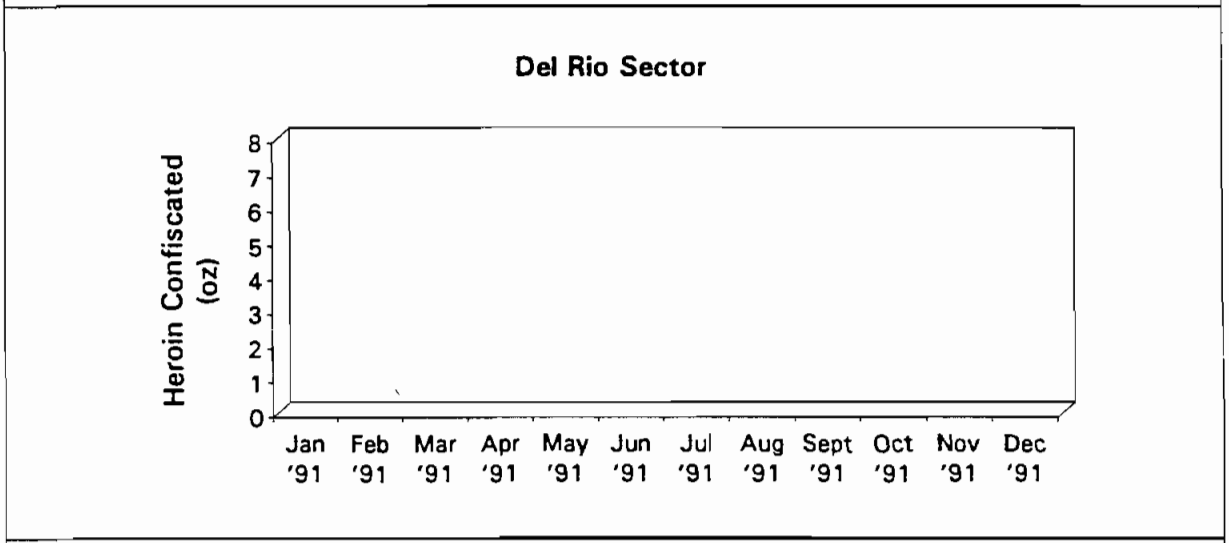

Del Rio Sector
Marijuana Confiscated (lbs)
3000
2500
2000
1500
1000
500
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

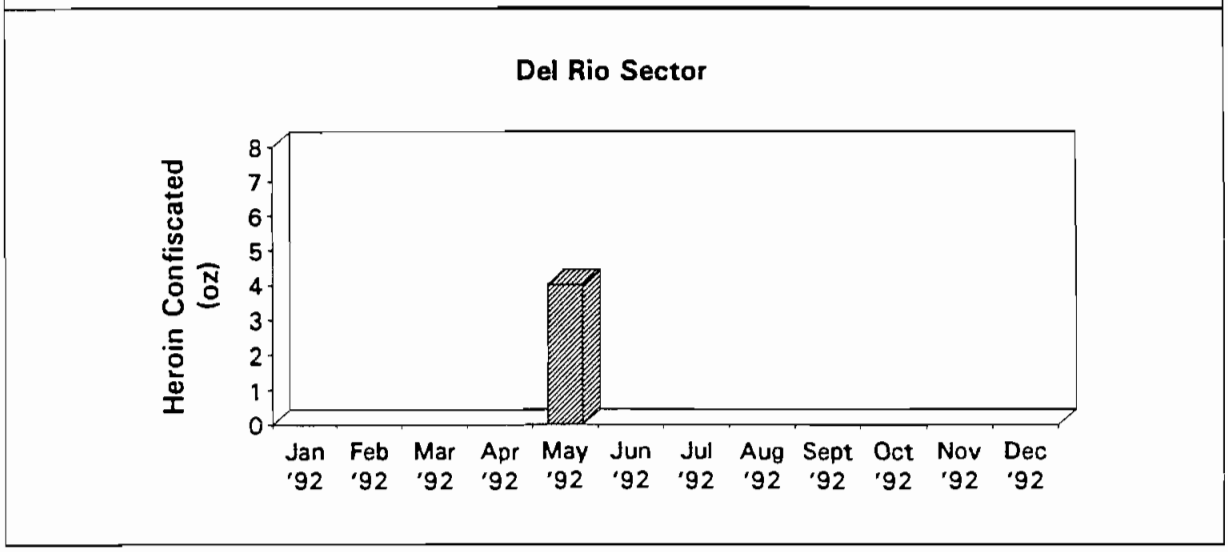

Del Rio Sector
Cocaine Confiscated (oz)
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

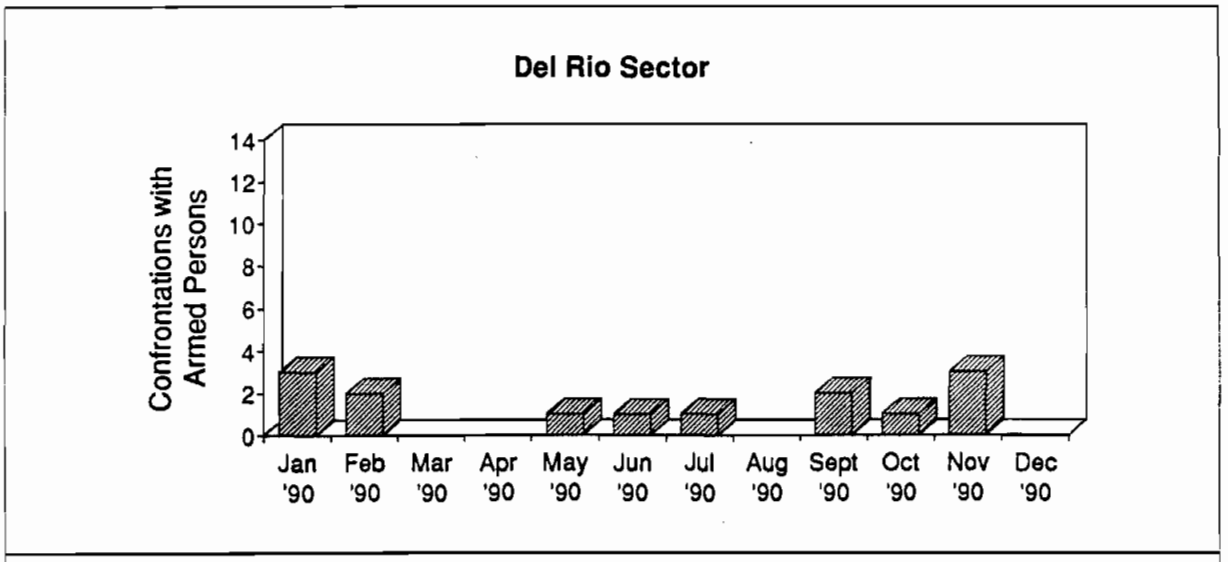

Del Rio Sector
Cocaine Confiscated (oz)
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

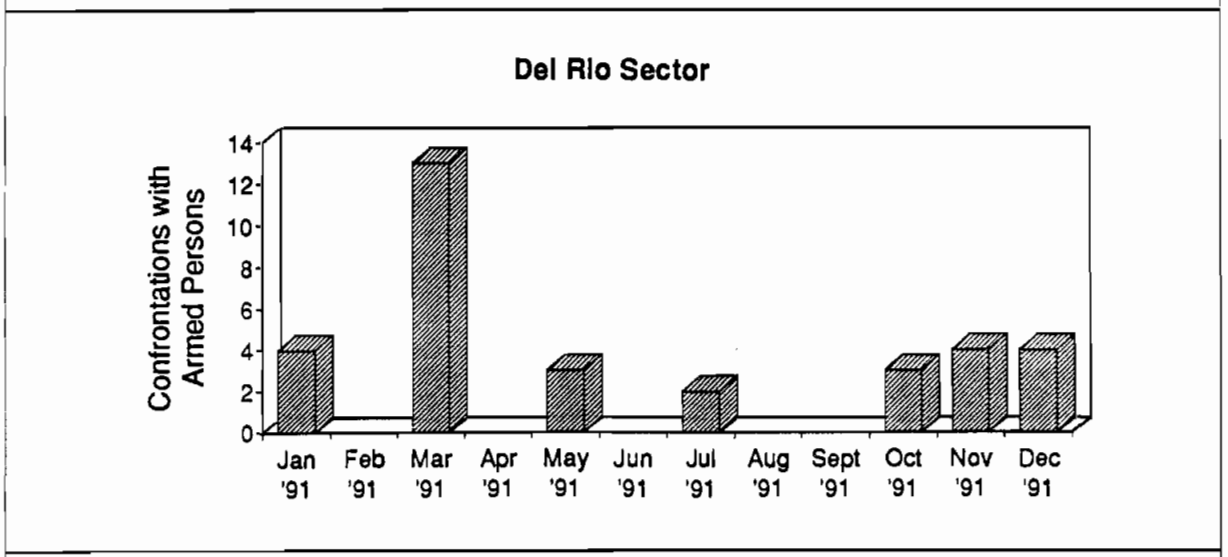

Del Rio Sector
Cocaine Confiscated (oz)
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92


Del Rio Sector
Heroin Confiscated (oz)
0
1
2
3
4
5
6
7
8
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


Del Rio Sector
Heroin Confiscated (oz)
0
1
2
3
4
5
6
7
8
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


Del Rio Sector
Heroin Confiscated (oz)
0
1
2
3
4
5
6
7
8
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92


Del Rio Sector
Confrontations with Armed Persons
0
2
4
6
8
10
12
14
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


Del Rio Sector
Confrontations with Armed Persons
0
2
4
6
8
10
12
14
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
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Oct '91
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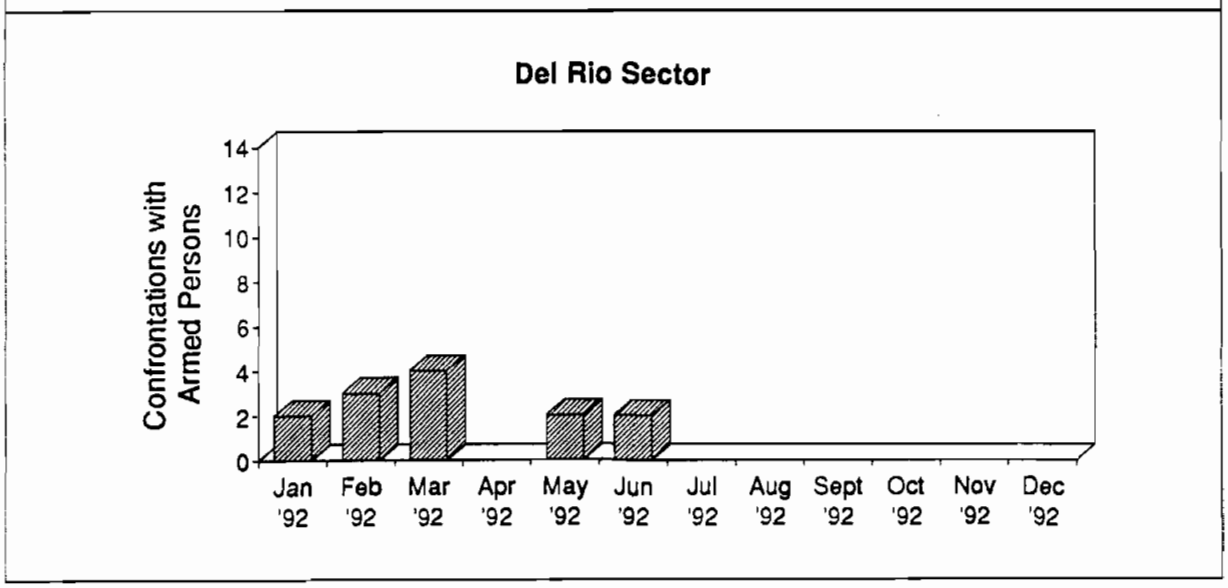
Dec '91


Del Rio Sector
Confrontations with Armed Persons
0
2
4
6
8
10
12
14
Jan '92
Feb '92
Mar '92
Apr '92
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Jun '92
Jul '92
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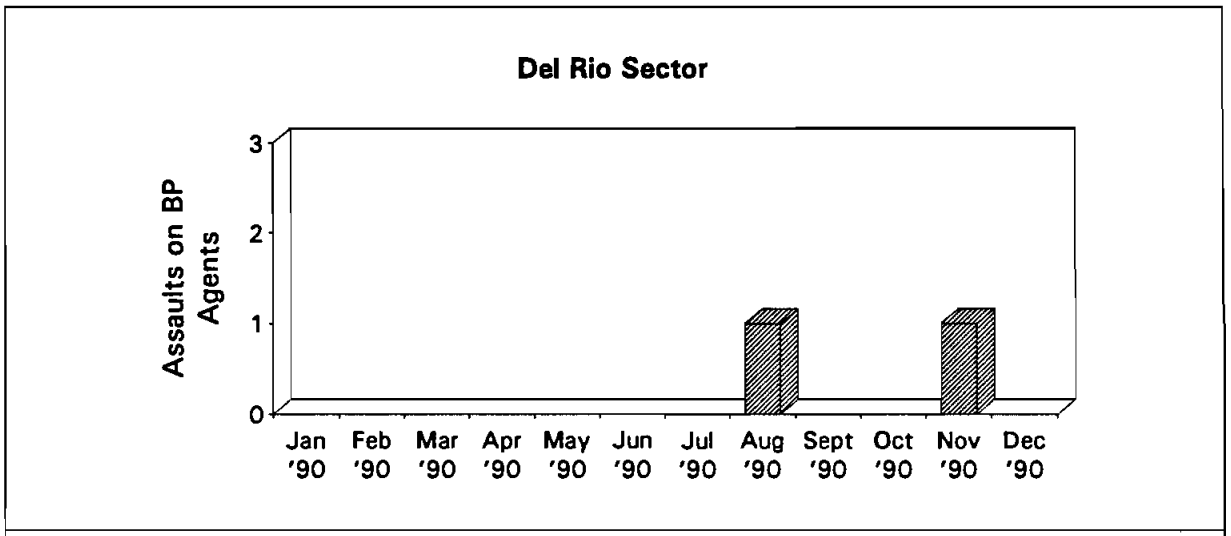
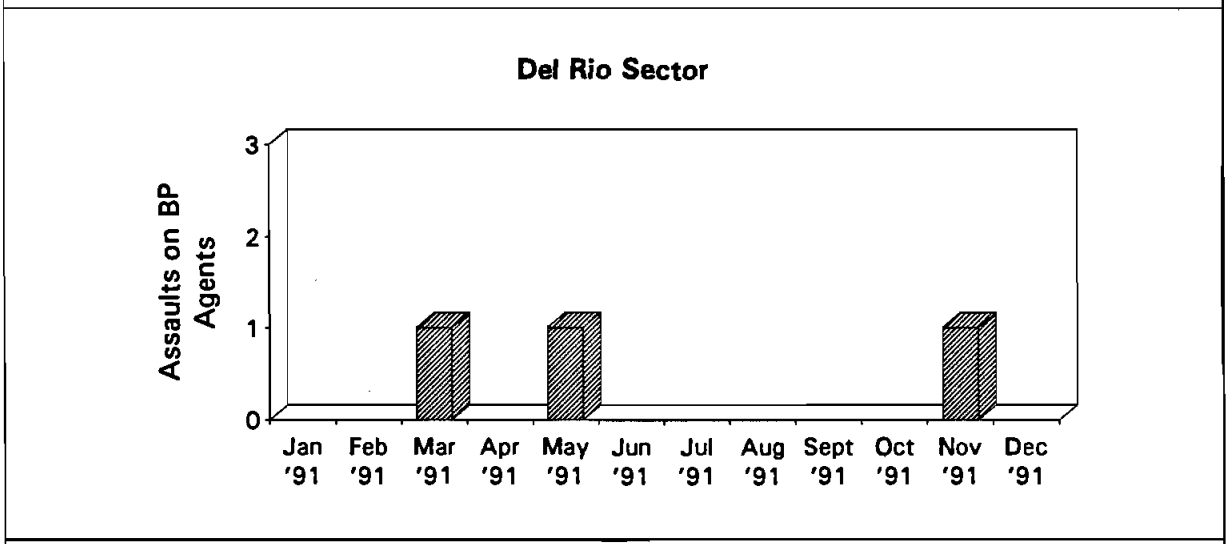
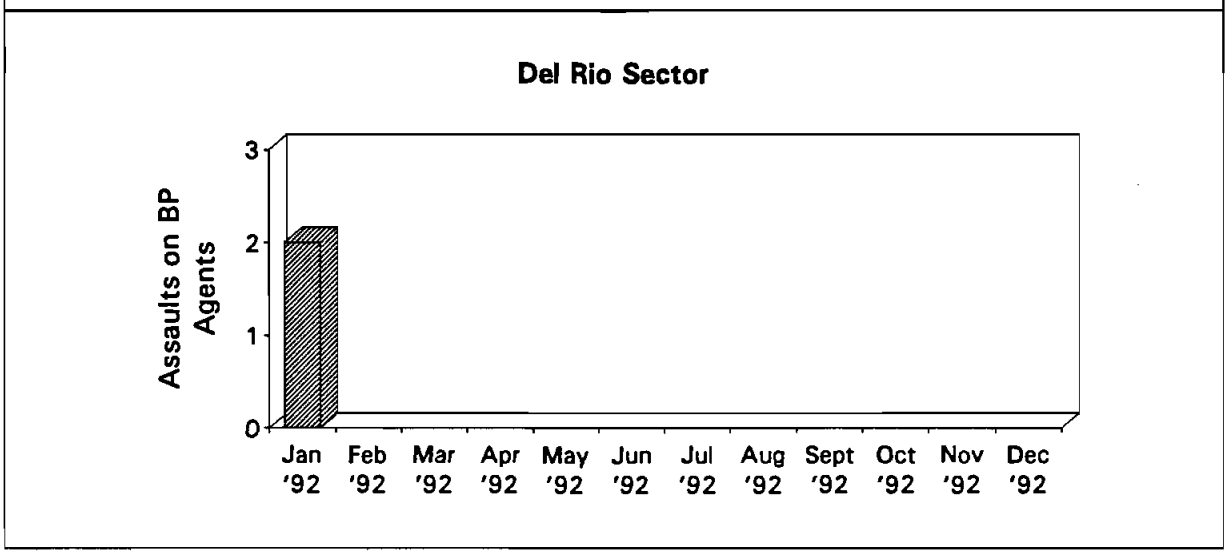
Oct '92
Nov '92
Dec '92


Del Rio Sector
Assaults on BP Agents
0
1
2
3
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


Del Rio Sector
Assaults on BP Agents
0
1
2
3
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


Del Rio Sector
Assaults on BP Agents
0
1
2
3
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

## Marfa Recommendations

Because of the exceedingly harsh nature of the terrain and the absence of large cities on the border, not as much lighted barrier is needed in this sector. In fact, only one POE exists in the sector.

The Marfa sector currently operates three highway checkpoints:

- (b) (7)(E) [redacted]
- [redacted]
- [redacted]. OUO-7

These checkpoints should be upgraded to support full-time, all-weather operation.

Five new full-time, all-weather checkpoints are recommended to implement the containment strategy:

- (b) (7)(E) [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted].

These new checkpoints will require 75 additional agents and 30 more canines. In correspondence with the sector personnel, we were told that the traffic on [redacted] was too light and sporadic to justify a checkpoint and that it would be more efficient to operate electronic sensors in this area. We defer to the sector's recommendations as long as the concept of containment is being fulfilled. This road should be closely monitored with an occasional temporary checkpoint established to confirm that the containment process on the other possible routes out of the sector have not diverted the traffic onto this one.

One must also be aware that contraband still could be transported to (b) (7)(E) [redacted] by human backpackers or pack animals at virtually any point between the sector's eastern border and the proposed new checkpoint (b) (7)(E) [redacted]. If this were to occur, then there are other viable routes out of the area.

OUO-7

Two fenced and lighted railroad inspection zones are also recommended:

- (b) (7)(E) [redacted]

- [redacted]).

Locating the railroad checkpoints next to the proposed highway checkpoints will allow multiple use of both facilities and personnel and will secure one flank of the highway checkpoint from bypassers.

We recommend that the priorities for this sector be those given in the general recommendations section, except that we have recommended [redacted], which should be considered to be Priority 9. Detailed numbers for these recommendations are given in the attached Marfa portion of the spreadsheet.

OUO-7

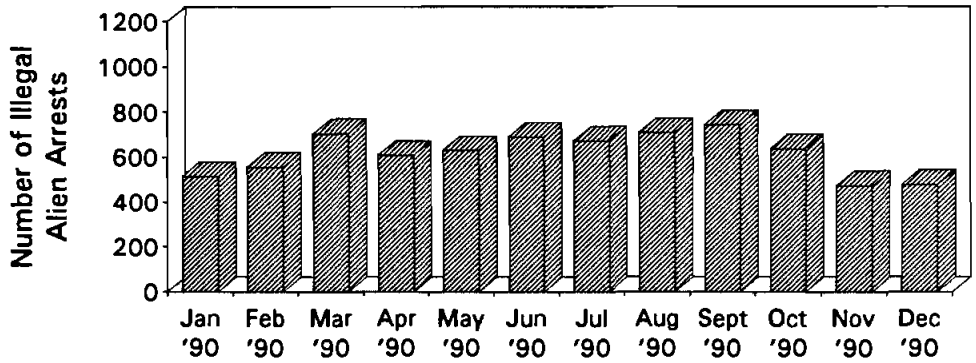
| Equipment Type | Marfa Rcmd | Marfa Ext. Cost | Unit Cost |
|---|---|---|---|
| [redacted] | | 66,000 | $825 |
| | | 112,320 | $260 |
| | | 99,500 | $995 |
| | | 16,020 | $445 |
| | | 8,375 | $1,675 |
| | | 14,400 | $400 |
| | | 7,475 | $1,495 |
| | | 12,600 | $350 |
| | | 11,520 | $320 |
| | | 79,600 | $995 |
| | | 3,640 | $260 |
| | | 9,990 | $4,995 |
| | | 24,950 | $2,495 |
| | | 0 | $1,050 |
| | | 0 | $15,000 |
| | | 4,995 | $4,995 |
| Receiver, Portable | 4 | 11,980 | $2,995 |
| Tactical | 14 | 6,580 | $470 |
| **Subtotal, Detectors** | | **$489,945** | |
| Regular Light CCTV | 3 | 4,800 | $1,600 |
| LLTV - Intensified | 1 | 8,500 | $8,500 |
| [redacted] | | 28,780 | $5,756 |
| | | 50,000 | $5,000 |
| | | 3,000 | $300 |
| | | 392,000 | $56,000 |
| | | 200,000 | $200,000 |
| Video & Sensor Cable | 1000 | 15,000 | $15 |
| **Subtotal, Assessment** | | **$702,080** | |
| Voice Comm, Short Range | 20 | 40,000 | $2,000 |
| Voice Comm, Long Range | 1 | 150,000 | $150,000 |
| **Subtotal, Communication** | | **$190,000** | |
| Info Control & Display | 1 | 5,000 | $5,000 |
| [redacted] | | 5,000 | $5,000 |
| **Subtotal, Cntrl & Disp** | | **$10,000** | |
| Checkpoint Shelter, Large | 0 | 0 | $300,000 |
| Checkpoint Shelter, Small | 5 | 1,000,000 | $200,000 |
| Checkpoint Personnel | 75 | 6,375,000 | $85,000 |
| Drug Dogs (Procurement) | 30 | 120,000 | $4,000 |
| Dog Support (Food & Vet) | 30 | 30,000 | $1,000 |
| [redacted] | | 1,584,000 | $30 |
| | | 1,478,400 | $70 |
| | | 1,977,600 | $60 |
| Vehicle Barrier | 0 | 0 | $35 |
| Lighting | 31680 | 792,000 | $25 |
| Patrol Roads | 21120 | 1,056,000 | $50 |
| Mobile Welder | 1 | 25,000 | $25,000 |
| Welder Operator | 1 | 85,000 | $85,000 |
| **Subtotal, Barriers, Etc.** | | **$14,523,000** | |
| Test Equipment | 1 | 100,000 | $100,000 |
| ILS, New Equipment | 1 | 100,000 | $100,000 |
| ILS, Old Equipment | 1 | 100,000 | $100,000 |
| **Subtotal, Support** | | **$300,000** | |
| **Sector Total** | | **$16,215,025** | |

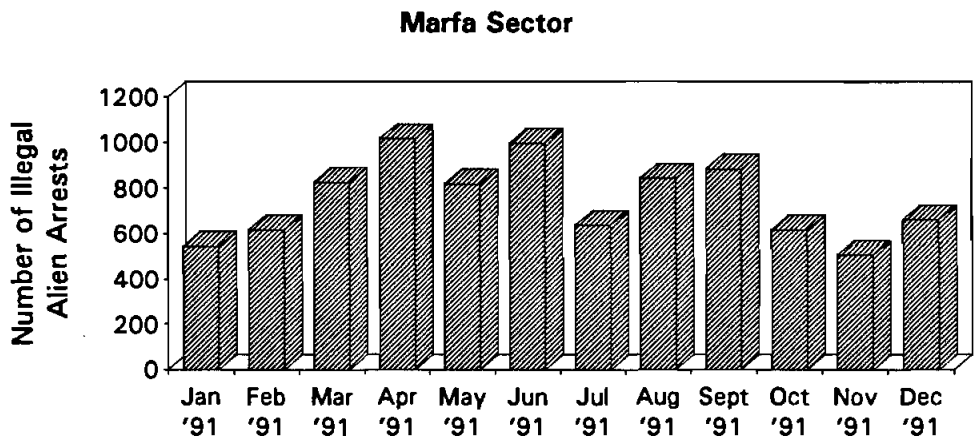
| Recurring Costs | Marfa Ext. Cost | Unit Cost |
|---|---|---|
| 15% of all Detection Assessment and Communications Equipment | $207,304 | 15.0% |
| 50% of Info Control and Display Equipment | $2,500 | 50.0% |
| 10% of the Construction Cost of Check Points for Maintenance & Utilities | $100,000 | 10.0% |
| 100% of Checkpont Personnel Cost and Dog Support | $6,405,000 | 100.0% |
| 5% of Barrier Cost for Maintenance | $304,800 | 5.0% |
| 15% of Lighting Cost for Maintenance & Electricity | $118,800 | 15.0% |
| 100% of Welder Operator | $85,000 | 100.0% |
| 25% of Test Equipment for Calibration, Repair and Upgrading of Equipment | $25,000 | 25.0% |
| 100% of ILS Costs | $200,000 | 100.0% |
| Total Recurring Cost for Each Sector | $7,448,404 | |

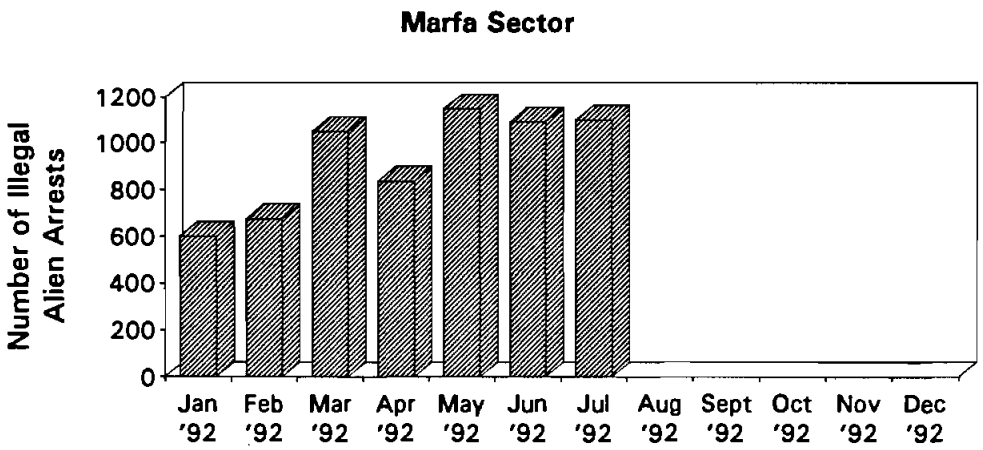
## Marfa Sector Analysis

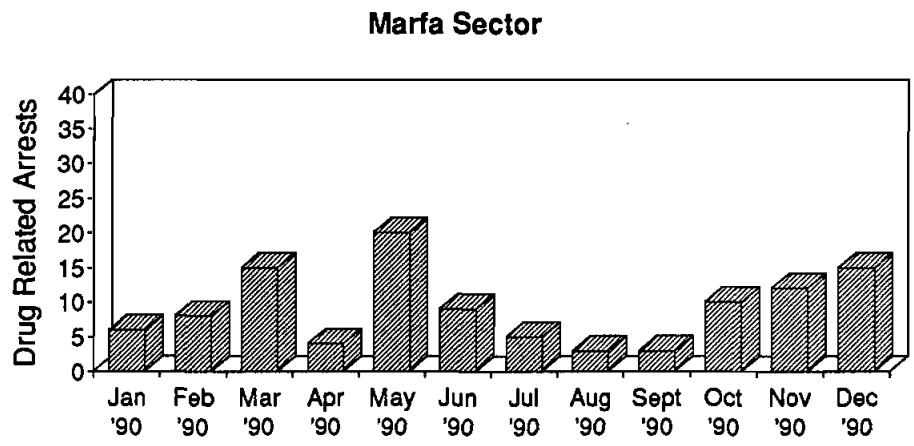
The data given in the Marfa sector discussion of "Contact with Suspects" is plotted on the following charts to show the overall trend of what has been happening in the sector for the years 1990, 1991, and the first half of 1992. The activities of the total Southwest Border are given at the end of this section.

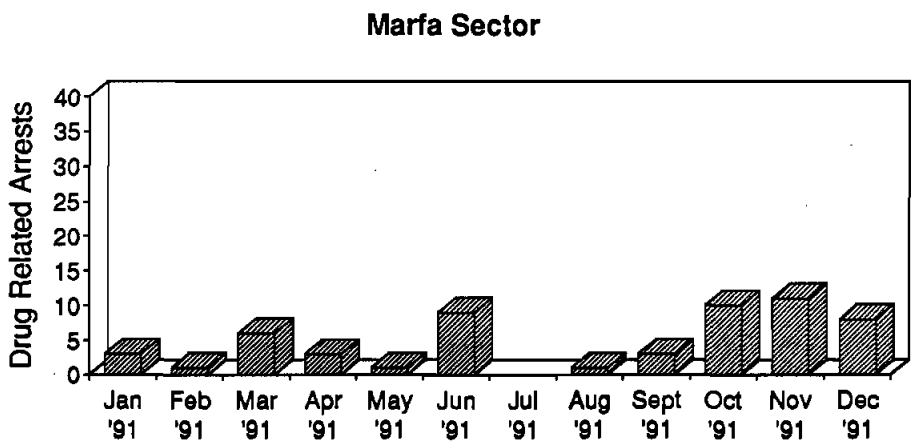
The analysis shows significant increases in all areas except the confrontations with armed persons and assaults on the Border Patrol agents, in which there was no data available. The plots of cocaine and heroin show a few months with large activity mixed with many smaller activity months.

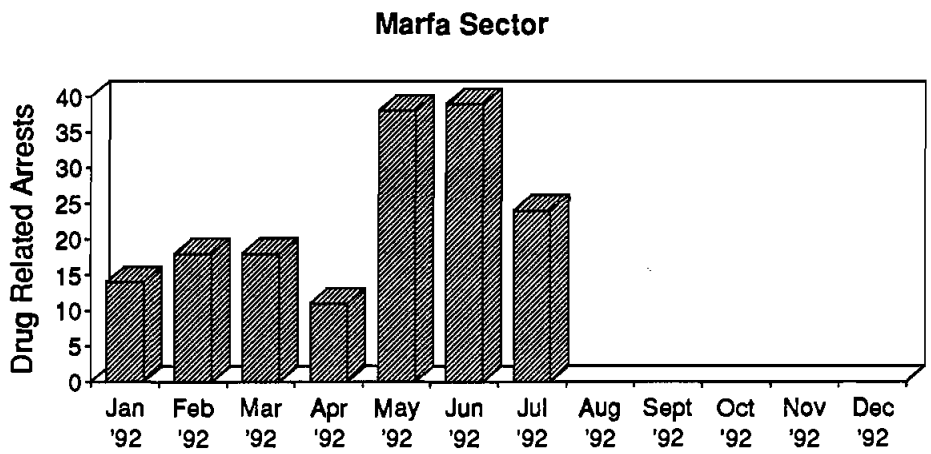

Marfa Sector
Number of Illegal Alien Arrests
1200
1000
800
600
400
200
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

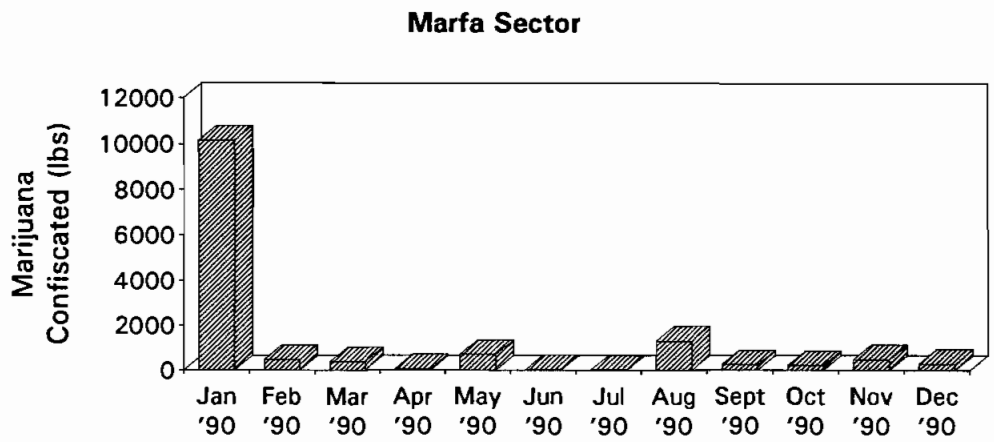

Marfa Sector
Number of Illegal Alien Arrests
1200
1000
800
600
400
200
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

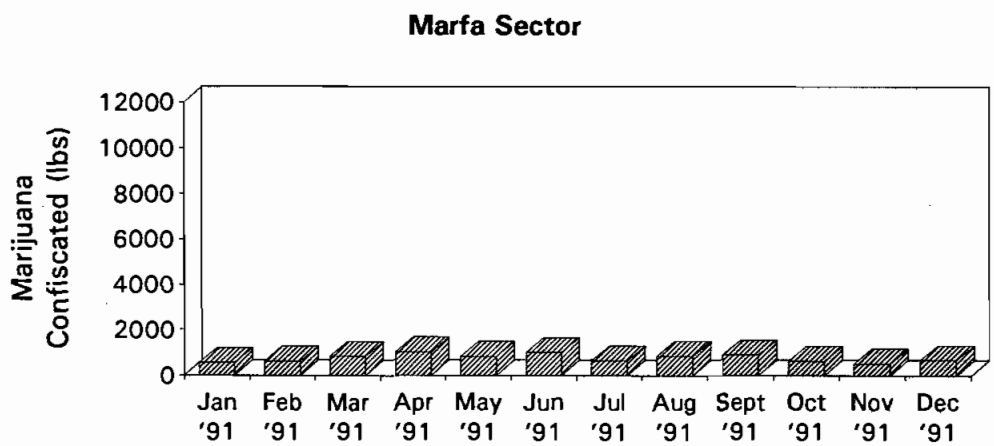

Marfa Sector
Number of Illegal Alien Arrests
1200
1000
800
600
400
200
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

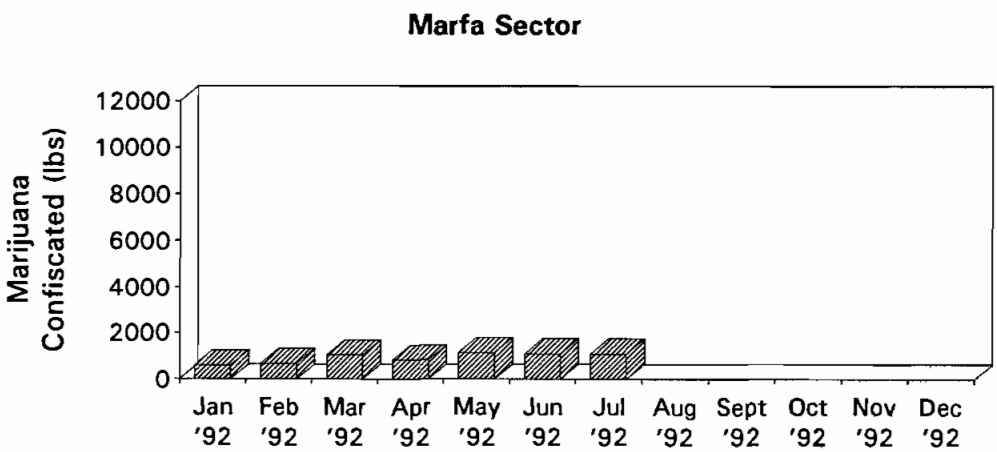

Marfa Sector
Drug Related Arrests
40
35
30
25
20
15
10
5
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

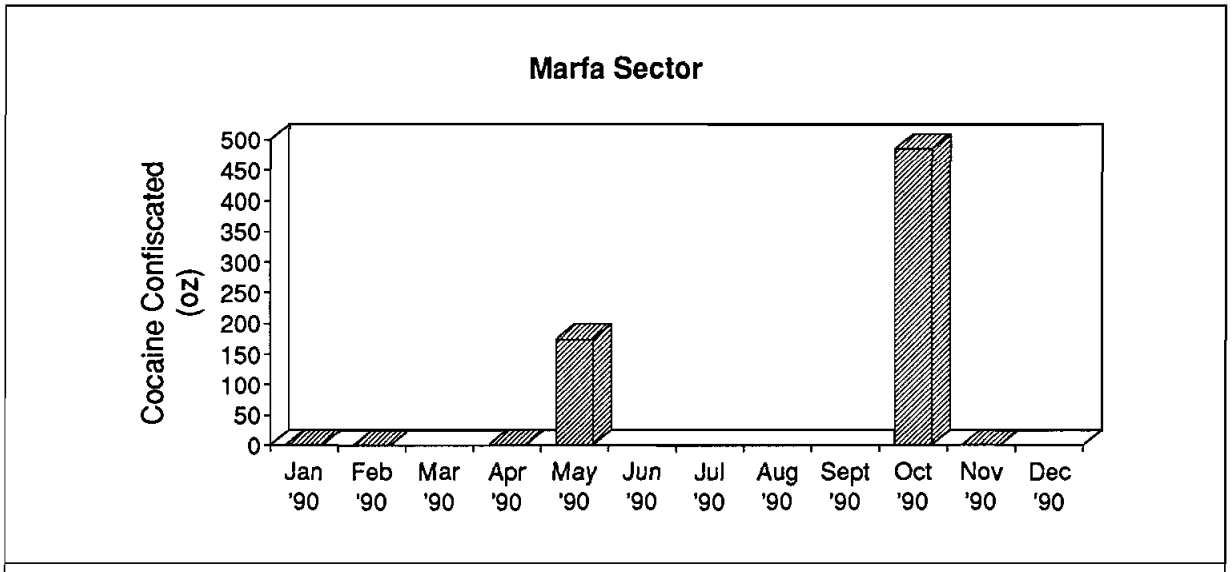

Marfa Sector
Drug Related Arrests
40
35
30
25
20
15
10
5
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

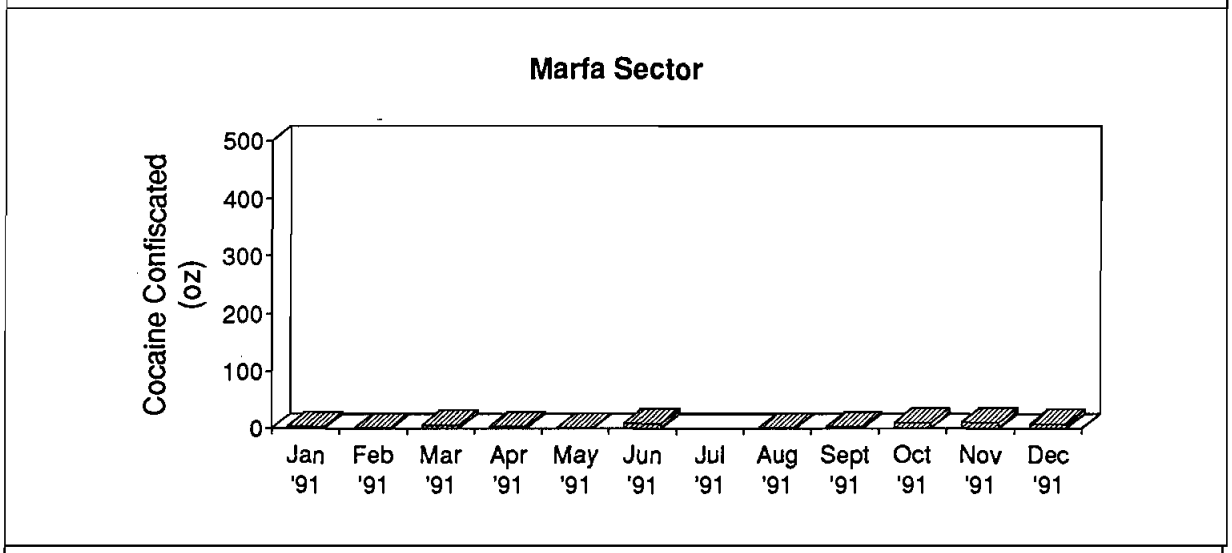

Marfa Sector
Drug Related Arrests
40
35
30
25
20
15
10
5
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

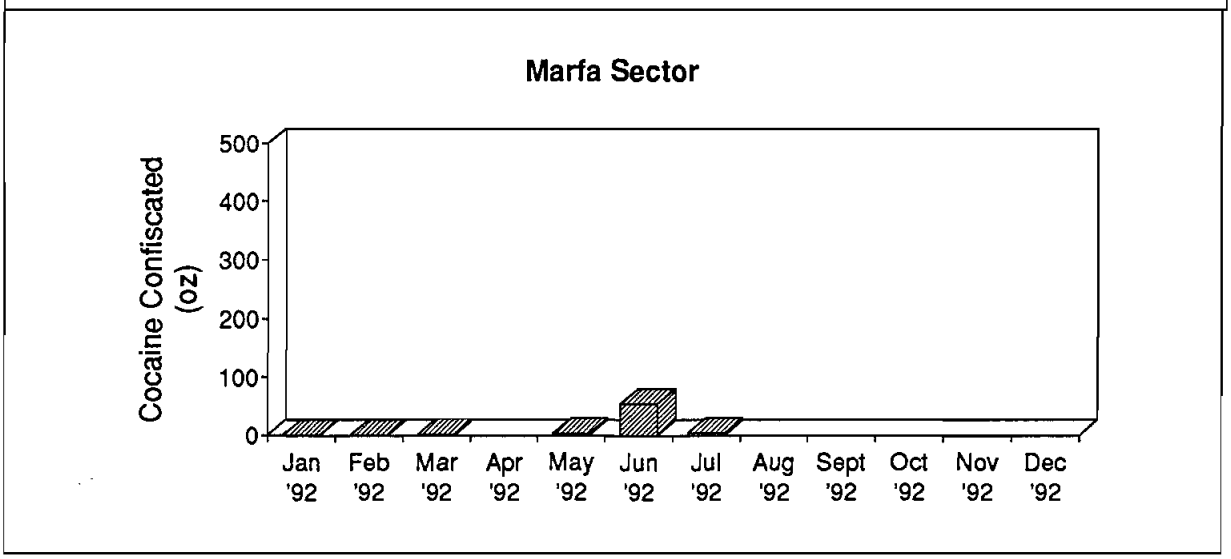

Marfa Sector
Marijuana Confiscated (lbs)
12000
10000
8000
6000
4000
2000
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

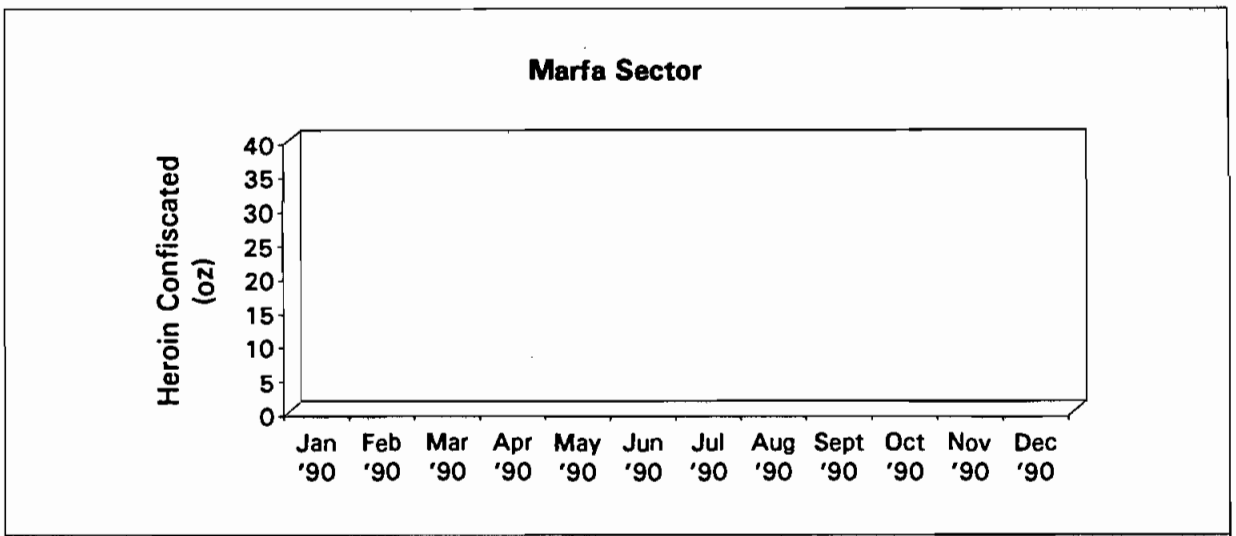

Marfa Sector
Marijuana Confiscated (lbs)
12000
10000
8000
6000
4000
2000
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

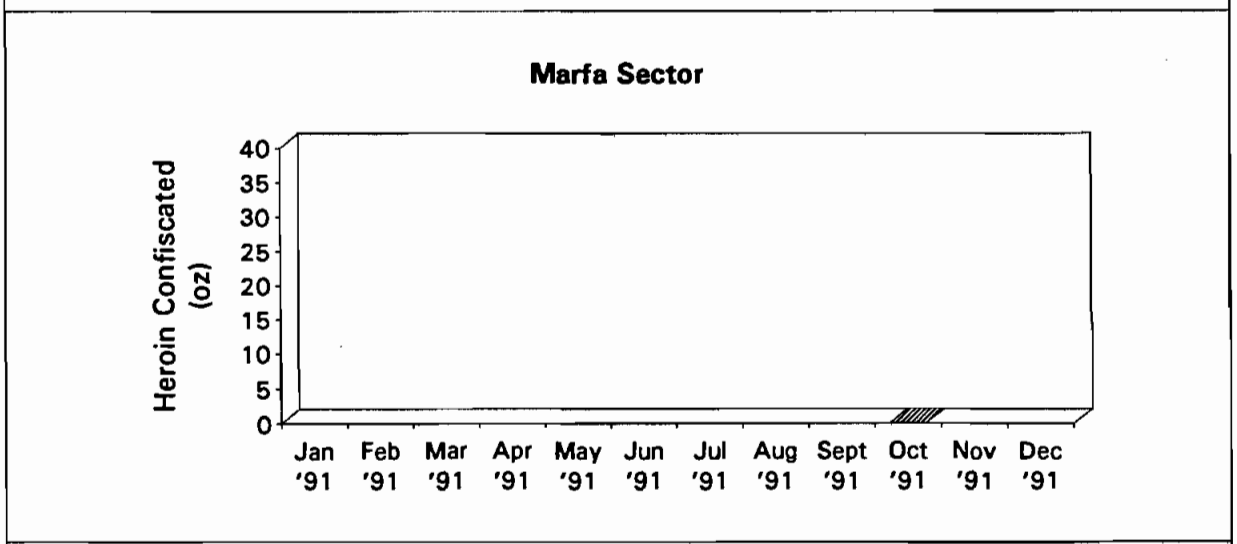

Marfa Sector
Marijuana Confiscated (lbs)
12000
10000
8000
6000
4000
2000
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

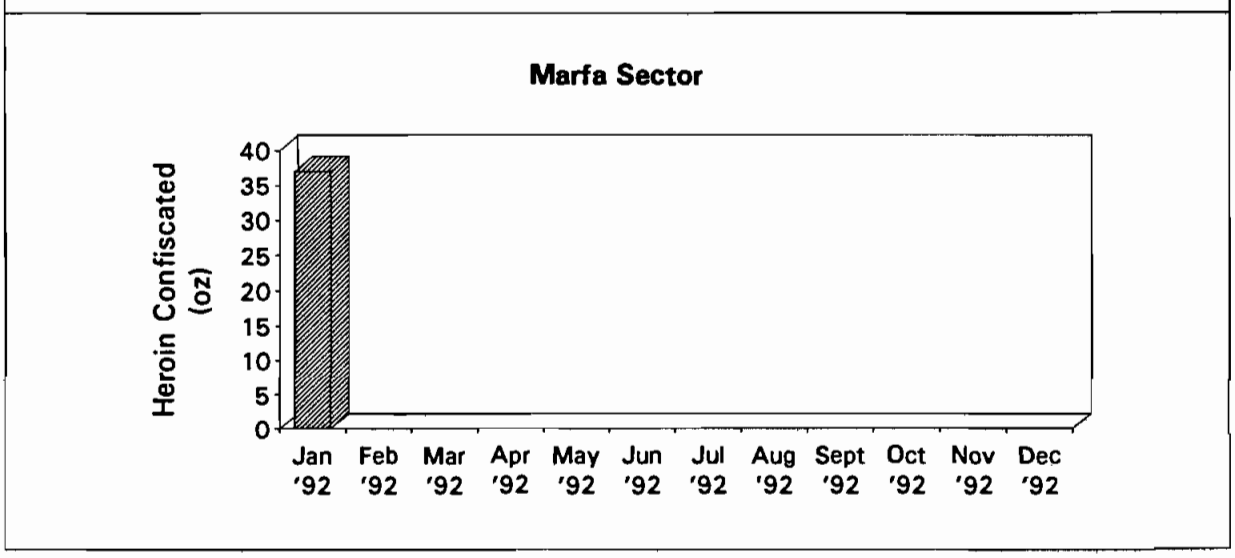

Marfa Sector
Cocaine Confiscated (oz)
500
450
400
350
300
250
200
150
100
50
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


Marfa Sector
Cocaine Confiscated (oz)
500
400
300
200
100
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


Marfa Sector
Cocaine Confiscated (oz)
500
400
300
200
100
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92


Marfa Sector
Heroin Confiscated (oz)
40
35
30
25
20
15
10
5
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


Marfa Sector
Heroin Confiscated (oz)
40
35
30
25
20
15
10
5
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


Marfa Sector
Heroin Confiscated (oz)
40
35
30
25
20
15
10
5
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

## El Paso Recommendations

OUO-7

(b) (7)(E) [redacted]. The actual design of the barrier system and the number of fences and patrol roads depend heavily on the existing conditions on the border. A large portion of the border that could benefit from barrier technology already includes concrete river embankments topped by fine mesh chain link fence and adjacent patrol roads. There are also multiple fences in place in the rail yards along the border, but the fences and patrol roads are not continuous or designed for delay and confinement. The recommendations on the spreadsheet entries are based on (b) (7)(E) [redacted]. Existing features and patrol roads must be considered in the actual design.

In correspondence with sector personnel, we learned that there is considerable opposition to the barriers by local residents on both sides of the border and also by sector personnel. Some of the reasons given for opposition from the sector personnel are the belief that the barriers will result in limited success and of much higher concern is the potential threat to agent and illegal alien safety. The concern is that if agents were trapped between the fences by large groups of illegal aliens, they might have to resort to the use of deadly force in order to escape. Our recommendations still support the lighted multiple barriers as mentioned, however, the concerns expressed here may be valid and procedures for patrolling, the numbers of gates, and the possibility of patrolling outside the third barrier should all be considered.

El Paso currently operates seven highway checkpoints:

- (b) (7)(E) [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

OUO-7

These checkpoints should be upgraded to accommodate full-time, all-weather operation. [redacted]

To complete the containment strategy, eight new full-time, all-weather highway checkpoints should be established:

- (b) (7)(E) [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted].

Sector personnel expressed the concern that some of the roads mentioned for the new checkpoints were too lightly traveled to justify the manpower required to operate the checkpoints. They recommended that the present method of using sensors to monitor these lightly traveled roads be used. We believe that the potential for illegal alien and drug traffic is so high in this sector that the checkpoints should remain as the second priority. The personnel required to operate the checkpoints was perhaps part of the sector's concern, because they realized these could not be operated without an increase in personnel.

The conventional physical protection equipment mentioned in the attached El Paso portion of the spreadsheet is important to this sector, but it should remain at the priority listed in the General Recommendations section.

OUO-7

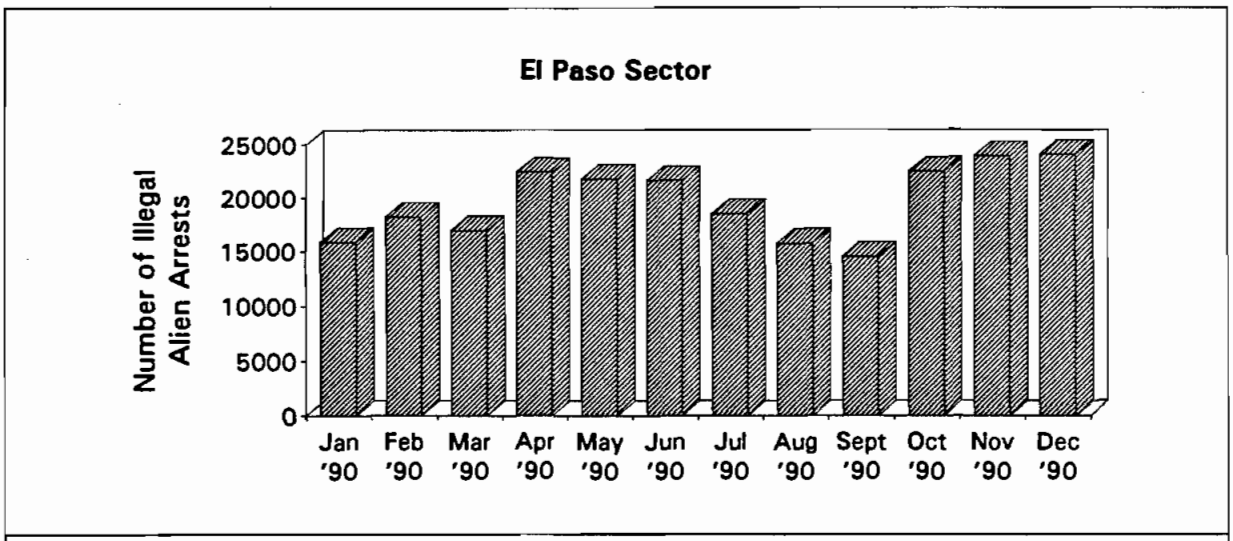
| Equipment Type | El Paso Rcmd | El Paso Ext.Cost | Unit Cost |
|---|---|---|---|
| [redacted] | | 165,000 | $825 |
| | | 197,600 | $260 |
| | | 119,400 | $995 |
| | | 24,475 | $445 |
| | | 58,625 | $1,675 |
| | | 22,000 | $400 |
| | | 14,950 | $1,495 |
| | | 19,250 | $350 |
| | | 17,600 | $320 |
| | | 99,500 | $995 |
| | | 5,200 | $260 |
| | | 19,980 | $4,995 |
| | | 9,980 | $2,495 |
| | | 0 | $1,050 |
| | | 0 | $15,000 |
| | | 4,995 | $4,995 |
| Receiver, Portable | 10 | 29,950 | $2,995 |
| Tactical | 20 | 9,400 | $470 |
| **Subtotal, Detectors** | | **$817,905** | |
| Regular Light CCTV | 12 | 19,200 | $1,600 |
| LLTV - Intensified | 12 | 102,000 | $8,500 |
| [redacted] | | 115,120 | $5,756 |
| | | 0 | $5,000 |
| | | 3,000 | $300 |
| | | 168,000 | $56,000 |
| | | 600,000 | $200,000 |
| Video & Sensor Cable | 1000 | 15,000 | $15 |
| **Subtotal, Assessment** | | **$1,022,320** | |
| Voice Comm, Short Range | 100 | 200,000 | $2,000 |
| Voice Comm, Long Range | 0 | 0 | $150,000 |
| **Subtotal, Communication** | | **$200,000** | |
| Info Control & Display | 1 | 5,000 | $5,000 |
| [redacted] | | 5,000 | $5,000 |
| **Subtotal, Cntrl & Disp** | | **$10,000** | |
| Checkpoint Shelter, Large | 0 | 0 | $300,000 |
| Checkpoint Shelter, Small | 8 | 1,600,000 | $200,000 |
| Checkpoint Personnel | 120 | 10,200,000 | $85,000 |
| Drug Dogs (Procurement) | 48 | 192,000 | $4,000 |
| Dog Support (Food & Vet) | 48 | 48,000 | $1,000 |
| [redacted] | 126720 | 3,801,600 | $30 |
| | 95040 | 6,652,800 | $70 |
| | 95040 | 5,702,400 | $60 |
| Vehicle Barrier | 0 | 0 | $35 |
| Lighting | 110880 | 2,772,000 | $25 |
| Patrol Roads | 95040 | 4,752,000 | $50 |
| Mobile Welder | 1 | 25,000 | $25,000 |
| Welder Operator | 1 | 85,000 | $85,000 |
| **Subtotal, Barriers, Etc.** | | **$35,830,800** | |
| Test Equipment | 1 | 100,000 | $100,000 |
| ILS, New Equipment | 1 | 100,000 | $100,000 |
| ILS, Old Equipment | 1 | 100,000 | $100,000 |
| **Subtotal, Support** | | **$300,000** | |
| **Sector Total** | | **$38,181,025** | |

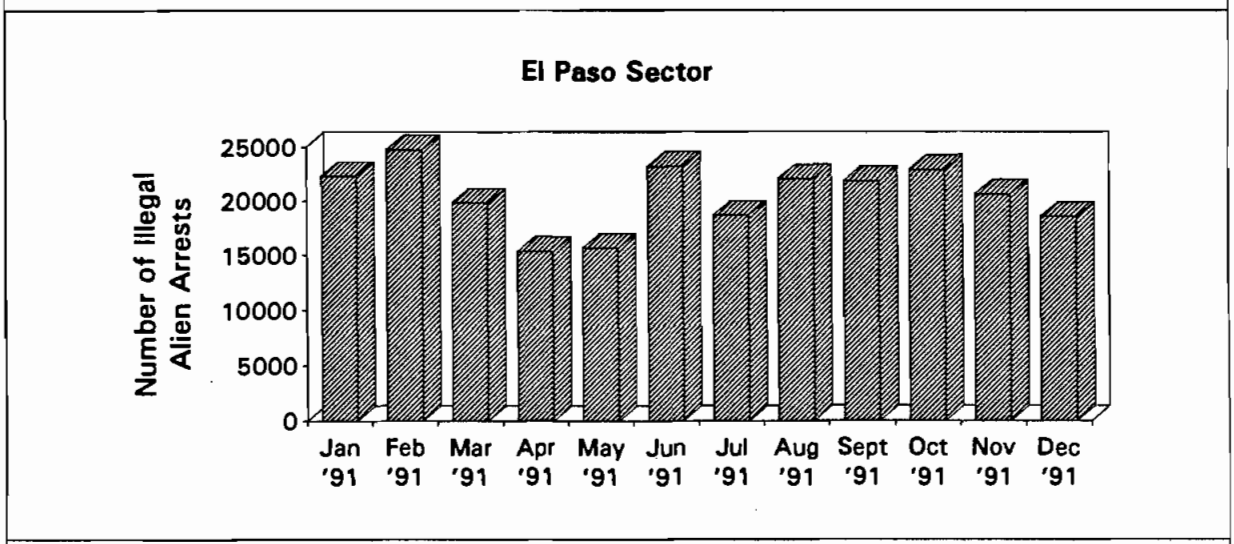
| Recurring Costs | El Paso Ext. Cost | Unit Cost |
|---|---|---|
| 15% of all Detection Assessment and Communications Equipment | $306,034 | 15.0% |
| 50% of Info Control and Display Equipment | $2,500 | 50.0% |
| 10% of the Construction Cost of Check Points for Maintenance & Utilities | $160,000 | 10.0% |
| 100% of Checkpont Personnel Cost and Dog Support | $10,248,000 | 100.0% |
| 5% of Barrier Cost for Maintenance | $1,045,440 | 5.0% |
| 15% of Lighting Cost for Maintenance & Electricity | $415,800 | 15.0% |
| 100% of Welder Operator | $85,000 | 100.0% |
| 25% of Test Equipment for Calibration, Repair and Upgrading of Equipment | $25,000 | 25.0% |
| 100% of ILS Costs | $200,000 | 100.0% |
| Total Recurring Cost for Each Sector | $12,487,774 | |

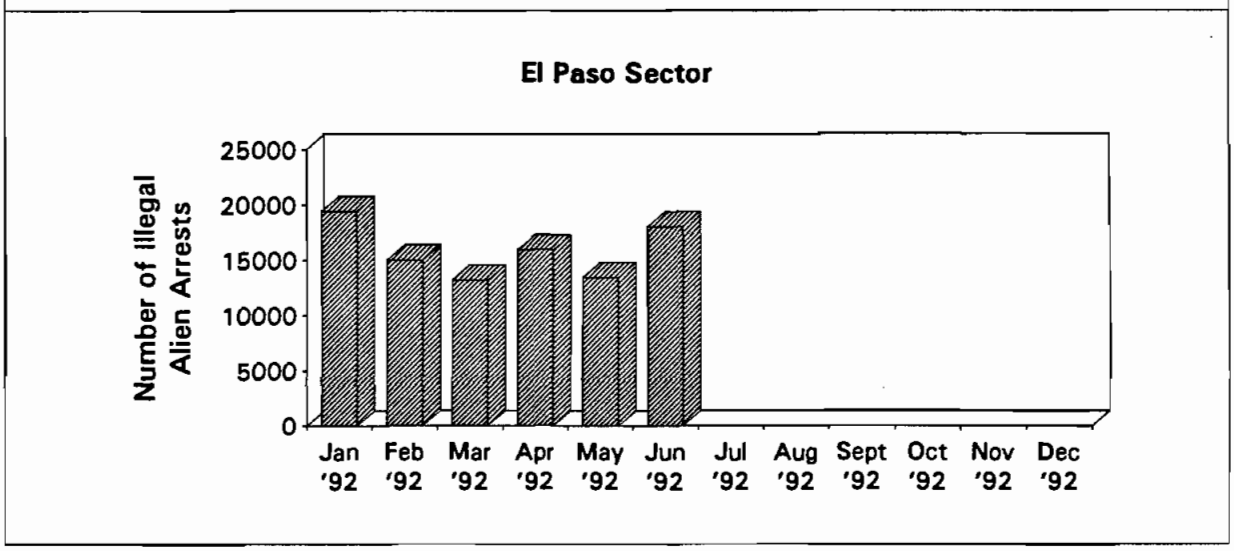
## El Paso Sector Analysis

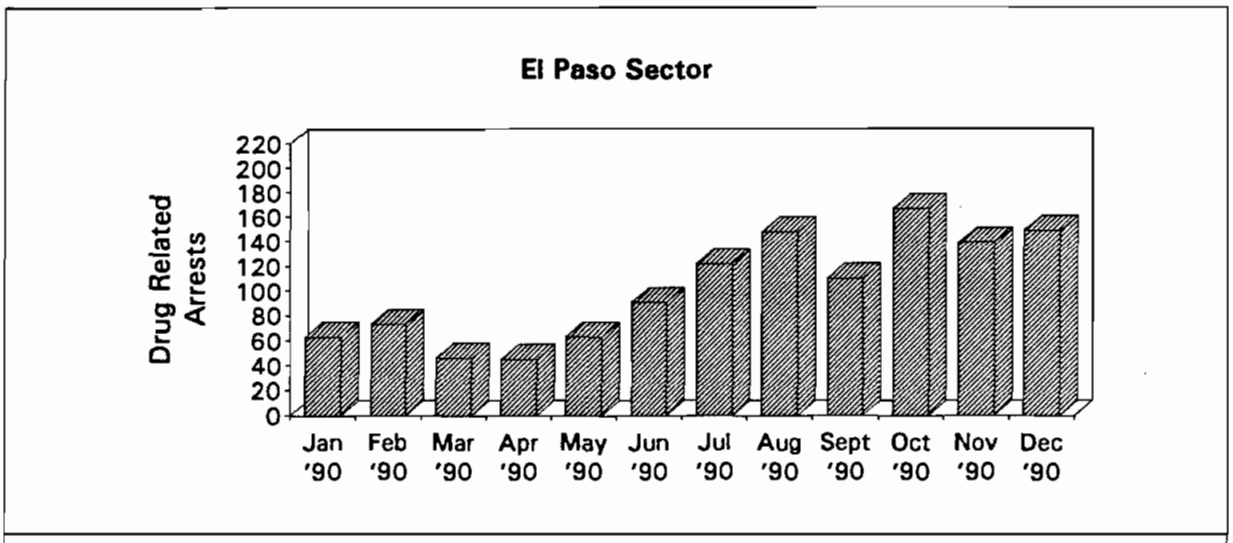
The data given in the El Paso sector discussion of "Contact with Suspects" is plotted on the following charts to show the overall trend of what has been happening in the sector for the years 1990, 1991, and the first half of 1992. The activities of the total Southwest Border are given at the end of this section.

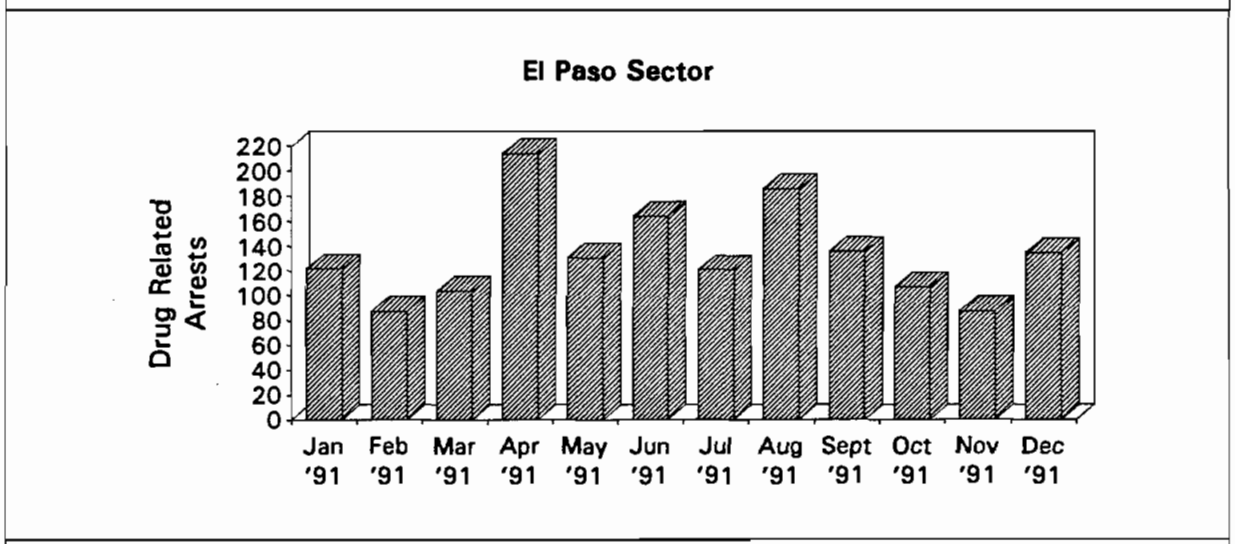
The analysis shows a decrease in overall illegal alien arrests, in the average number of drug-related arrests, and in the average amount of cocaine and heroin confiscated per month, but significant increases in the amount of marijuana confiscated. The plots of cocaine and heroin show a few months with large activity mixed with many smaller activity months. There are a considerable number of confrontations with armed persons and assaults on Border Patrol agents in this sector.

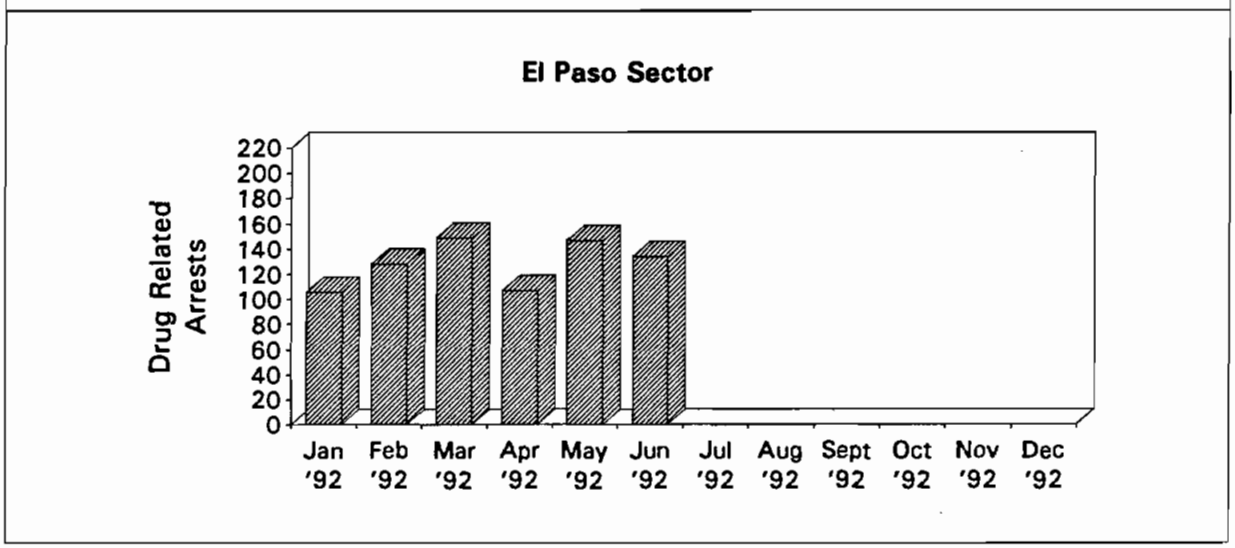

El Paso Sector
Number of Illegal Alien Arrests
25000
20000
15000
10000
5000
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

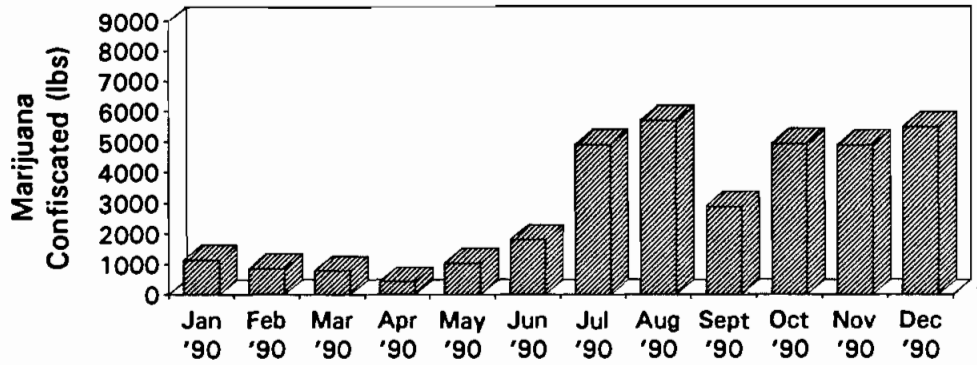

El Paso Sector
Number of Illegal Alien Arrests
25000
20000
15000
10000
5000
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

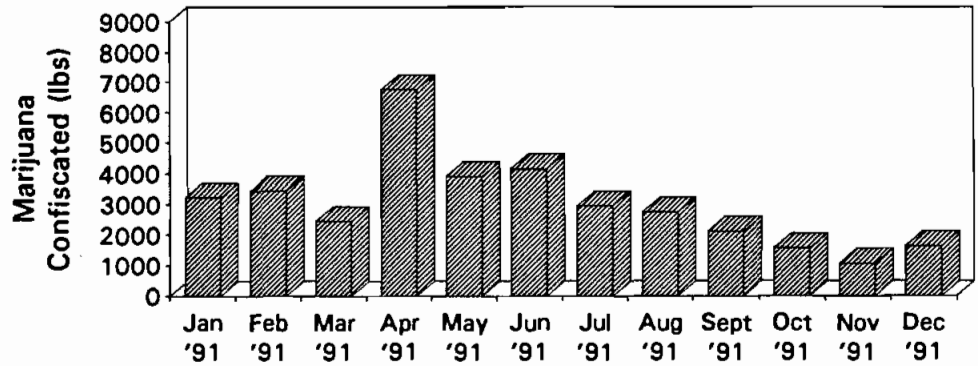

El Paso Sector
Number of Illegal Alien Arrests
25000
20000
15000
10000
5000
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

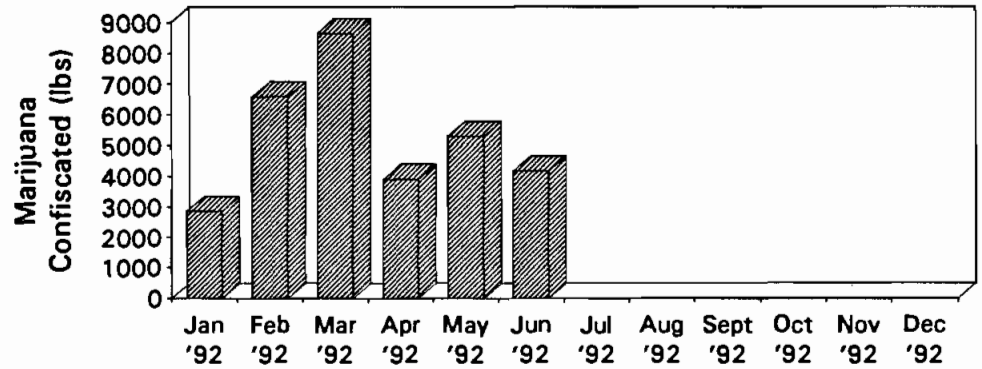

El Paso Sector
Drug Related Arrests
220
200
180
160
140
120
100
80
60
40
20
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

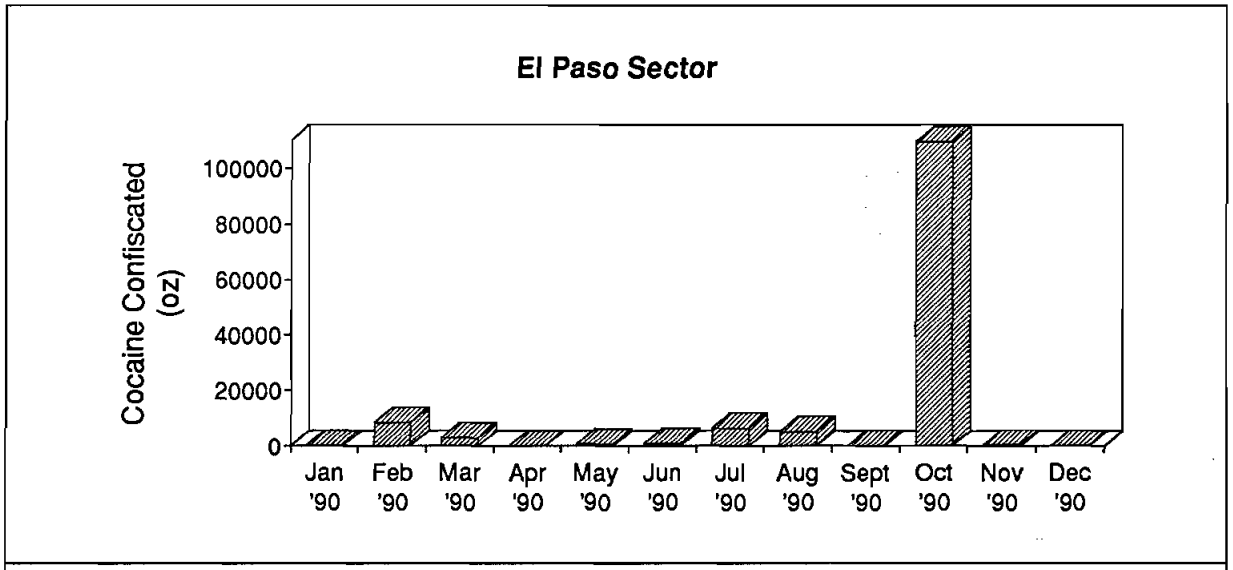

El Paso Sector
Drug Related Arrests
220
200
180
160
140
120
100
80
60
40
20
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

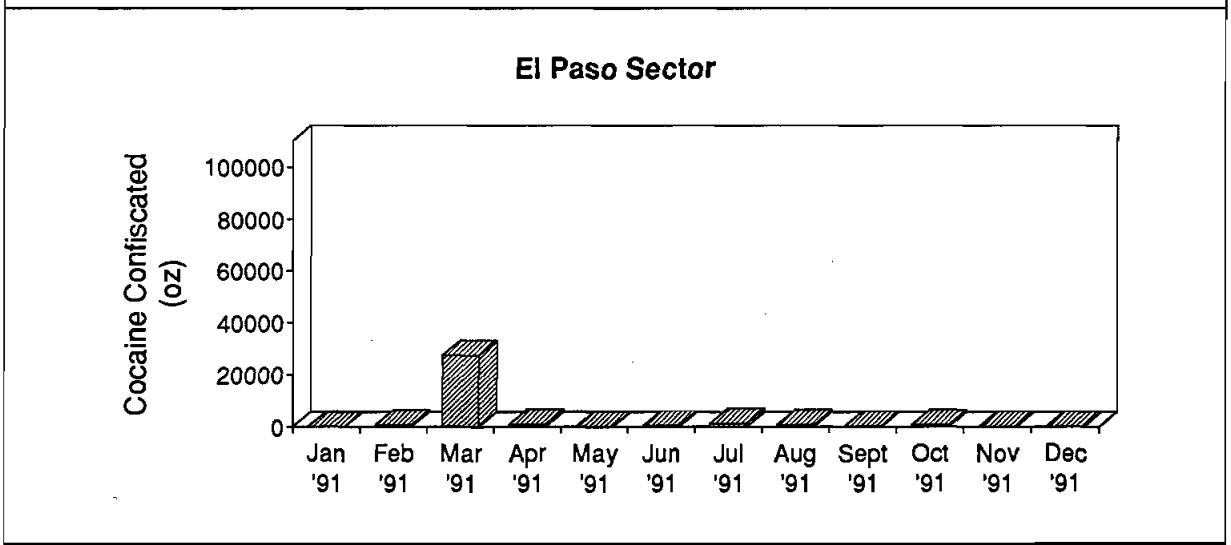

El Paso Sector
Drug Related Arrests
220
200
180
160
140
120
100
80
60
40
20
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

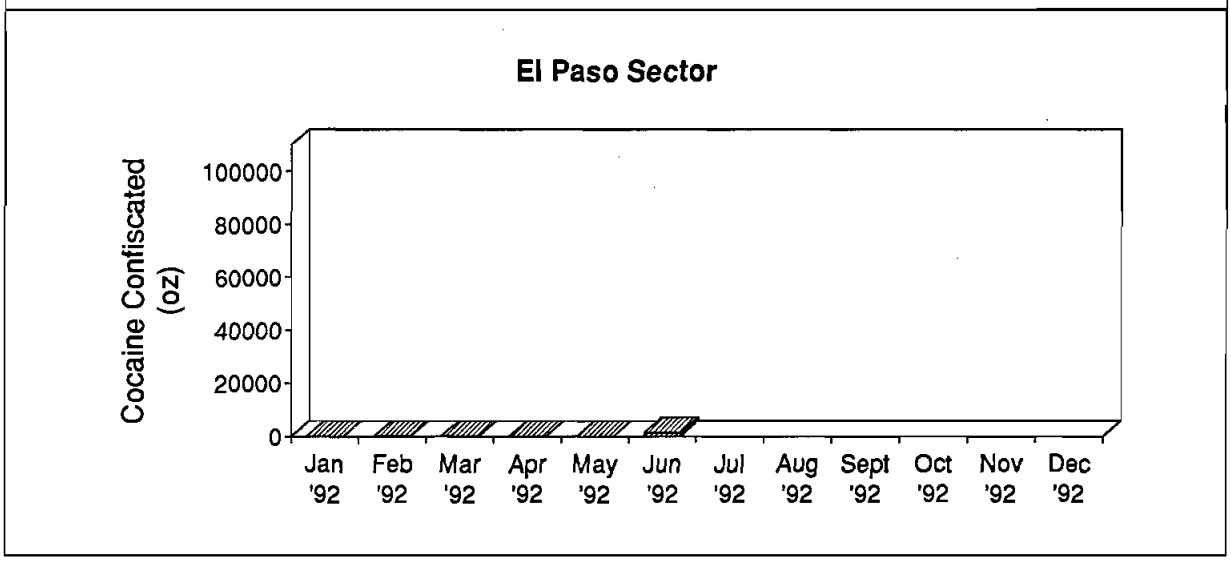

El Paso Sector
Marijuana Confiscated (lbs)
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

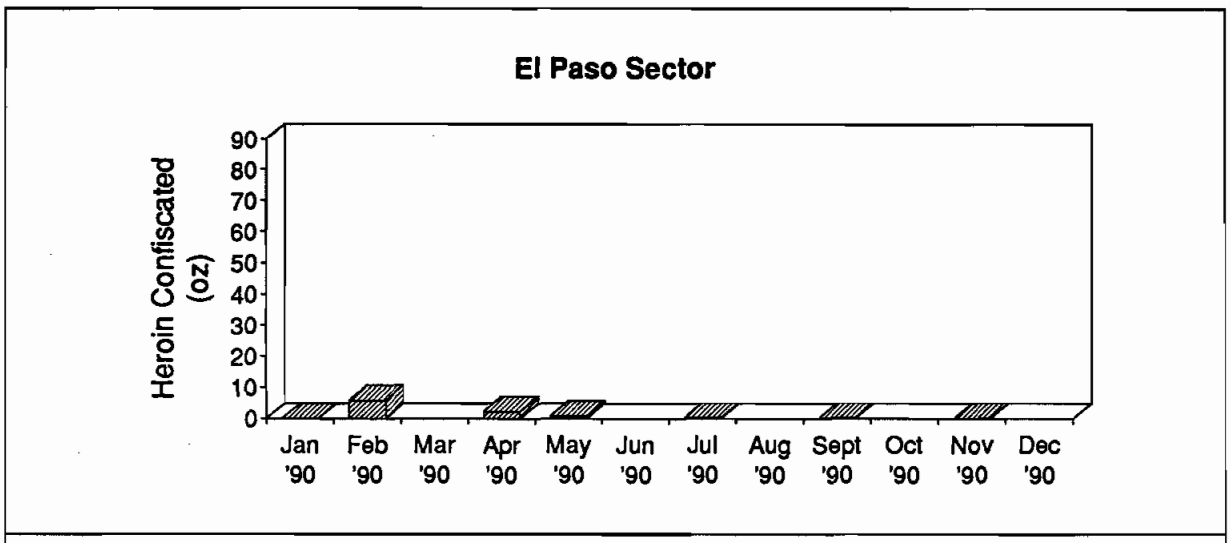

El Paso Sector
Marijuana Confiscated (lbs)
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

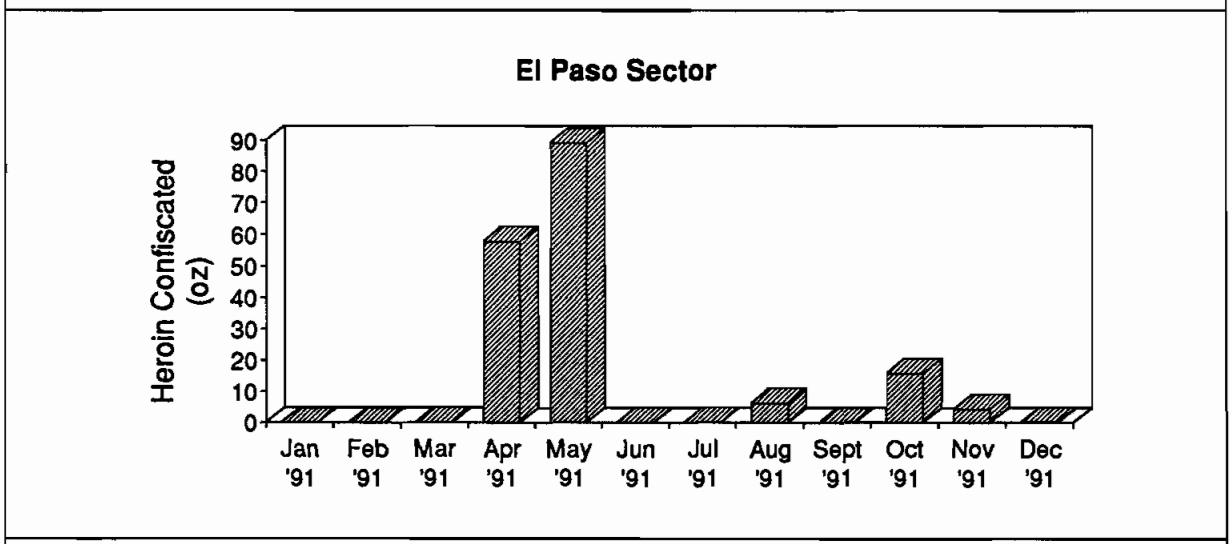

El Paso Sector
Marijuana Confiscated (lbs)
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

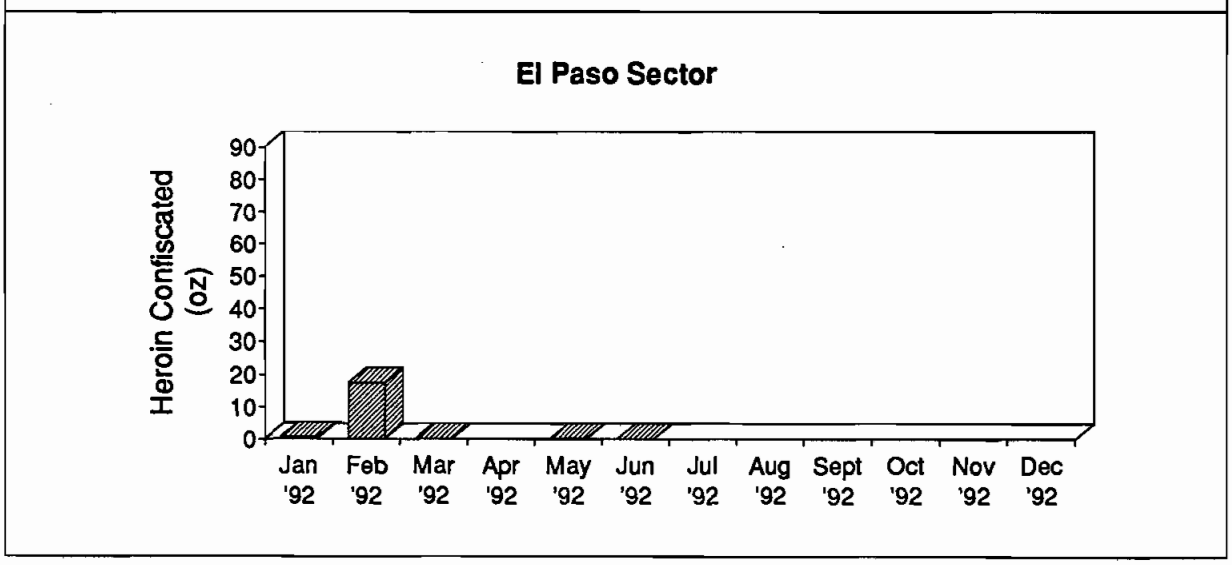

El Paso Sector
Cocaine Confiscated (oz)
100000
80000
60000
40000
20000
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

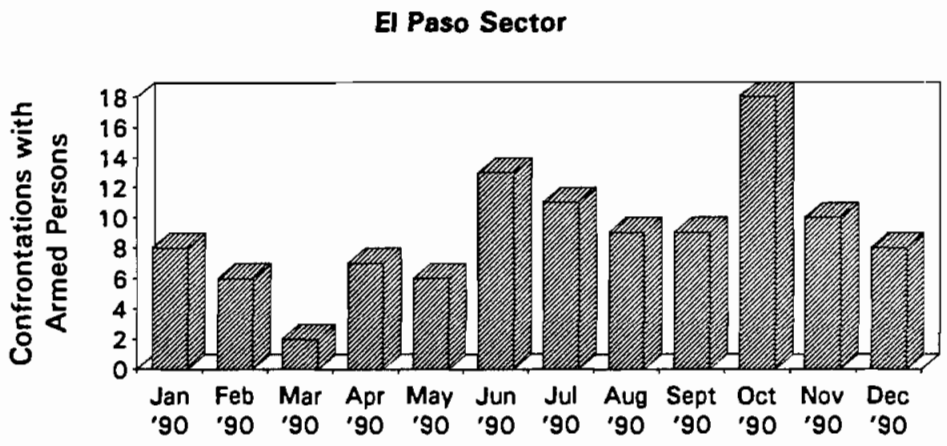

El Paso Sector
Cocaine Confiscated (oz)
100000
80000
60000
40000
20000
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

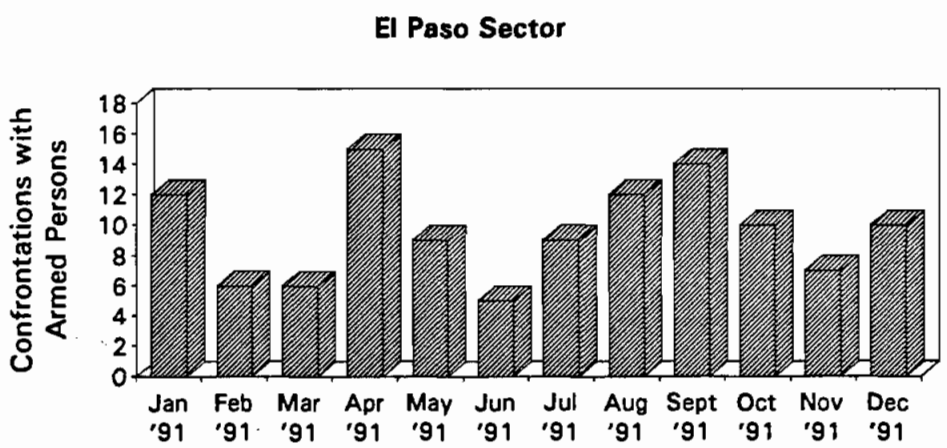

El Paso Sector
Cocaine Confiscated (oz)
100000
80000
60000
40000
20000
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

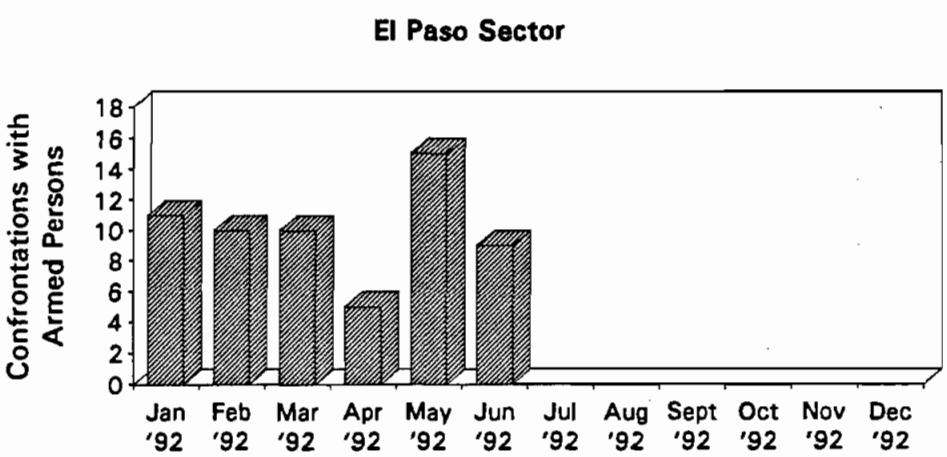

El Paso Sector
Heroin Confiscated (oz)
90
80
70
60
50
40
30
20
10
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

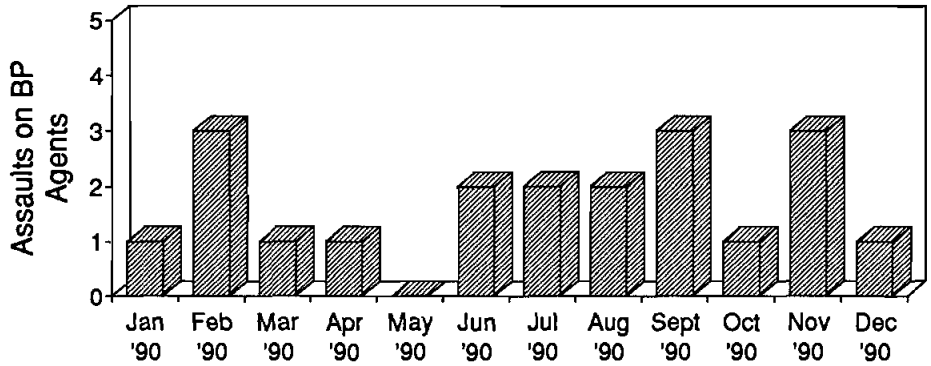

El Paso Sector
Heroin Confiscated (oz)
90
80
70
60
50
40
30
20
10
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

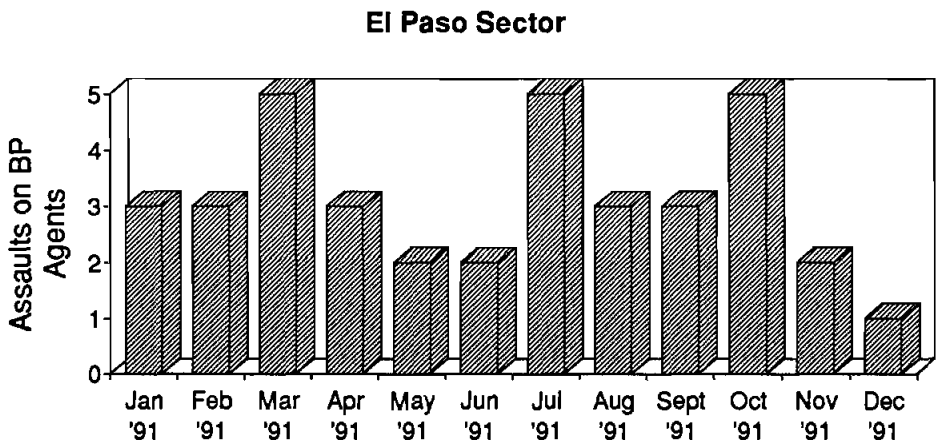

El Paso Sector
Heroin Confiscated (oz)
90
80
70
60
50
40
30
20
10
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

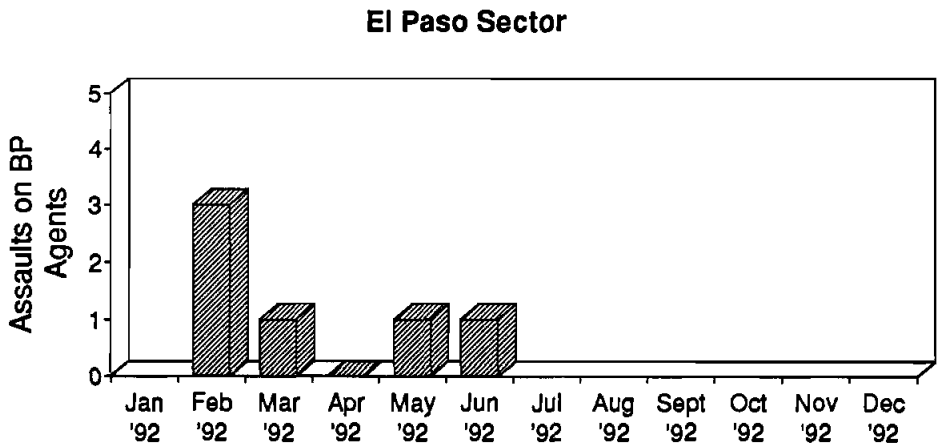

El Paso Sector
Confrontations with Armed Persons
0
2
4
6
8
10
12
14
16
18
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


El Paso Sector
Confrontations with Armed Persons
0
2
4
6
8
10
12
14
16
18
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


El Paso Sector
Confrontations with Armed Persons
0
2
4
6
8
10
12
14
16
18
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92


El Paso Sector
Assaults on BP Agents
0
1
2
3
4
5
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


El Paso Sector
Assaults on BP Agents
0
1
2
3
4
5
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


El Paso Sector
Assaults on BP Agents
0
1
2
3
4
5
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

## Tucson Recommendations

The Tucson sector includes 16.5% of the Southwest Border, but accounts for a large fraction of illicit drugs seized on the border. From the western boundary to Nogales, the terrain alternates between desert and mountains and the eastern section is predominantly brush and ranchland with some desert. A small section just east of Nogales is mountains and border town areas. OUO-7

We recommend that (b) (7)(E) [redacted].

Ten full-time, all-weather highway checkpoints are recommended to enforce the containment strategy:

- (b) (7)(E) [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

There was general concurrence with the philosophy expressed above by the sector personnel. [redacted]. We also have this concern, but believe that [redacted].

The conventional physical protection equipment is listed in the attached portion of the spreadsheet. We recommend that the priorities be those listed in the General Recommendations section.

OUO-7

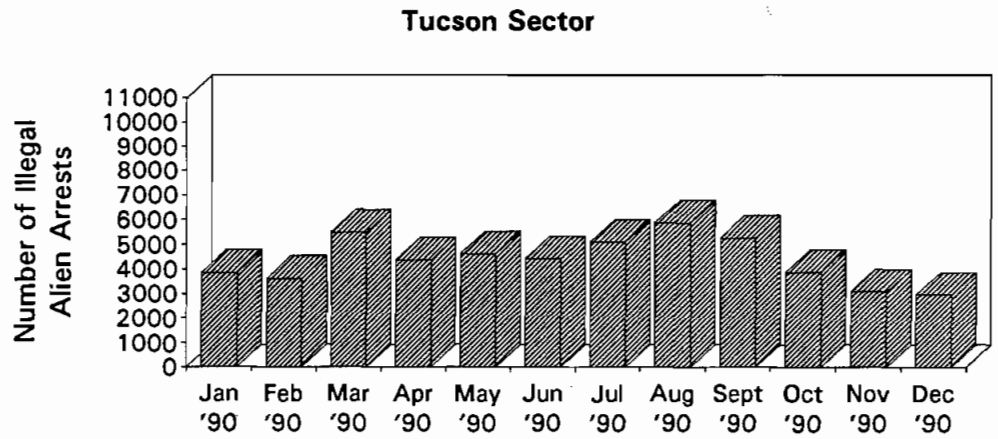
| Equipment Type | Tucson Rcmd | Tucson Ext. Cost | Unit Cost |
|---|---|---|---|
| [redacted] | | 148,500 | $825 |
| | | 137,280 | $260 |
| | | 54,725 | $995 |
| | | 18,690 | $445 |
| | | 25,125 | $1,675 |
| | | 16,800 | $400 |
| | | 14,950 | $1,495 |
| | | 14,700 | $350 |
| | | 13,440 | $320 |
| | | 199,000 | $995 |
| | | 0 | $260 |
| | | 24,975 | $4,995 |
| | | 24,950 | $2,495 |
| | | 16,800 | $1,050 |
| | | 0 | $15,000 |
| | | 19,980 | $4,995 |
| Receiver, Portable | 20 | 59,900 | $2,995 |
| Tactical | 16 | 7,520 | $470 |
| **Subtotal, Detectors** | | **$797,335** | |
| Regular Light CCTV | 15 | 24,000 | $1,600 |
| LLTV - Intensified | 12 | 102,000 | $8,500 |
| [redacted] | | 57,560 | $5,756 |
| | | 10,000 | $5,000 |
| | | 3,000 | $300 |
| | | 448,000 | $56,000 |
| | | 200,000 | $200,000 |
| Video & Sensor Cable | 1000 | 15,000 | $15 |
| **Subtotal, Assessment** | | **$859,560** | |
| Voice Comm, Short Range | 75 | 150,000 | $2,000 |
| Voice Comm, Long Range | 1 | 150,000 | $150,000 |
| **Subtotal, Communication** | | **$300,000** | |
| Info Control & Display | 1 | 5,000 | $5,000 |
| (b) (7)(E) [redacted] | 1 | 5,000 | $5,000 |
| **Subtotal, Cntrl & Disp** | | **$10,000** | |
| Checkpoint Shelter, Large | 1 | 300,000 | $300,000 |
| Checkpoint Shelter, Small | 9 | 1,800,000 | $200,000 |
| Checkpoint Personnel | 165 | 14,025,000 | $85,000 |
| Drug Dogs (Procurement) | 60 | 240,000 | $4,000 |
| Dog Support (Food & Vet) | 60 | 60,000 | $1,000 |
| [redacted] | 73920 | 2,217,600 | $30 |
| | 73920 | 5,174,400 | $70 |
| | 73920 | 4,435,200 | $60 |
| Vehicle Barrier | 105600 | 3,696,000 | $35 |
| Lighting | 73920 | 1,848,000 | $25 |
| Patrol Roads | 73920 | 3,696,000 | $50 |
| Mobile Welder | 1 | 25,000 | $25,000 |
| Welder Operator | 1 | 85,000 | $85,000 |
| **Subtotal, Barriers, Etc.** | | **$37,602,200** | |
| Test Equipment | 1 | 100,000 | $100,000 |
| ILS, New Equipment | 1 | 100,000 | $100,000 |
| ILS, Old Equipment | 1 | 100,000 | $100,000 |
| **Subtotal, Support** | | **$300,000** | |
| **Sector Total** | | **$39,869,095** | |

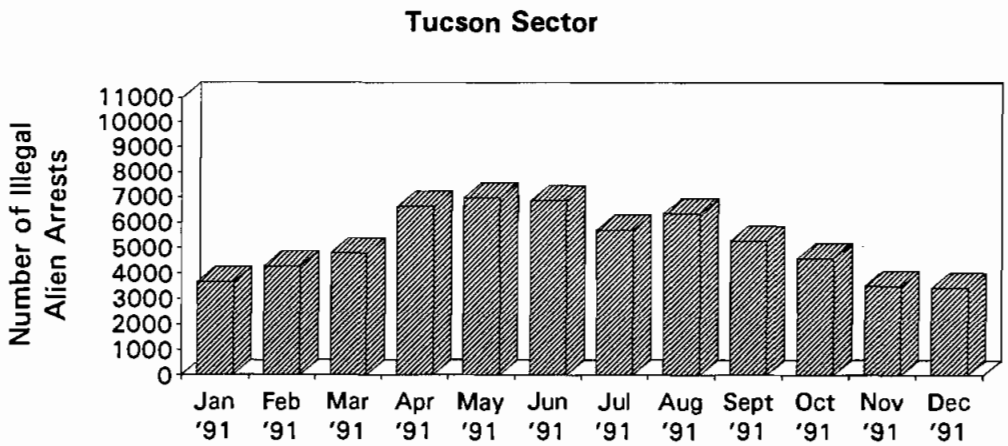
| Recurring Costs | Tucson Ext. Cost | Unit Cost |
|---|---|---|
| 15% of all Detection Assessment and Communications Equipment | $293,534 | 15.0% |
| 50% of Info Control and Display Equipment | $2,500 | 50.0% |
| 10% of the Construction Cost of Check Points for Maintenance & Utilities | $210,000 | 10.0% |
| 100% of Checkpont Personnel Cost and Dog Support | $14,085,000 | 100.0% |
| 5% of Barrier Cost for Maintenance | $960,960 | 5.0% |
| 15% of Lighting Cost for Maintenance & Electricity | $277,200 | 15.0% |
| 100% of Welder Operator | $85,000 | 100.0% |
| 25% of Test Equipment for Calibration, Repair and Upgrading of Equipment | $25,000 | 25.0% |
| 100% of ILS Costs | $200,000 | 100.0% |
| Total Recurring Cost for Each Sector | $16,139,194 | |

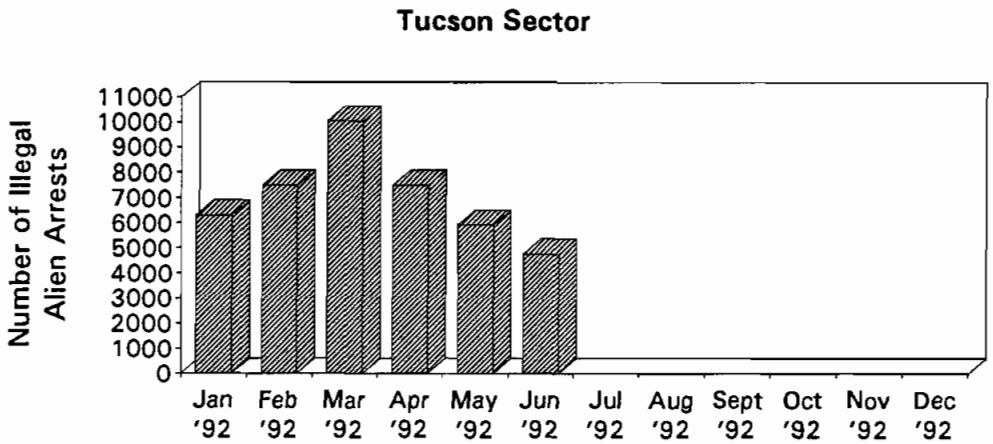
## Tucson Sector Analysis

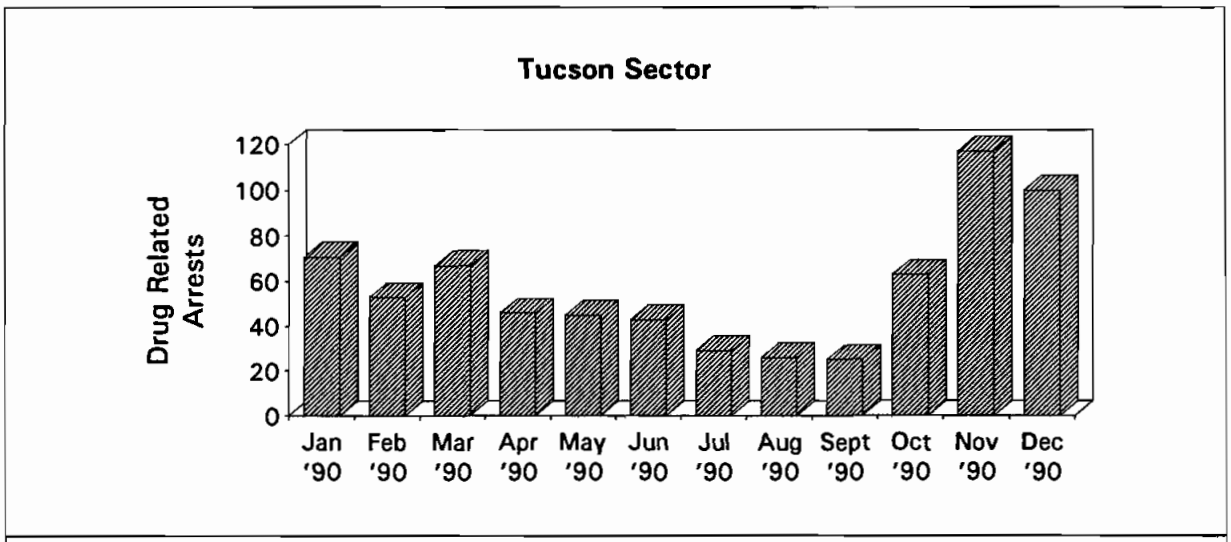
The data given in the Tucson sector discussion of "Contact with Suspects" is plotted on the following charts to show the overall trend of what has been happening in the sector for the years 1990, 1991, and the first half of 1992. The activities of the total Southwest Border are given at the end of this section.

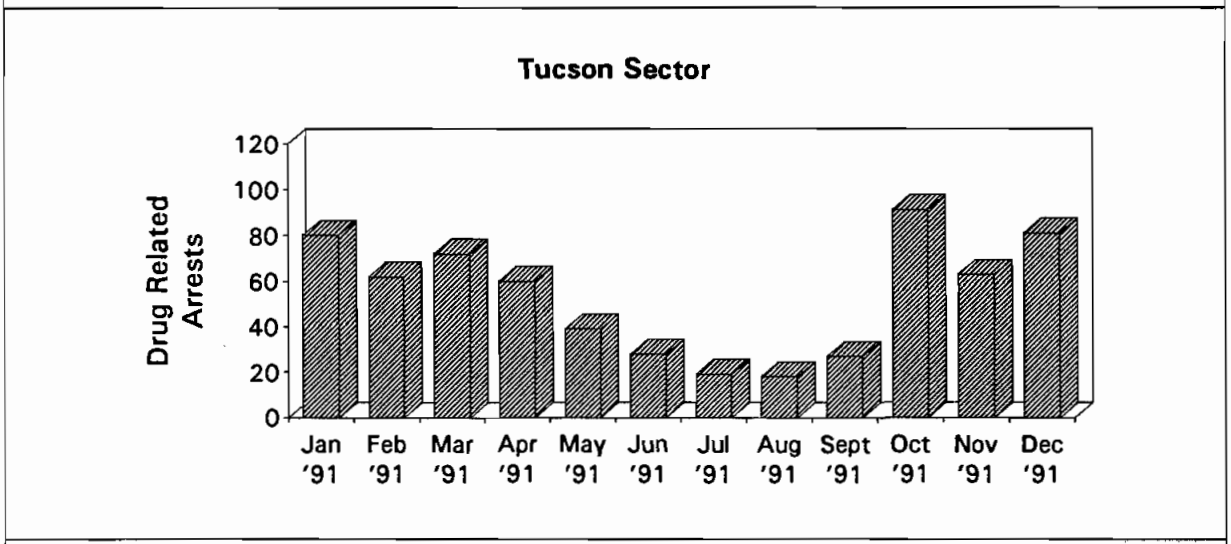
The analysis shows significant increases in the average numbers of alien arrests per month, drug-related arrests, and marijuana and heroin confiscated. The plots of cocaine and heroin show a few months with large activity mixed with many smaller activity months. The data on confrontations with armed persons and assaults of Border Patrol agents are small averages, but the individual plots show decreases in these areas.

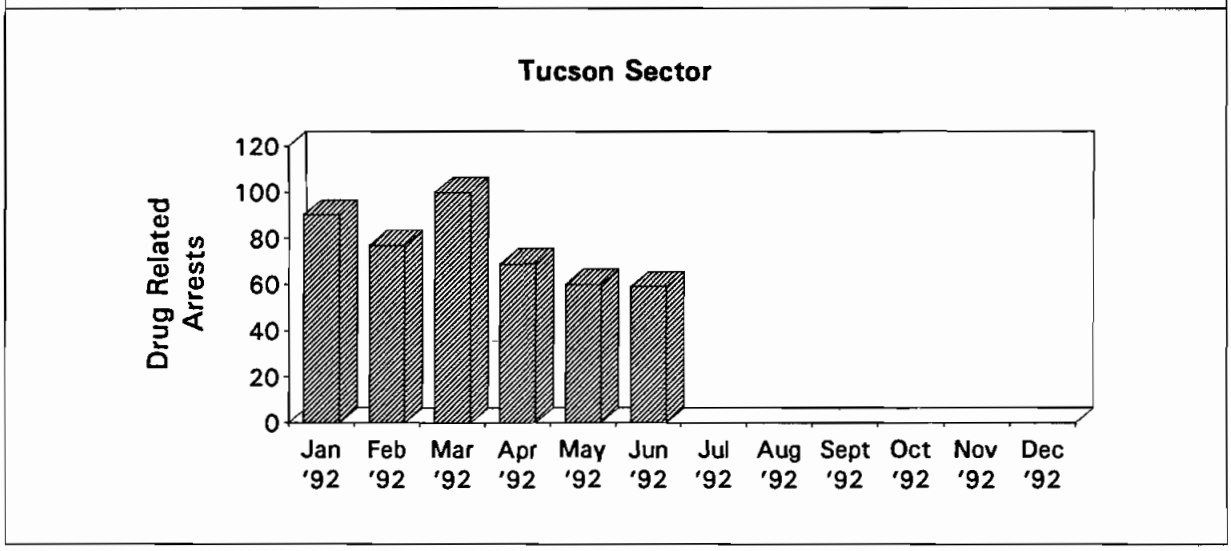

Tucson Sector
Number of Illegal Alien Arrests
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

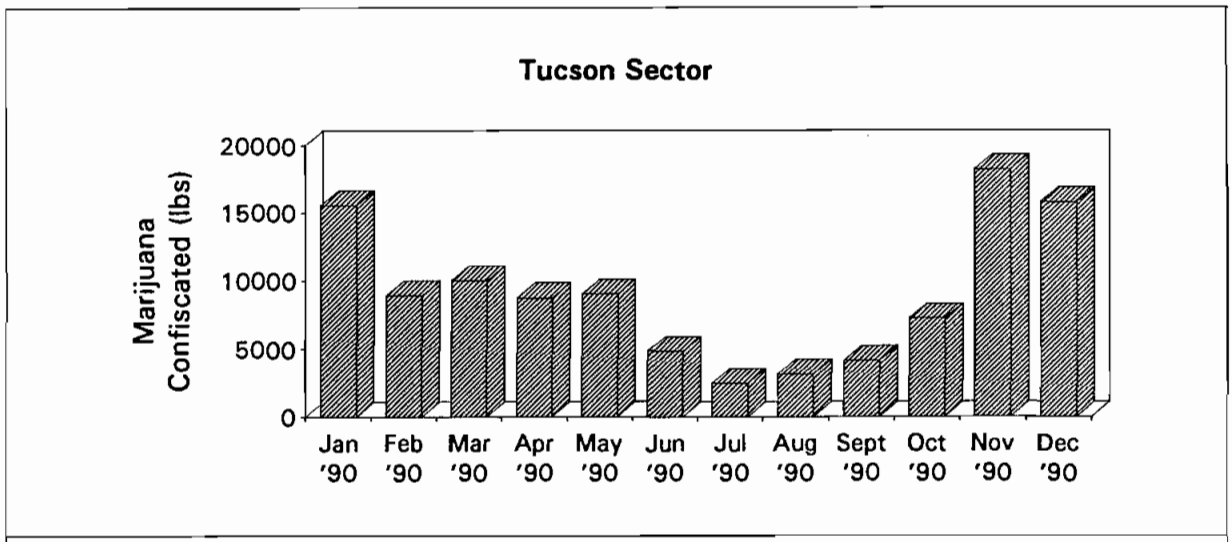

Tucson Sector
Number of Illegal Alien Arrests
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

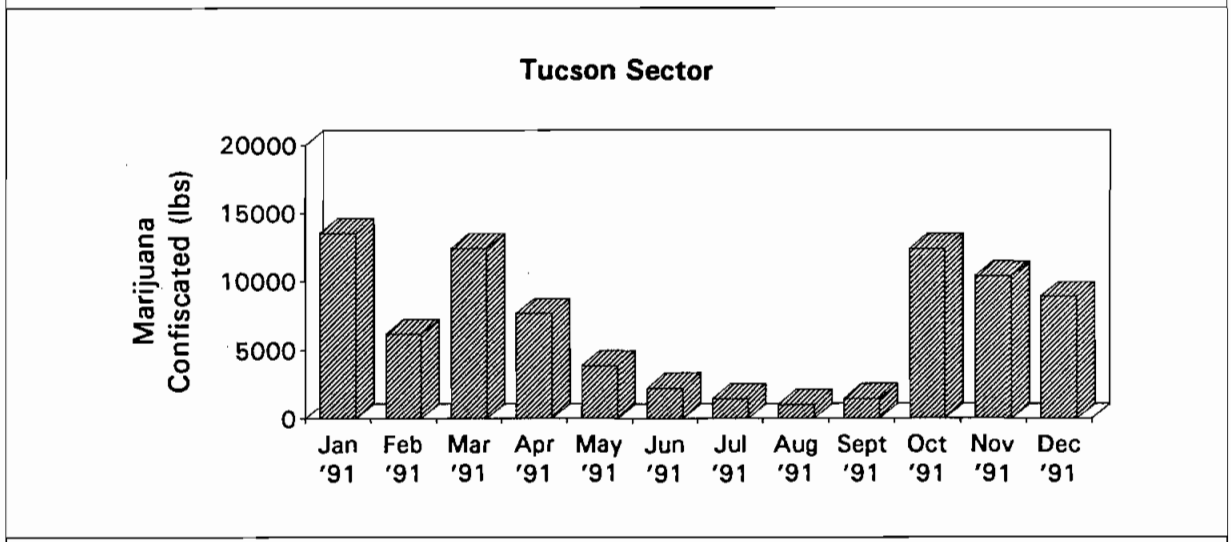

Tucson Sector
Number of Illegal Alien Arrests
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

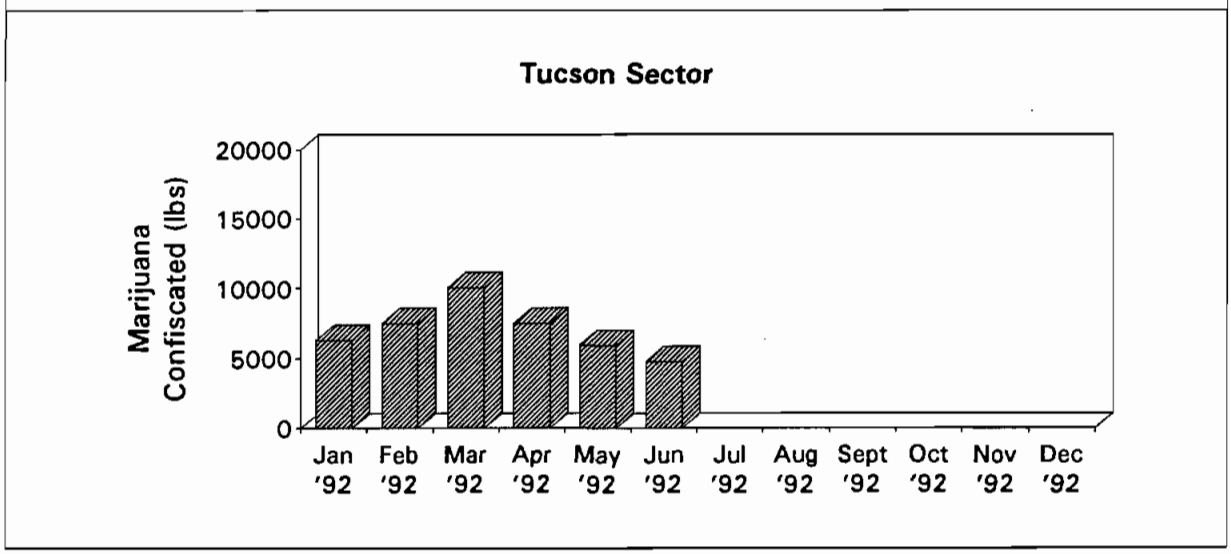

Tucson Sector
Drug Related Arrests
120
100
80
60
40
20
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

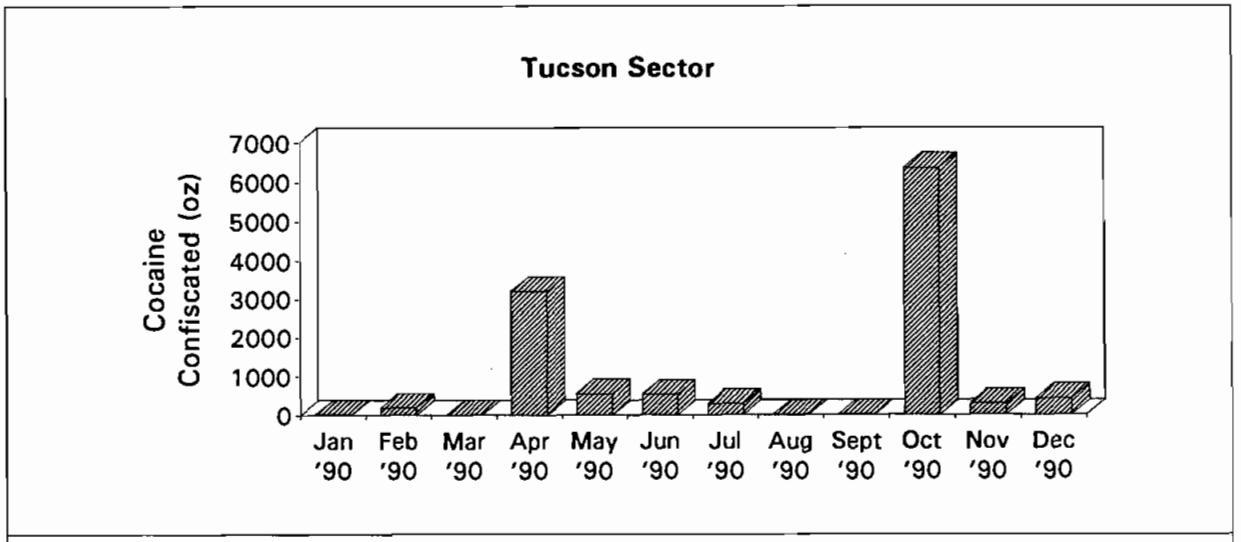

Tucson Sector
Drug Related Arrests
120
100
80
60
40
20
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

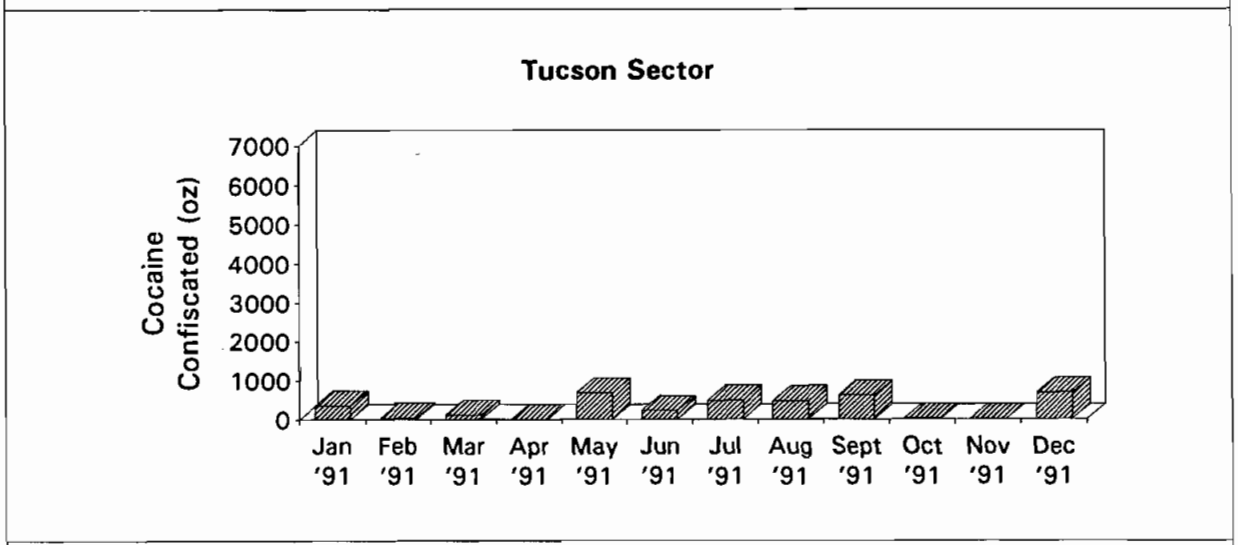

Tucson Sector
Drug Related Arrests
120
100
80
60
40
20
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

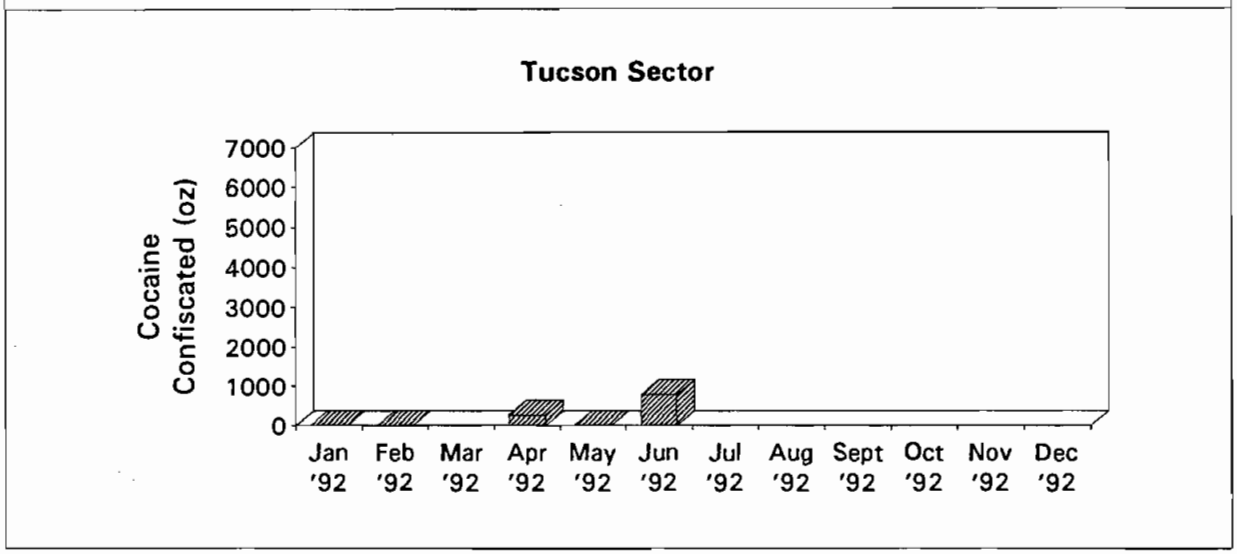

Tucson Sector
Marijuana Confiscated (lbs)
20000
15000
10000
5000
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

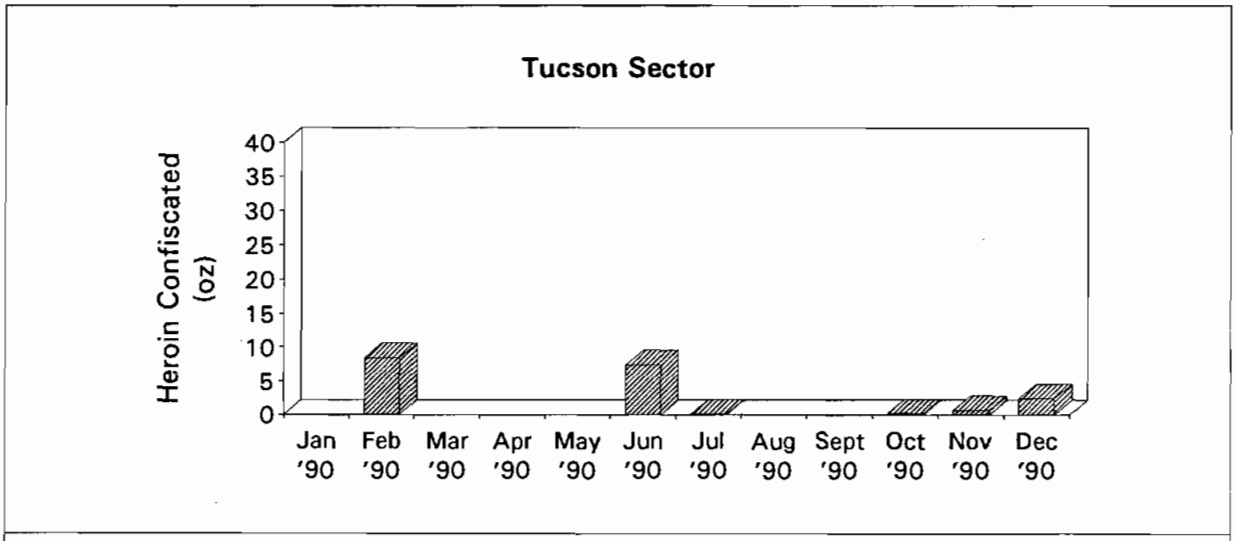

Tucson Sector
Marijuana Confiscated (lbs)
20000
15000
10000
5000
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

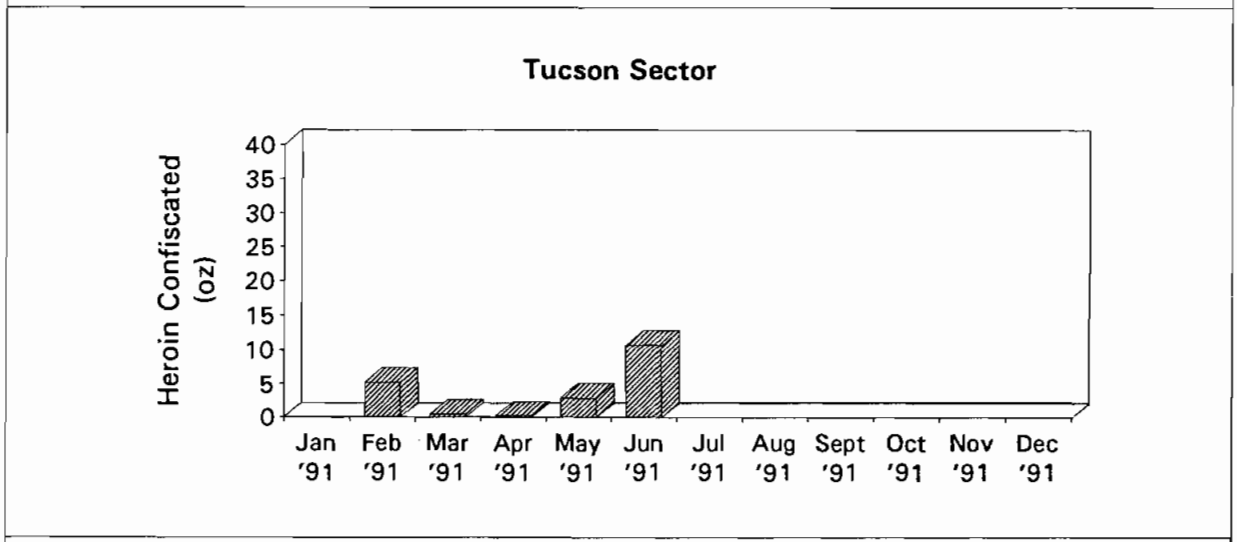

Tucson Sector
Marijuana Confiscated (lbs)
20000
15000
10000
5000
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

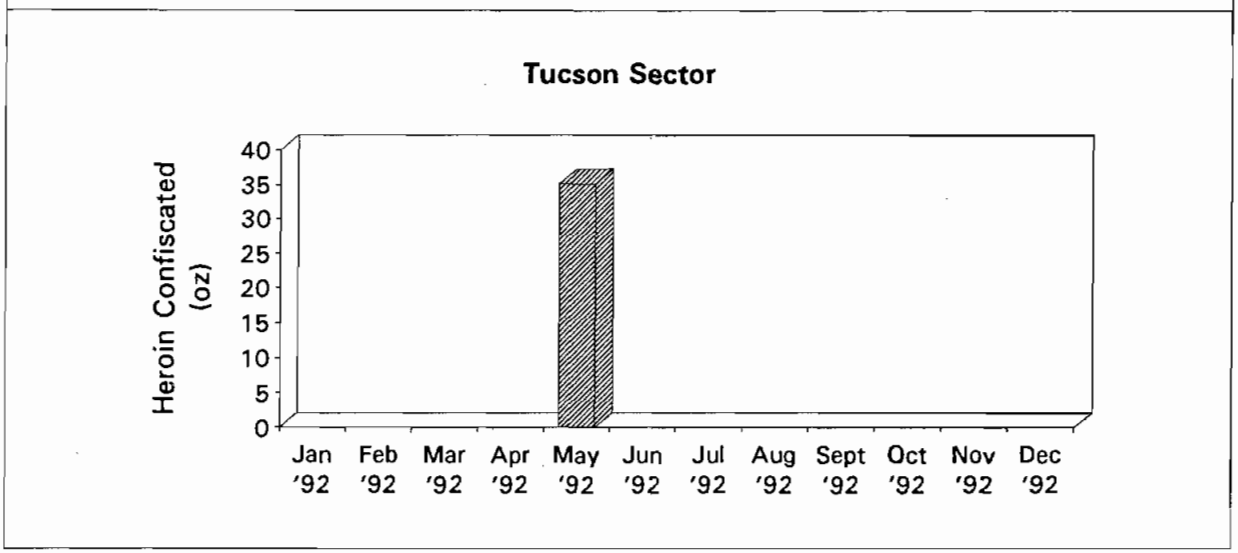

Tucson Sector
Cocaine Confiscated (oz)
7000
6000
5000
4000
3000
2000
1000
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

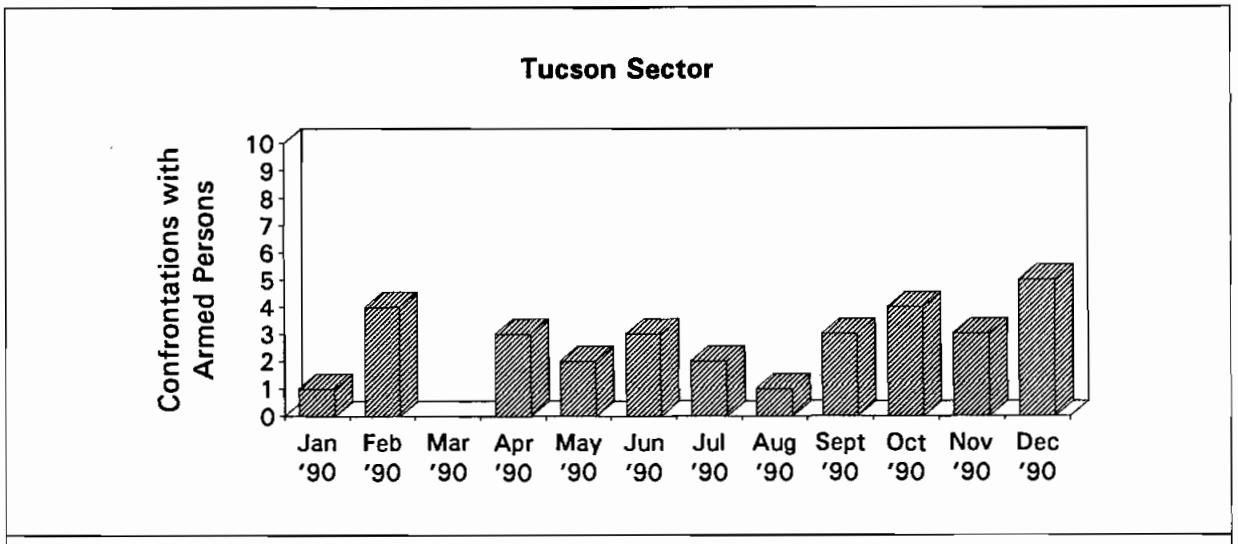

Tucson Sector
Cocaine Confiscated (oz)
7000
6000
5000
4000
3000
2000
1000
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

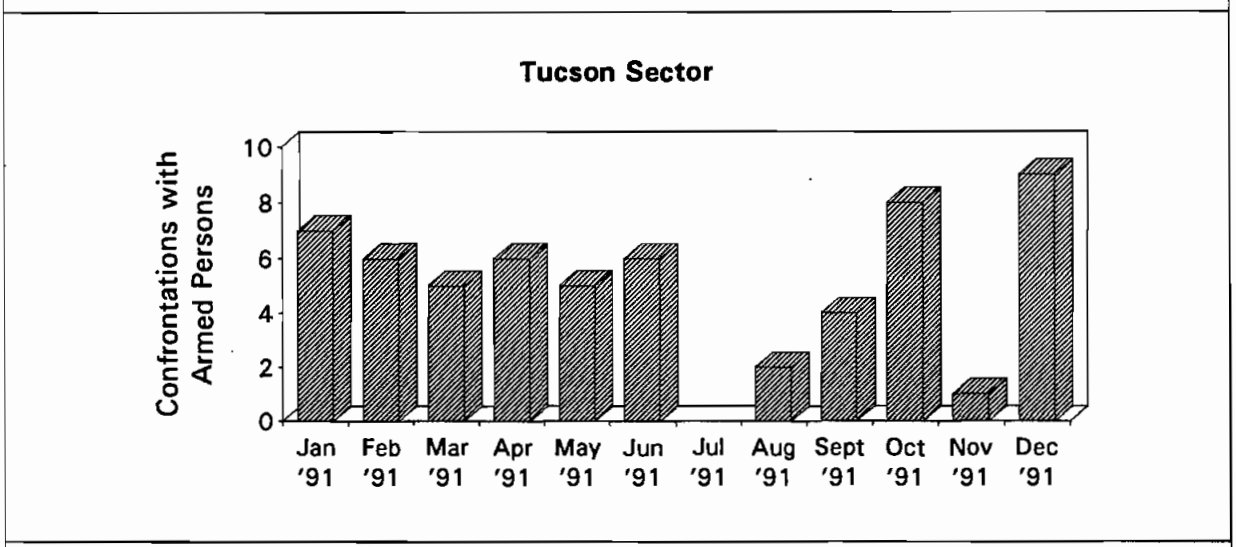

Tucson Sector
Cocaine Confiscated (oz)
7000
6000
5000
4000
3000
2000
1000
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

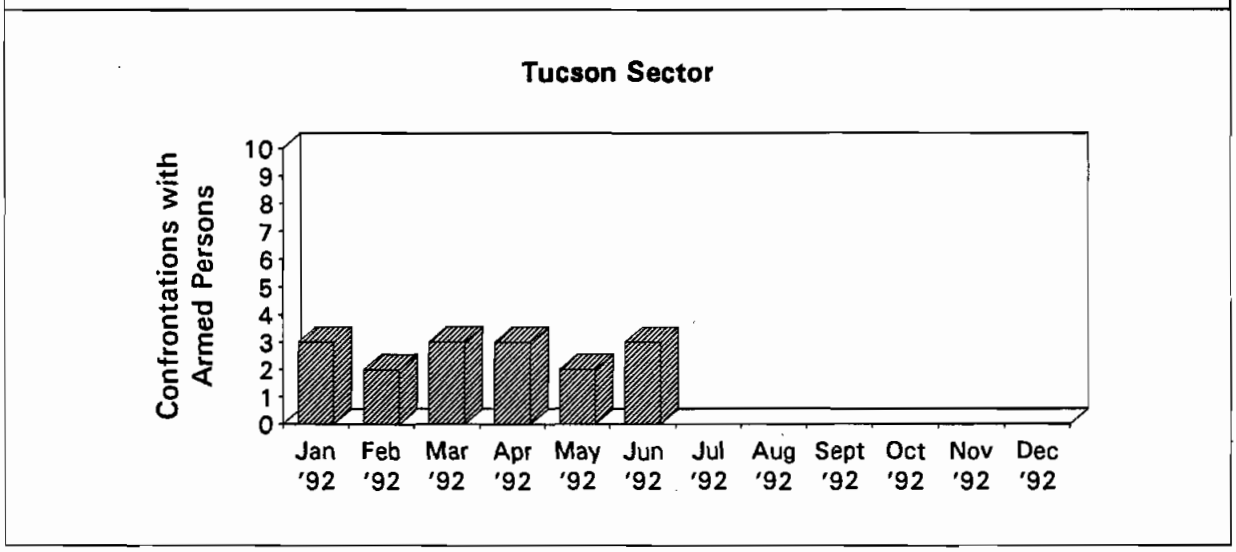

Tucson Sector
Heroin Confiscated (oz)
40
35
30
25
20
15
10
5
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

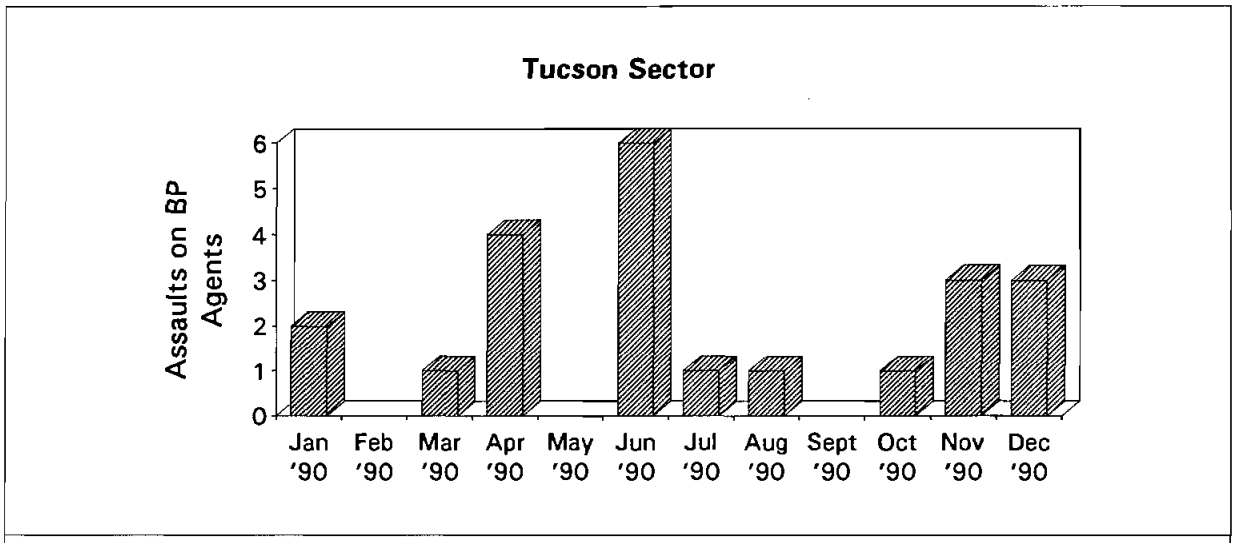

Tucson Sector
Heroin Confiscated (oz)
40
35
30
25
20
15
10
5
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

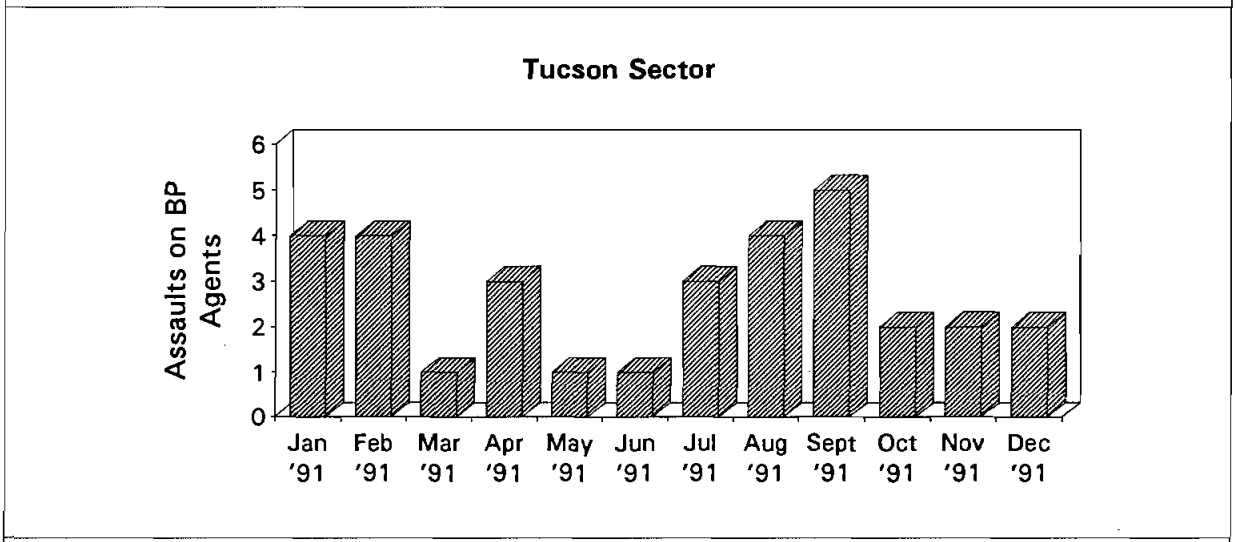

Tucson Sector
Heroin Confiscated (oz)
40
35
30
25
20
15
10
5
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

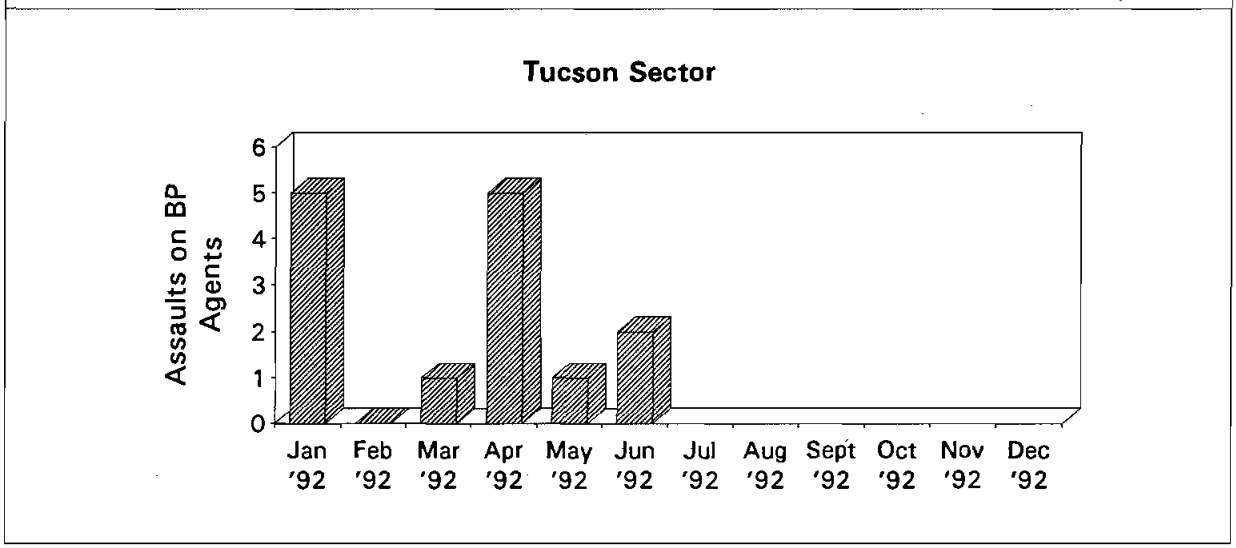

Tucson Sector
Confrontations with Armed Persons
0
1
2
3
4
5
6
7
8
9
10
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


Tucson Sector
Confrontations with Armed Persons
0
2
4
6
8
10
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


Tucson Sector
Confrontations with Armed Persons
0
1
2
3
4
5
6
7
8
9
10
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92


Tucson Sector
Assaults on BP Agents
0
1
2
3
4
5
6
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


Tucson Sector
Assaults on BP Agents
0
1
2
3
4
5
6
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


Tucson Sector
Assaults on BP Agents
0
1
2
3
4
5
6
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

## Yuma Recommendations

OUO-7

We recommend (b) (7)(E) [redacted] The (b) (7)(E) [redacted] the outer edges of the urban areas.

The Yuma sector has implemented a [redacted] to control illegal alien and drug traffic out of the Yuma area. [redacted] (attrition of manpower has reduced the ability to operate nearly full-time even more than when we visited the sector).

We recommend that the three existing checkpoints be upgraded to full-time, all-weather operation.

- (b) (7)(E) [redacted]
- [redacted]
- [redacted]

The Yuma Sector Technology Committee has developed a comprehensive plan for video surveillance. [redacted] Presently, video signals are monitored by officers at the Yuma station and sensors are monitored by radio operators at Sector Headquarters. Consolidating these two activities will increase efficiency and yield the immediate result of returning five agents to field work.

The needed [redacted]. The plans for this tower are on file at Headquarters Border Patrol and Headquarters Electronics.

We recommend that the priorities listed in the general recommendations section be followed. If the need for conventional surveillance equipment is not solved by the overall communications upgrade, we support the Yuma sector enhanced video surveillance system proposal.

The recommendations concerning the barriers and checkpoints are in general supported by sector personnel. Additional conventional physical protection equipment is shown on the spreadsheet.

OUO-7

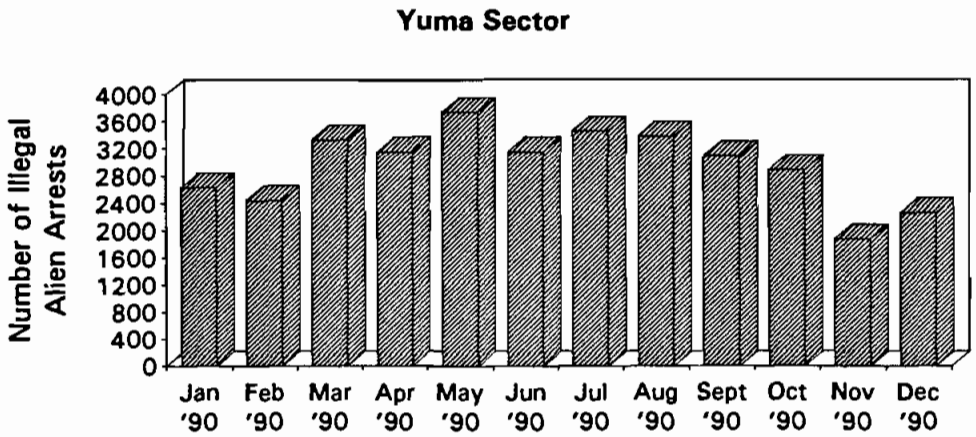
| Equipment Type | Yuma Rcmd | Yuma Ext. Cost | Unit Cost |
|---|---|---|---|
| [redacted] | | 90,750 | $825 |
| | | 41,600 | $260 |
| | | 54,725 | $995 |
| | | 5,785 | $445 |
| | | 8,375 | $1,675 |
| | | 5,200 | $400 |
| | | 22,425 | $1,495 |
| | | 4,550 | $350 |
| | | 4,160 | $320 |
| | | 174,125 | $995 |
| | | 0 | $260 |
| | | 9,990 | $4,995 |
| | | 29,940 | $2,495 |
| | | 5,250 | $1,050 |
| | | 0 | $15,000 |
| | | 9,990 | $4,995 |
| Receiver, Portable | 5 | 14,975 | $2,995 |
| Tactical | 5 | 2,350 | $470 |
| **Subtotal, Detectors** | | **$484,190** | |
| Regular Light CCTV | 5 | 8,000 | $1,600 |
| LLTV - Intensified | 7 | 59,500 | $8,500 |
| [redacted] | | 115,120 | $5,756 |
| | | 75,000 | $5,000 |
| | | 3,000 | $300 |
| | | 560,000 | $56,000 |
| | | 400,000 | $200,000 |
| Video & Sensor Cable | 1000 | 15,000 | $15 |
| **Subtotal, Assessment** | | **$1,235,620** | |
| Voice Comm, Short Range | 100 | 200,000 | $2,000 |
| Voice Comm, Long Range | 1 | 150,000 | $150,000 |
| **Subtotal, Communication** | | **$350,000** | |
| Info Control & Display | 1 | 5,000 | $5,000 |
| [redacted] | | 5,000 | $5,000 |
| **Subtotal, Cntrl & Disp** | | **$10,000** | |
| Checkpoint Shelter, Large | 0 | 0 | $300,000 |
| Checkpoint Shelter, Small | 0 | 0 | $200,000 |
| Checkpoint Personnel | 15 | 1,275,000 | $85,000 |
| Drug Dogs (Procurement) | 0 | 0 | $4,000 |
| Dog Support (Food & Vet) | 0 | 0 | $1,000 |
| [redacted] | 26400 | 792,000 | $30 |
| | 26400 | 1,848,000 | $70 |
| | 26400 | 1,584,000 | $60 |
| | 10560 | 369,600 | $35 |
| Lighting | 26400 | 660,000 | $25 |
| Patrol Roads | 26400 | 1,320,000 | $50 |
| Mobile Welder | 0.5 | 12,500 | $25,000 |
| Welder Operator | 0.5 | 42,500 | $85,000 |
| **Subtotal, Barriers, Etc.** | | **$7,903,600** | |
| Test Equipment | 1 | 100,000 | $100,000 |
| ILS, New Equipment | 1 | 100,000 | $100,000 |
| ILS, Old Equipment | 1 | 100,000 | $100,000 |
| **Subtotal, Support** | | **$300,000** | |
| **Sector Total** | | **$10,283,410** | |

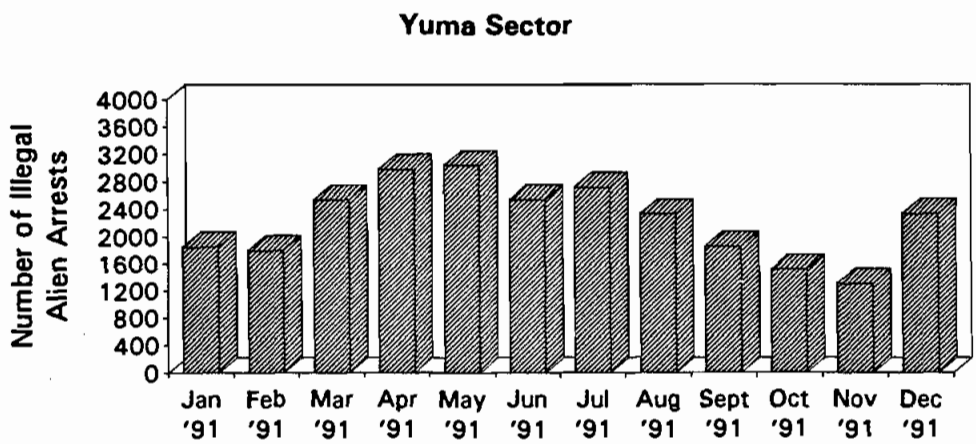
| Recurring Costs | Yuma Ext. Cost | Unit Cost |
|---|---|---|
| 15% of all Detection Assessment and Communications Equipment | $310,472 | 15.0% |
| 50% of Info Control and Display Equipment | $2,500 | 50.0% |
| 10% of the Construction Cost of Check Points for Maintenance & Utilities | $0 | 10.0% |
| 100% of Checkpont Personnel Cost and Dog Support | $1,275,000 | 100.0% |
| 5% of Barrier Cost for Maintenance | $295,680 | 5.0% |
| 15% of Lighting Cost for Maintenance & Electricity | $99,000 | 15.0% |
| 100% of Welder Operator | $42,500 | 100.0% |
| 25% of Test Equipment for Calibration, Repair and Upgrading of Equipment | $25,000 | 25.0% |
| 100% of ILS Costs | $200,000 | 100.0% |
| Total Recurring Cost for Each Sector | $2,250,152 | |

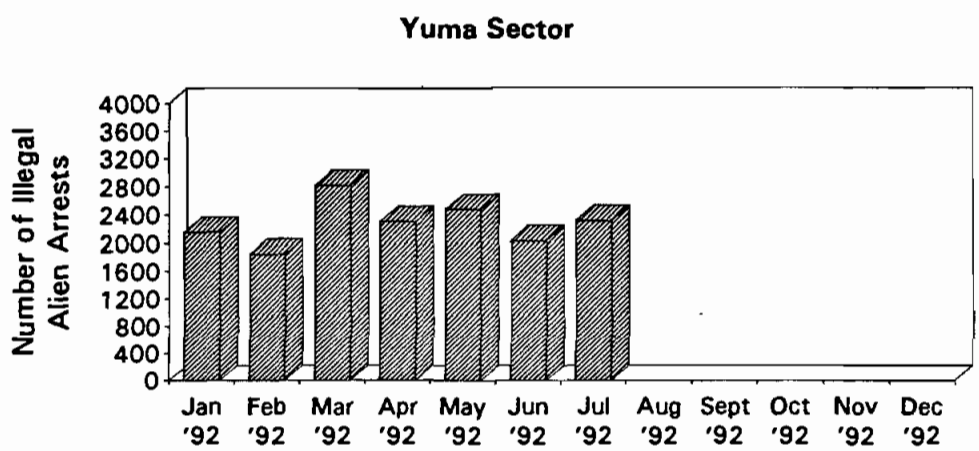
## Yuma Sector Analysis

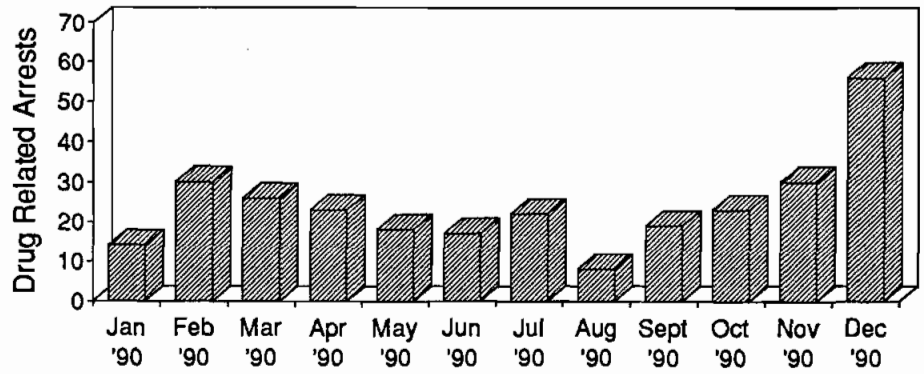
The data given in the Yuma sector discussion of "Contact with Suspects" is plotted on the following charts to show the overall trend of what has been happening in the sector for the years 1990, 1991, and the first half of 1992. The activities of the total Southwest Border are given at the end of this section.

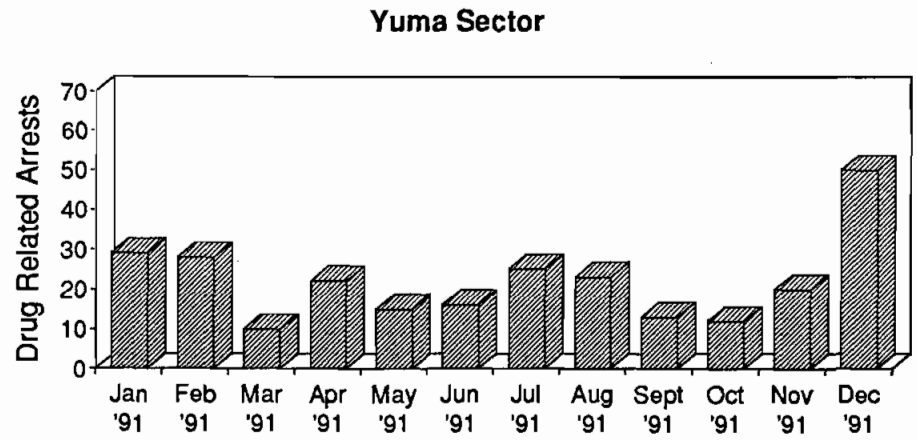
The analysis shows significant increases in the average numbers of alien arrests per month, drug-related arrests, and marijuana confiscated. The average amount of cocaine and heroin significantly decreased. The plots of cocaine and heroin show a few months with large activity mixed with many smaller activity months. The data on confrontations with armed persons and assaults of Border Patrol agents are small averages, but the individual plots show decreases or small changes in these areas.

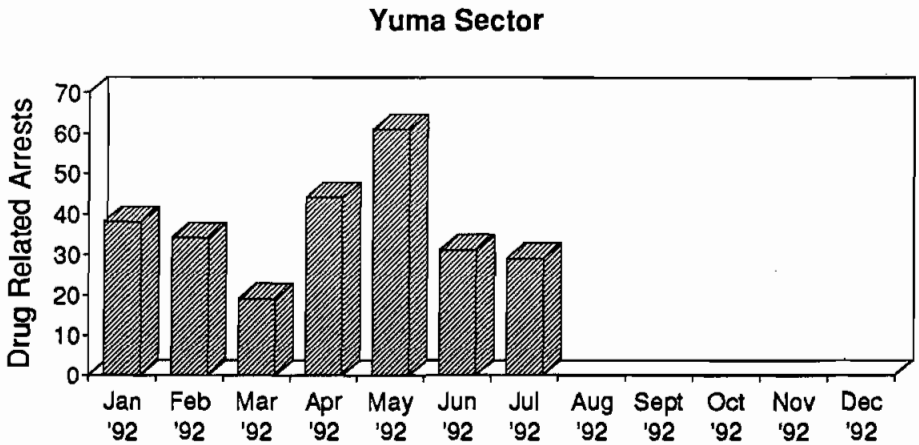

Yuma Sector
Number of Illegal Alien Arrests
4000
3600
3200
2800
2400
2000
1600
1200
800
400
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

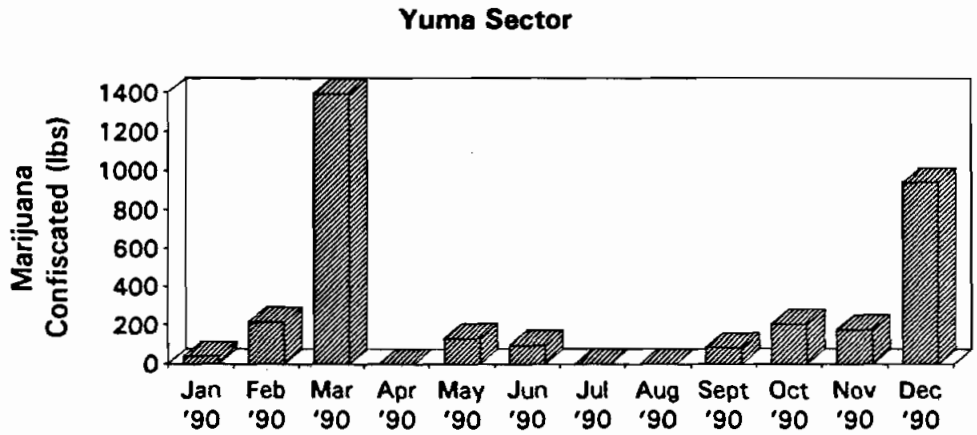

Yuma Sector
Number of Illegal Alien Arrests
4000
3600
3200
2800
2400
2000
1600
1200
800
400
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

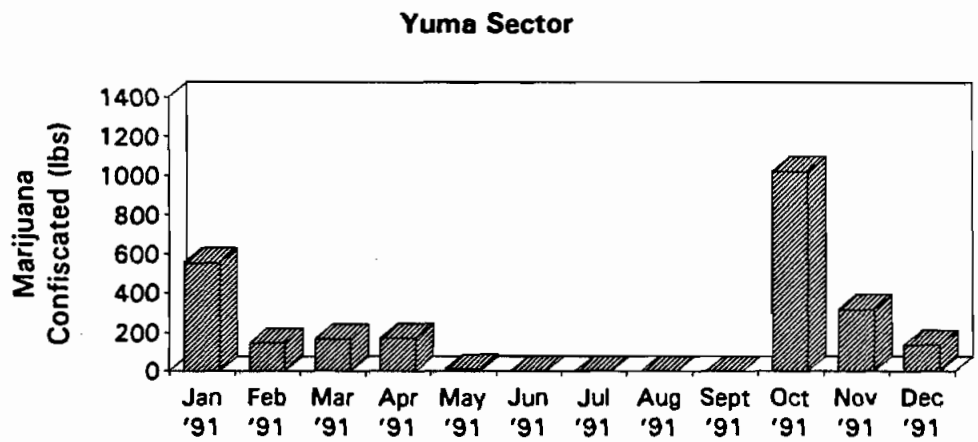

Yuma Sector
Number of Illegal Alien Arrests
4000
3600
3200
2800
2400
2000
1600
1200
800
400
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

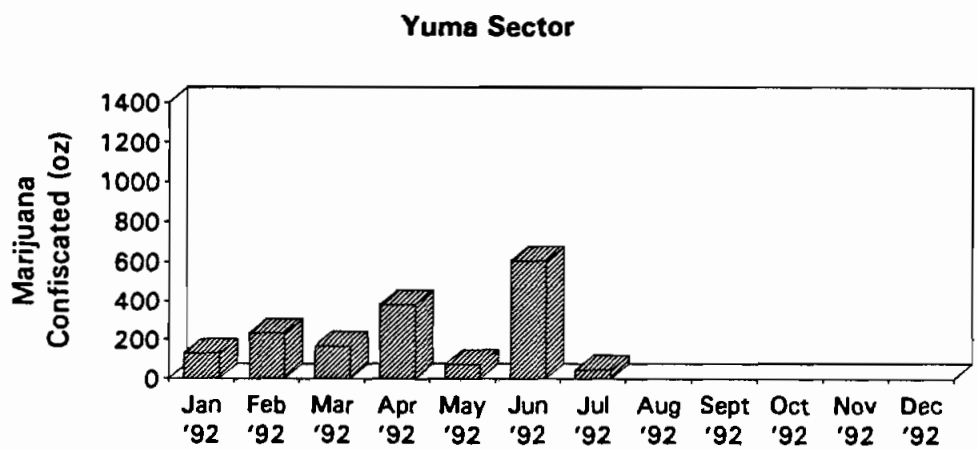

Yuma Sector
Drug Related Arrests
70
60
50
40
30
20
10
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

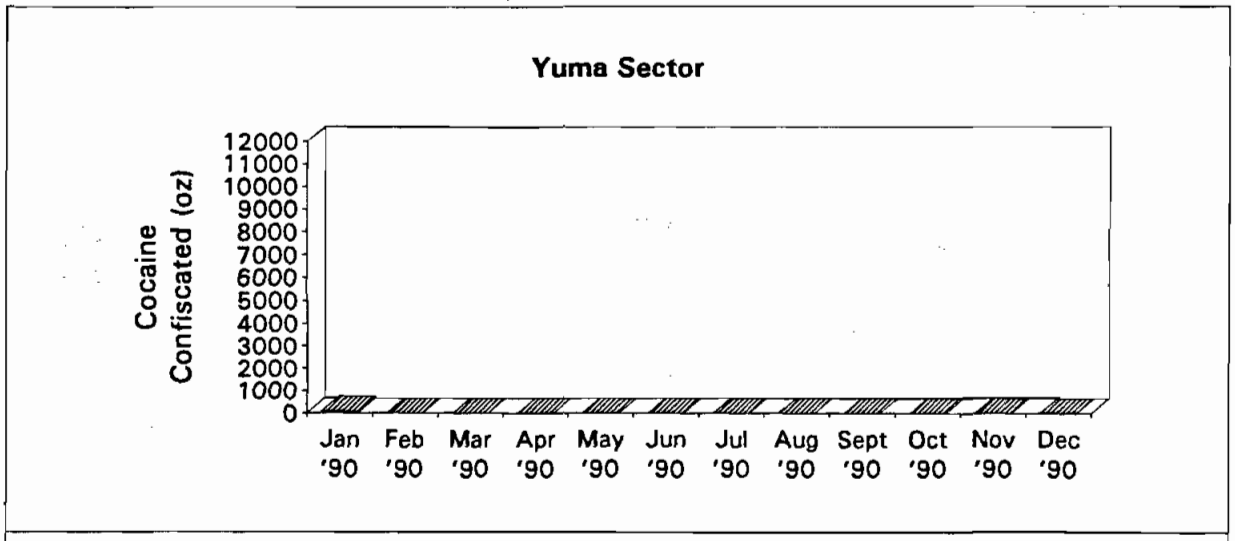

Yuma Sector
Drug Related Arrests
70
60
50
40
30
20
10
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

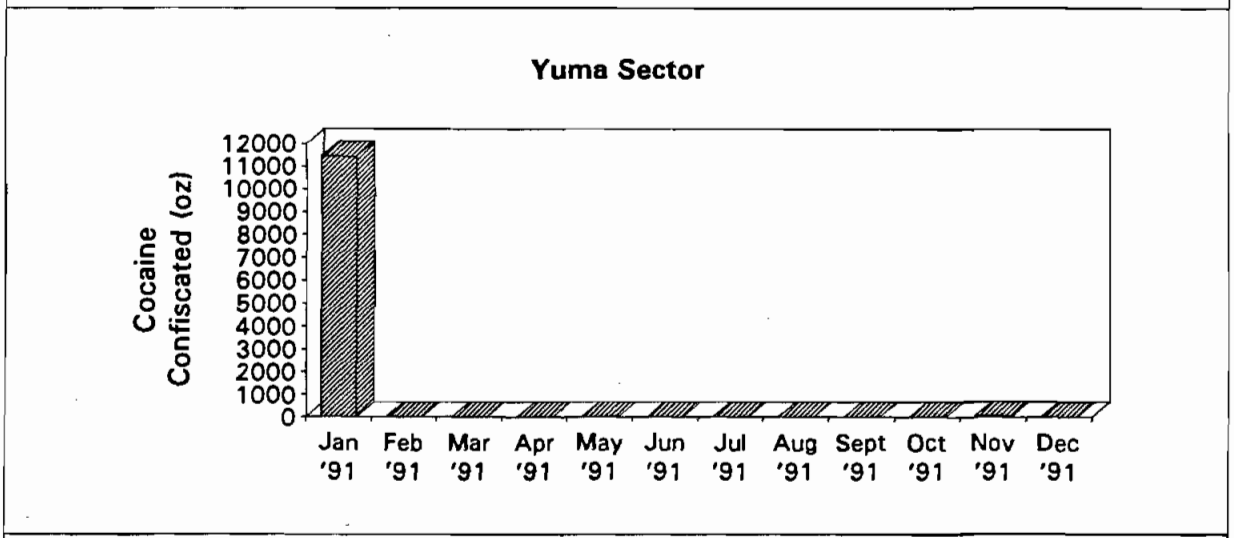

Yuma Sector
Drug Related Arrests
70
60
50
40
30
20
10
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

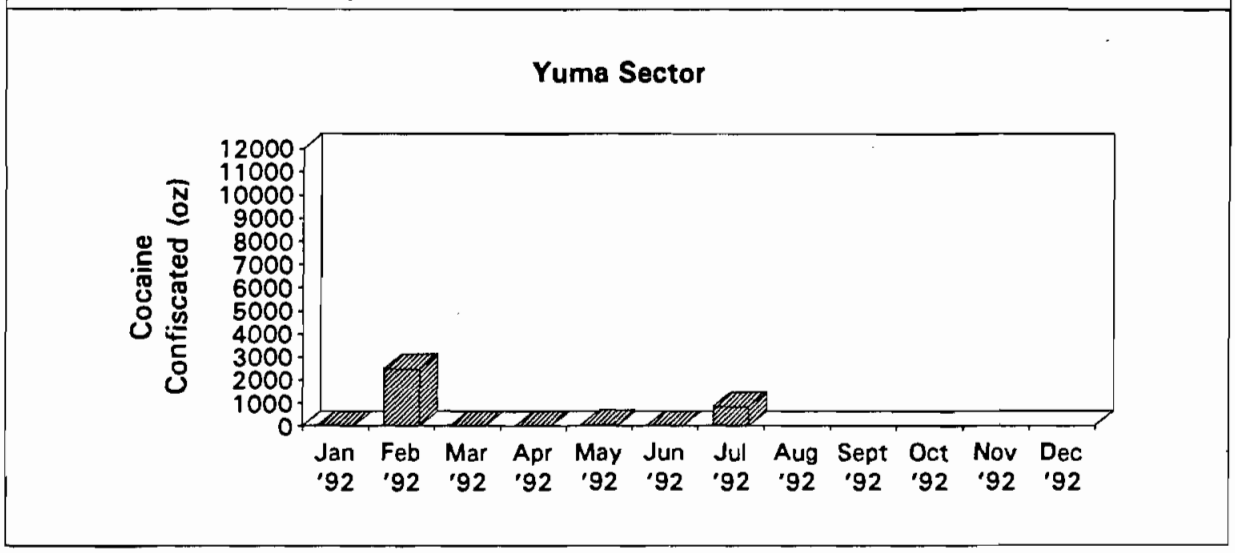

Yuma Sector
Marijuana Confiscated (lbs)
1400
1200
1000
800
600
400
200
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


Yuma Sector
Marijuana Confiscated (lbs)
1400
1200
1000
800
600
400
200
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


Yuma Sector
Marijuana Confiscated (oz)
1400
1200
1000
800
600
400
200
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92


Yuma Sector
Cocaine Confiscated (oz)
12000
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


Yuma Sector
Cocaine Confiscated (oz)
12000
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


Yuma Sector
Cocaine Confiscated (oz)
12000
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
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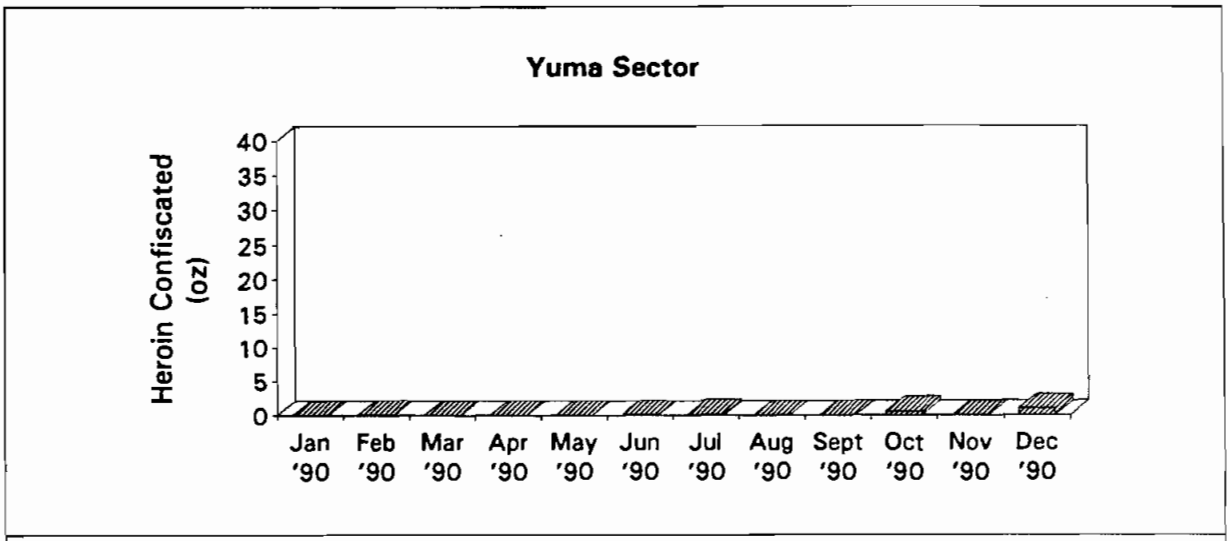
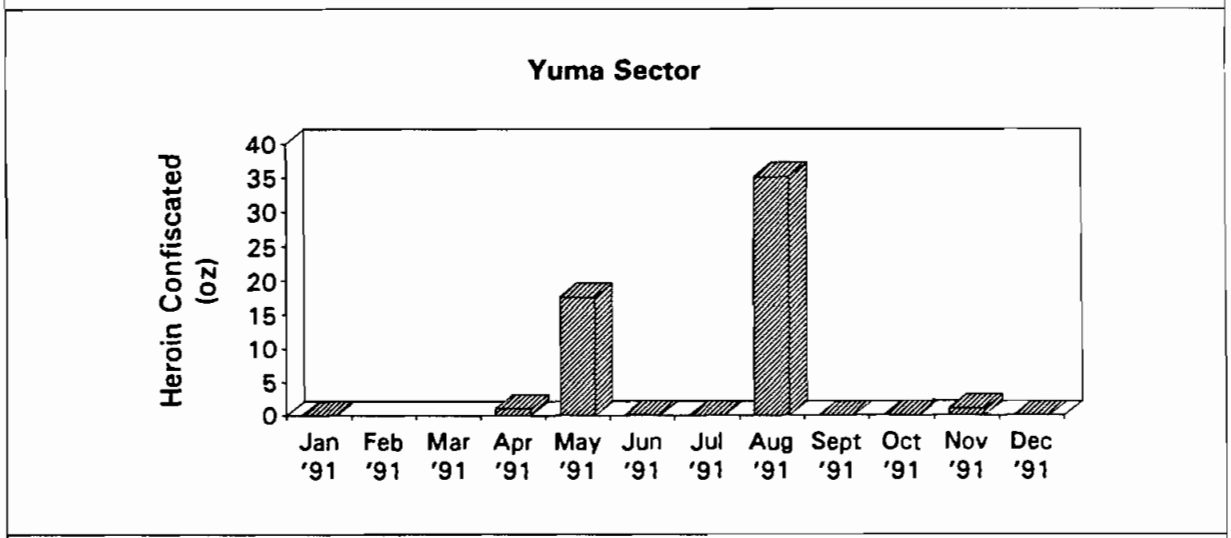
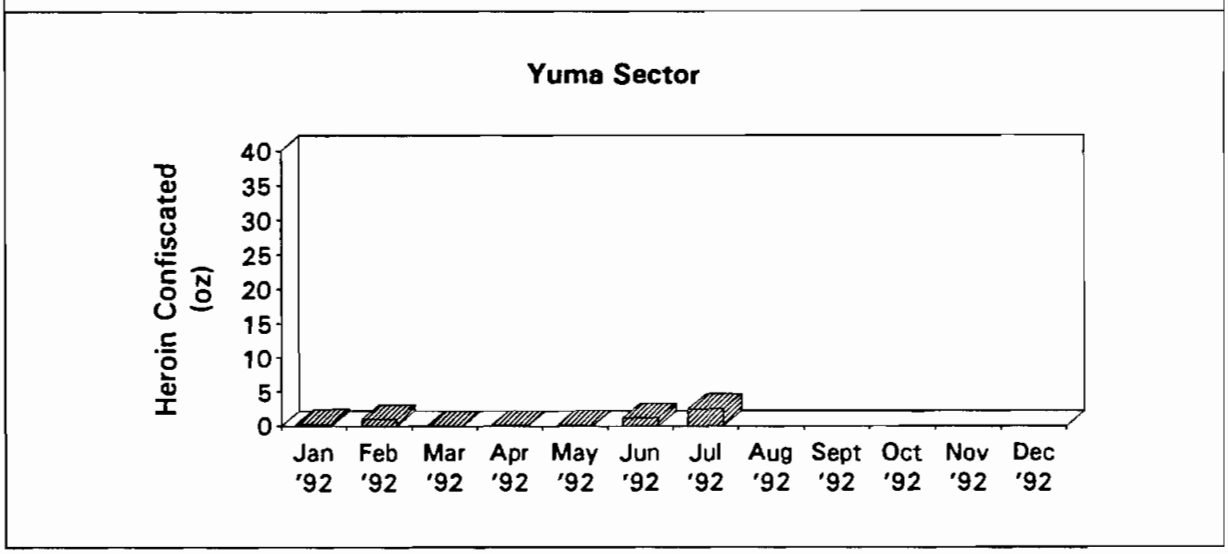
Oct '92
Nov '92
Dec '92


Yuma Sector
Heroin Confiscated (oz)
40
35
30
25
20
15
10
5
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


Yuma Sector
Heroin Confiscated (oz)
40
35
30
25
20
15
10
5
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


Yuma Sector
Heroin Confiscated (oz)
40
35
30
25
20
15
10
5
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
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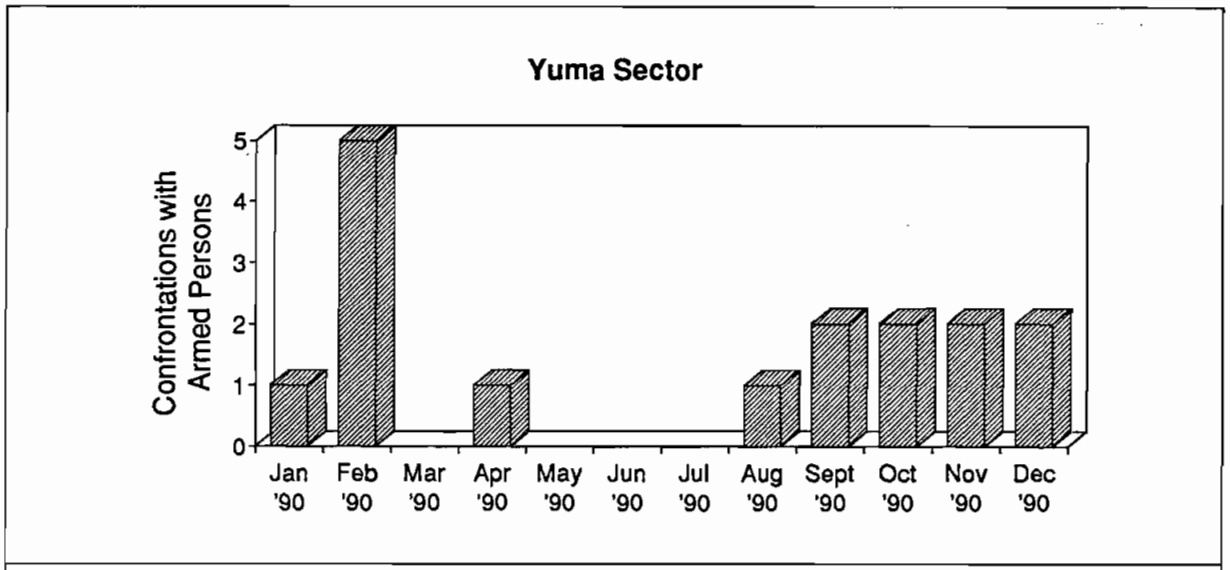
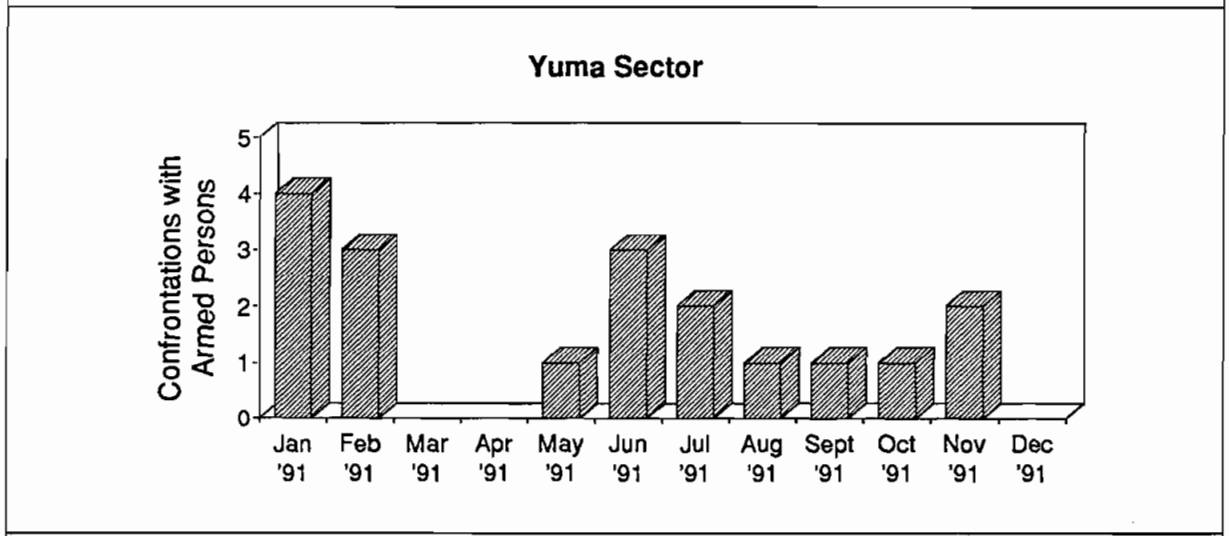
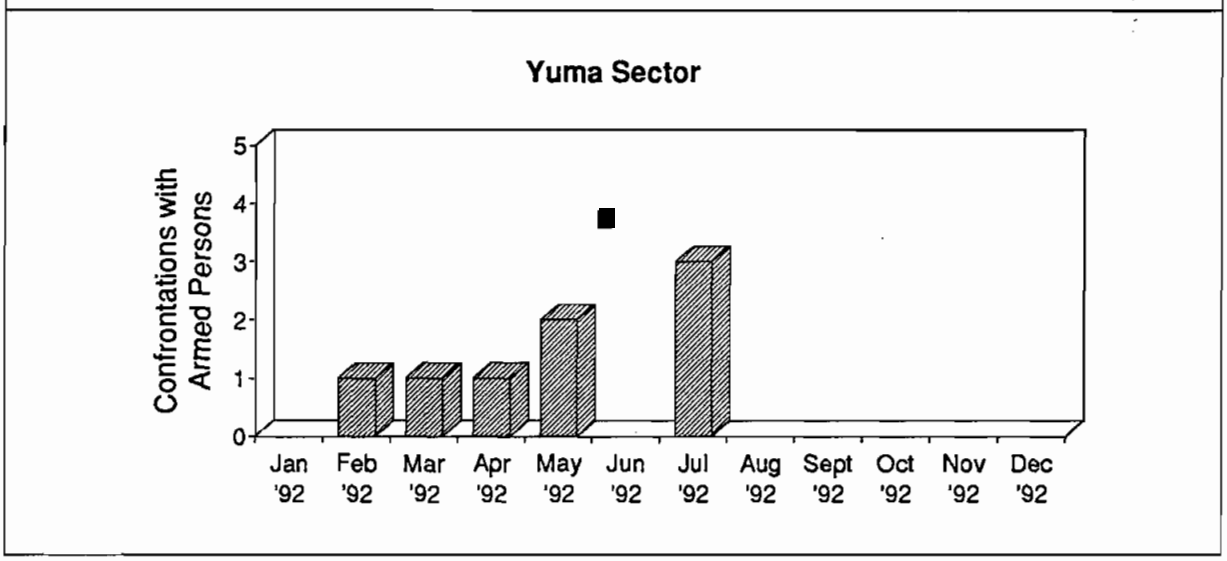
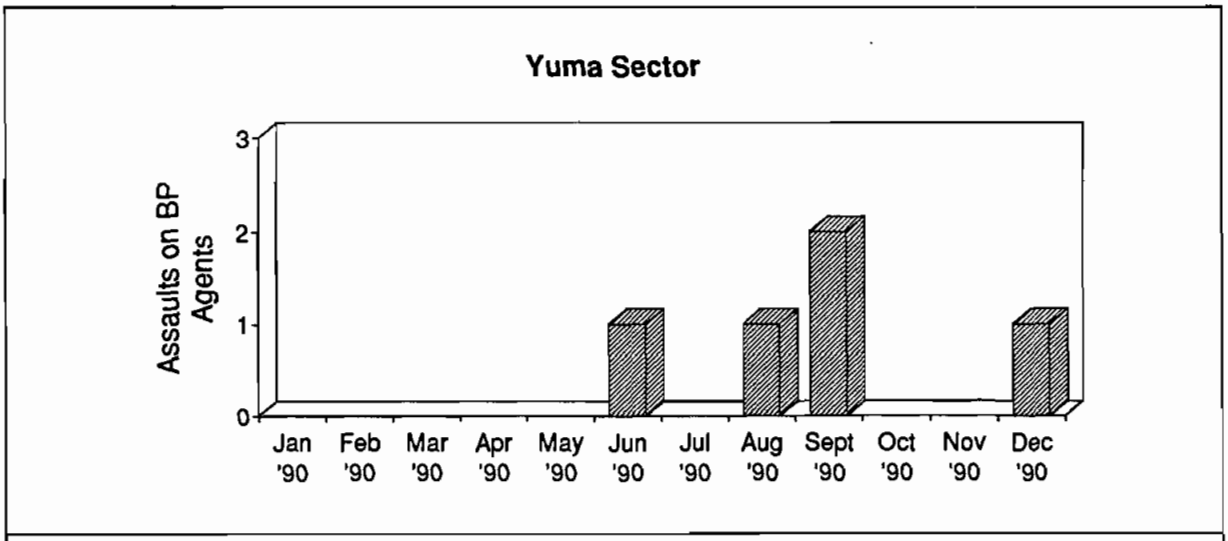
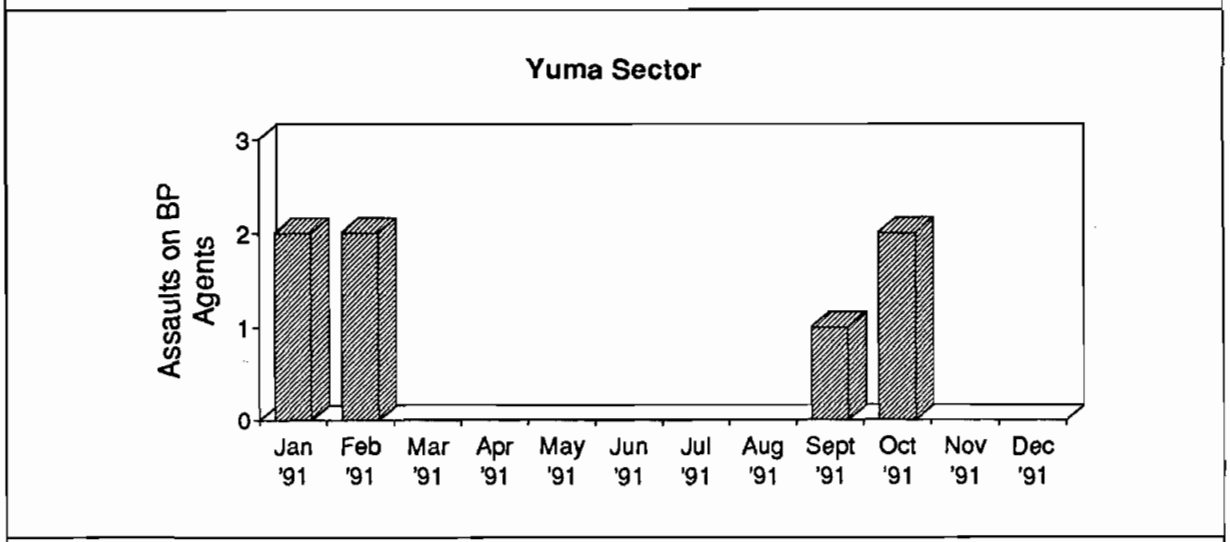
Nov '92
Dec '92

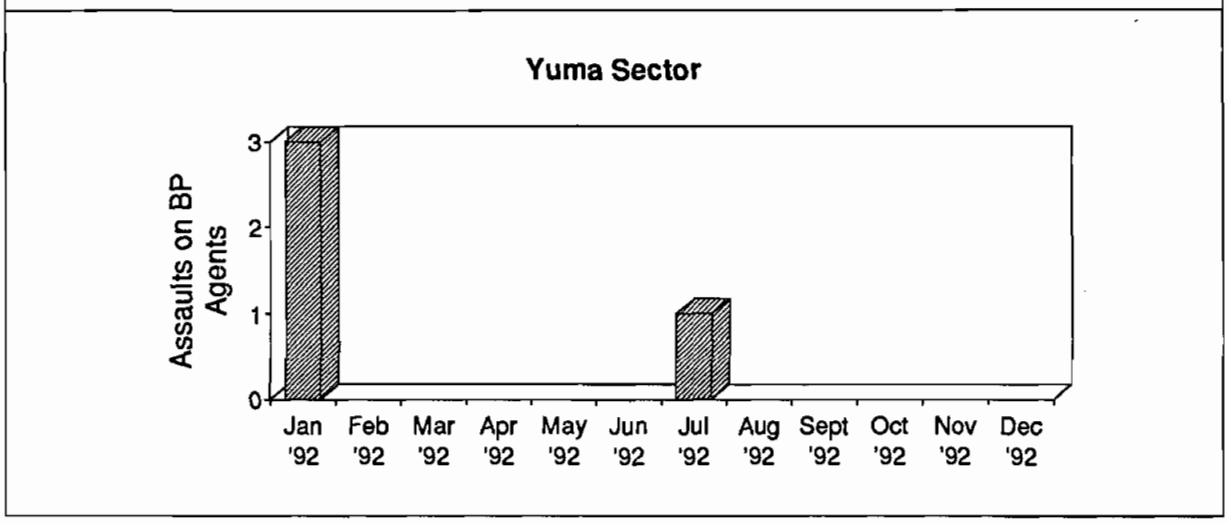

Yuma Sector
Confrontations with Armed Persons
0
1
2
3
4
5
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


Yuma Sector
Confrontations with Armed Persons
0
1
2
3
4
5
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


Yuma Sector
Confrontations with Armed Persons
0
1
2
3
4
5
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92


Yuma Sector
Assaults on BP Agents
0
1
2
3
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


Yuma Sector
Assaults on BP Agents
0
1
2
3
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


Yuma Sector
Assaults on BP Agents
0
1
2
3
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

## El Centro Recommendations

OUO-7

(b) (7)(E) [redacted].

In addition to the existing [redacted] is sometimes operated on [redacted]. Three new highway checkpoints are recommended:

- (b) (7)(E) [redacted]
- [redacted]
- [redacted]
- [redacted].

These highway checkpoints will require assignment of about 45 agents for full-time operation. Sector personnel expressed concern about the cost effectiveness of the permanent checkpoint on [redacted] and that their other checkpoints seemed to cover all of the routes out of the area. We have identified what we believe to be viable routes for traffic on [redacted] to exit the area without encountering a checkpoint, and for that reason continue our recommendation that the [redacted] checkpoint be established. All of the permanent checkpoints should be capable of full-time, all-weather operation.

The intricacies of the illegal traffic and how they reroute their operations is demonstrated by some of the interactions between the San Diego and El Centro checkpoints. For example, when the San Diego sector's checkpoint at [redacted], California, is manned, the apprehensions on [redacted] of El Centro's [redacted] checkpoint greatly increase. This demonstrates to us that those involved in illegal traffic carefully monitor which checkpoints are operational and will seek alternate routes to avoid them. This is also reason to consider some full-time, all-weather checkpoints on routes that may normally be low-volume routes.

A concern expressed by sector personnel is that of inconvenience to the motoring public if they are stopped too often. The checkpoints are located to minimize this problem and still fulfill the containment strategy.

OUO-7

We recommend that the priorities in the General Recommendations section be followed. In the Conventional Physical Protection Equipment section, we believe that a slow-scan CCTV system should be considered if adequate personnel are available to respond to the detection and assessments made. If those personnel are not available, then the sign-cutting and apprehension procedures now in place should be continued. The situation for considering the slow-scan system is discussed below.

The [redacted]. The canal forms a formidable barrier for those illegal aliens who cannot swim. There are a number of [redacted], and these are all potential [redacted]. Slow-scan CCTV is desired by the sector personnel to monitor these crossings. The western [redacted] miles of the sector consists of either rugged mountains or flat desert. During construction of the barrier system, additional night vision devices would aid the linewatch operation. The [redacted] of the [redacted] should also be [redacted]. We also recommend [redacted]

There may be areas near the eastern end of Mexicali where sign-cutting would be useful and help alert personnel at highway checkpoints to potential illegal alien penetration attempts.

Other conventional physical protection equipment is mentioned in the portion of the accompanying spreadsheet.

Sector personnel are in general agreement with the use of the heavily patrolled barriers and containment philosophy recommended.

OUO-7

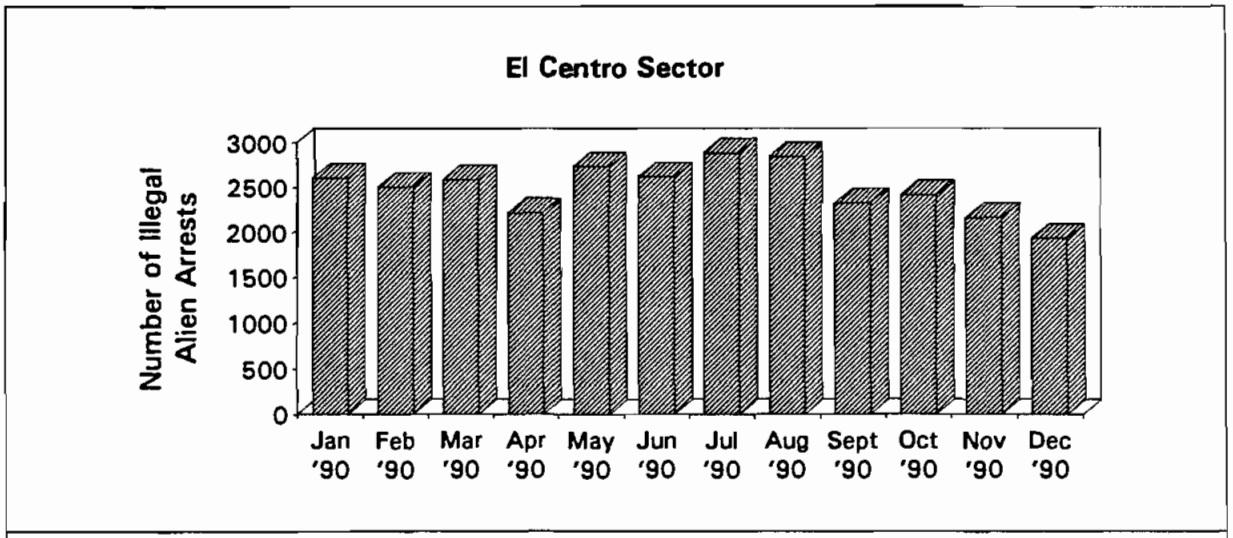
| Equipment Type | El Centro Rcmd | El Centro Ext. Cost | Unit Cost |
|---|---|---|---|
| [redacted] | | 90,750 | $825 |
| | | 79,040 | $260 |
| | | 24,875 | $995 |
| | | 9,790 | $445 |
| | | 8,375 | $1,675 |
| | | 8,800 | $400 |
| | | 37,375 | $1,495 |
| | | 7,700 | $350 |
| | | 7,040 | $320 |
| | | 149,250 | $995 |
| | | 2,080 | $260 |
| | | 14,985 | $4,995 |
| | | 12,475 | $2,495 |
| | | 3,150 | $1,050 |
| | | 0 | $15,000 |
| | | 9,990 | $4,995 |
| Receiver, Portable | 4 | 11,980 | $2,995 |
| Tactical | 8 | 3,760 | $470 |
| **Subtotal, Detectors** | | **$481,415** | |
| Regular Light CCTV | 10 | 16,000 | $1,600 |
| LLTV - Intensified | 6 | 51,000 | $8,500 |
| [redacted] | | 57,560 | $5,756 |
| | | 100,000 | $5,000 |
| | | 6,000 | $300 |
| | | 560,000 | $56,000 |
| | | 400,000 | $200,000 |
| Video & Sensor Cable | 1000 | 15,000 | $15 |
| **Subtotal, Assessment** | | **$1,205,560** | |
| Voice Comm, Short Range | 100 | 200,000 | $2,000 |
| Voice Comm, Long Range | 1 | 150,000 | $150,000 |
| **Subtotal, Communication** | | **$350,000** | |
| Info Control & Display | 1 | 5,000 | $5,000 |
| [redacted] | | 5,000 | $5,000 |
| **Subtotal, Cntrl & Disp** | | **$10,000** | |
| Checkpoint Shelter, Large | 0 | 0 | $300,000 |
| Checkpoint Shelter, Small | 3 | 600,000 | $200,000 |
| Checkpoint Personnel | 45 | 3,825,000 | $85,000 |
| Drug Dogs (Procurement) | 18 | 72,000 | $4,000 |
| Dog Support (Food & Vet) | 18 | 18,000 | $1,000 |
| [redacted] | 31680 | 950,400 | $30 |
| | 31680 | 2,217,600 | $70 |
| | 31680 | 1,900,800 | $60 |
| Vehicle Barrier | 10560 | 369,600 | $35 |
| Lighting | 31680 | 792,000 | $25 |
| Patrol Roads | 31680 | 1,584,000 | $50 |
| Mobile Welder | 0.5 | 12,500 | $25,000 |
| Welder Operator | 0.5 | 42,500 | $85,000 |
| **Subtotal, Barriers, Etc.** | | **$12,384,400** | |
| Test Equipment | 1 | 100,000 | $100,000 |
| ILS, New Equipment | 1 | 100,000 | $100,000 |
| ILS, Old Equipment | 1 | 100,000 | $100,000 |
| **Subtotal, Support** | | **$300,000** | |
| **Sector Total** | | **$14,731,375** | |

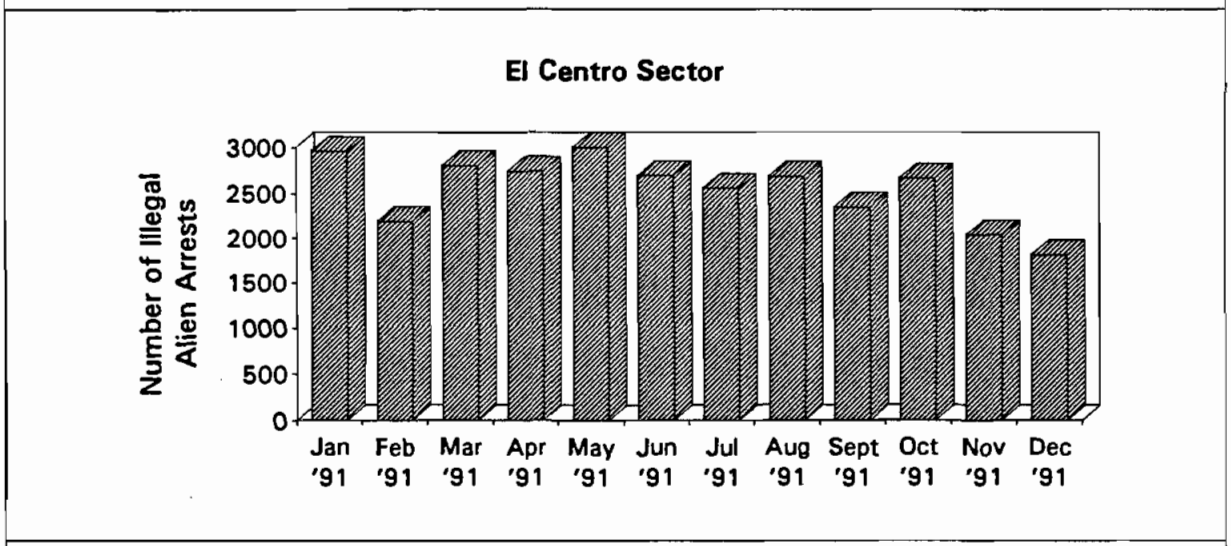
| Recurring Costs | El Centro Ext. Cost | Unit Cost |
|---|---|---|
| 15% of all Detection Assessment and Communications Equipment | $305,546 | 15.0% |
| 50% of Info Control and Display Equipment | $2,500 | 50.0% |
| 10% of the Construction Cost of Check Points for Maintenance & Utilities | $60,000 | 10.0% |
| 100% of Checkpont Personnel Cost and Dog Support | $3,843,000 | 100.0% |
| 5% of Barrier Cost for Maintenance | $351,120 | 5.0% |
| 15% of Lighting Cost for Maintenance & Electricity | $118,800 | 15.0% |
| 100% of Welder Operator | $42,500 | 100.0% |
| 25% of Test Equipment for Calibration, Repair and Upgrading of Equipment | $25,000 | 25.0% |
| 100% of ILS Costs | $200,000 | 100.0% |
| Total Recurring Cost for Each Sector | $4,948,466 | |

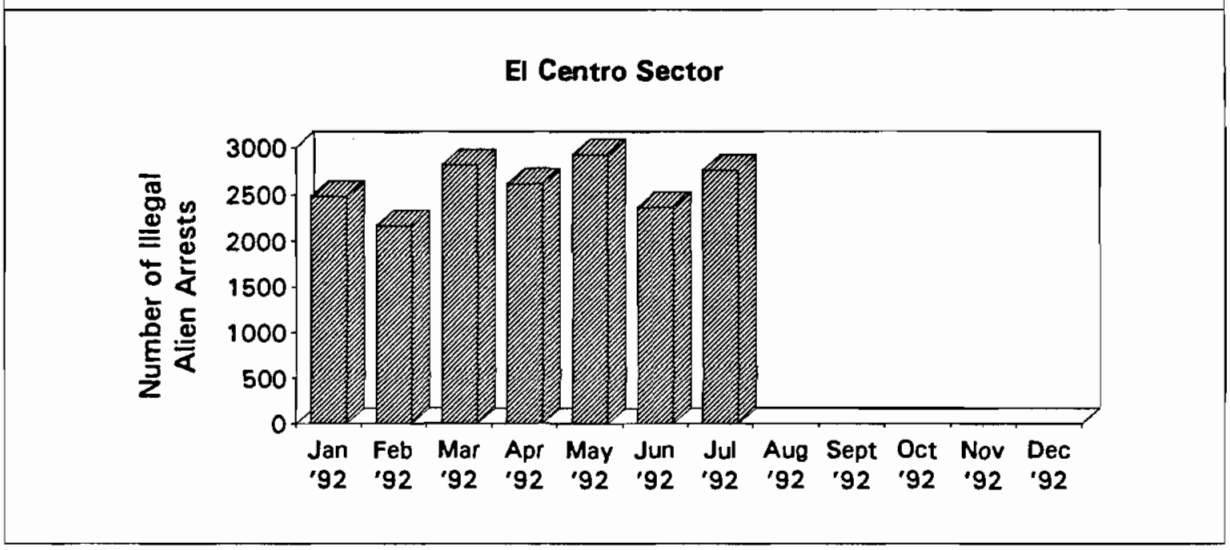
## El Centro Sector Analysis

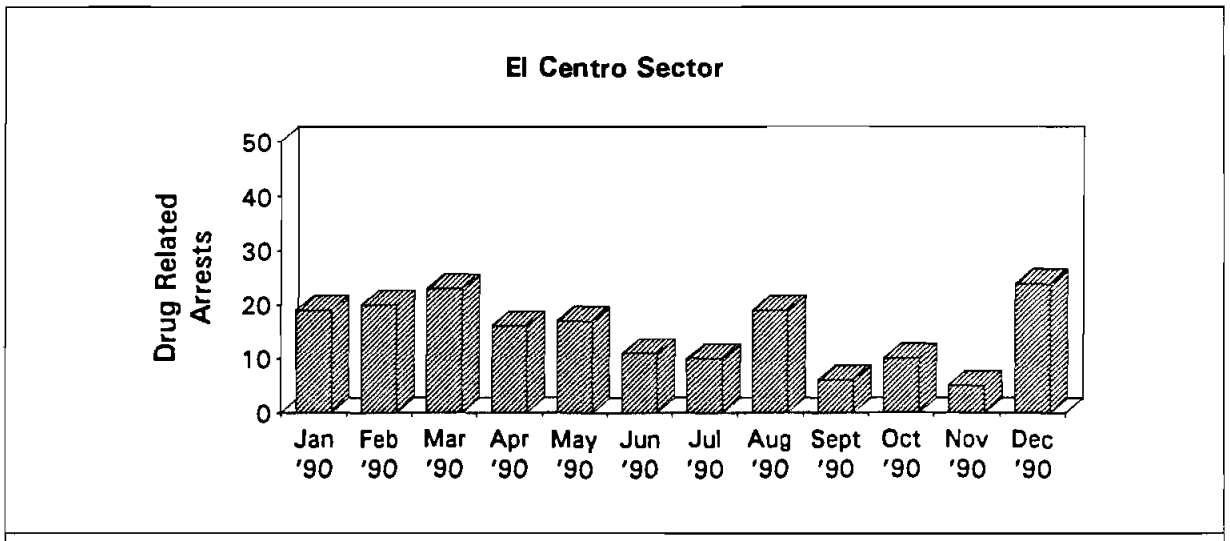
The data given in the El Centro sector discussion of "Contact with Suspects" is plotted on the following charts to show the overall trend of what has been happening in the sector for the years 1990, 1991, and the first half of 1992. The activities of the total Southwest Border are given at the end of this section.

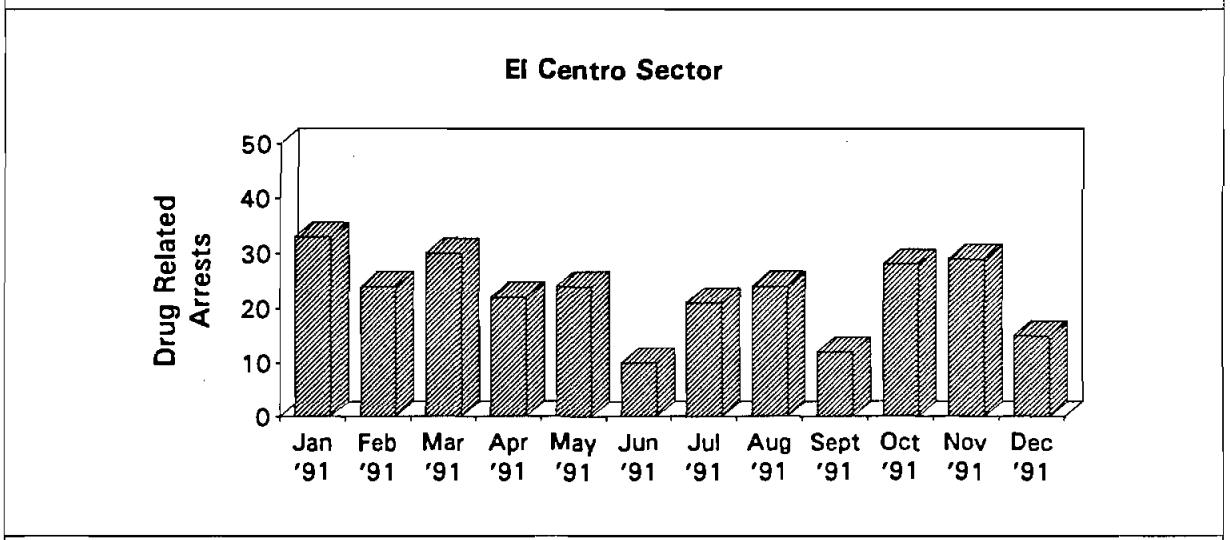
The analysis shows increases in the average numbers of alien arrests per month and drug-related arrests and significant increases in marijuana and cocaine confiscated. The average amount of heroin is decreased. The plots of cocaine and heroin show a few months with large activity mixed with many smaller activity months. The data on confrontations with armed persons and assaults of Border Patrol agents are small averages, but the individual plots show increases or small changes in these areas.

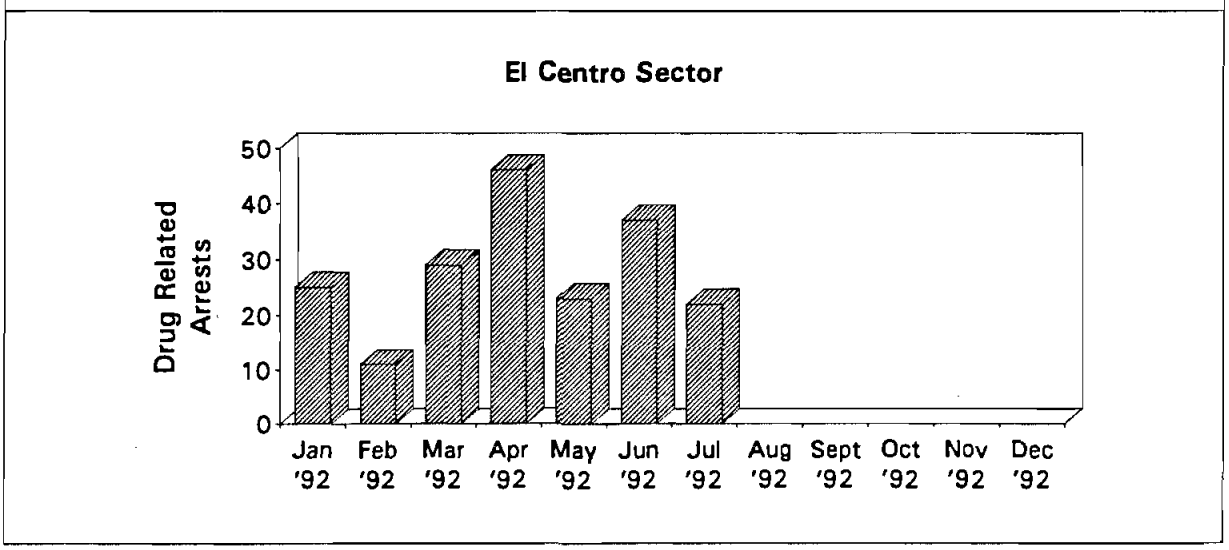

El Centro Sector
Number of Illegal Alien Arrests
3000
2500
2000
1500
1000
500
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

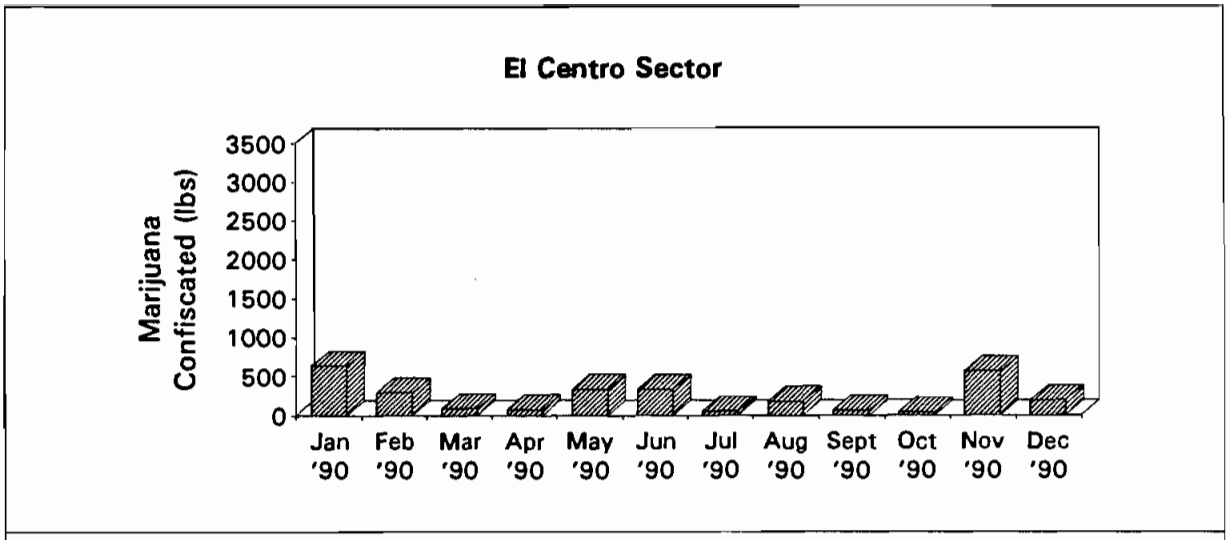

El Centro Sector
Number of Illegal Alien Arrests
3000
2500
2000
1500
1000
500
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

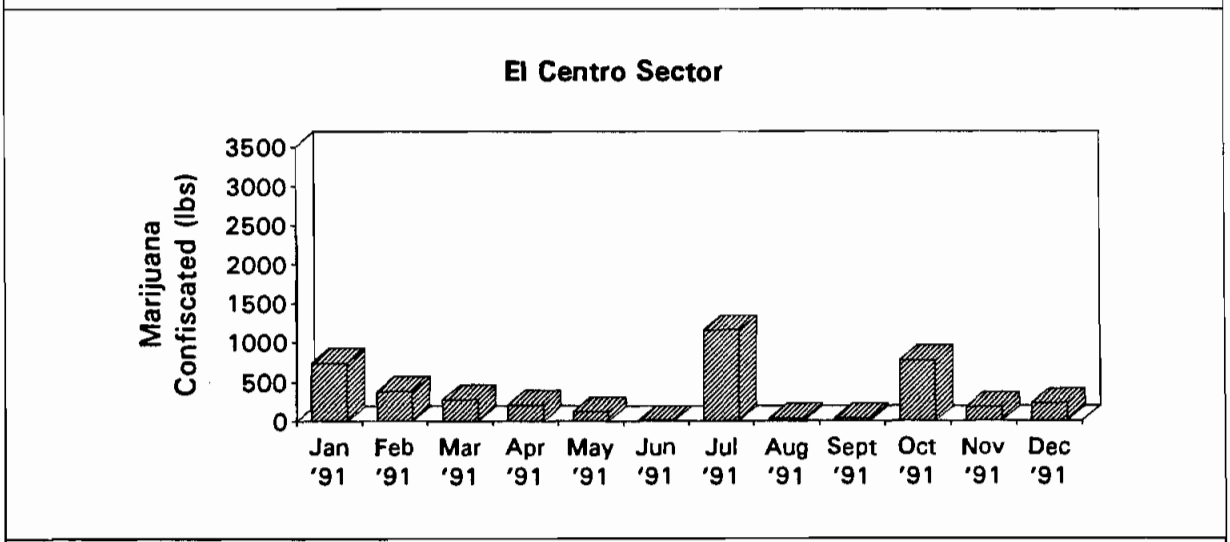

El Centro Sector
Number of Illegal Alien Arrests
3000
2500
2000
1500
1000
500
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

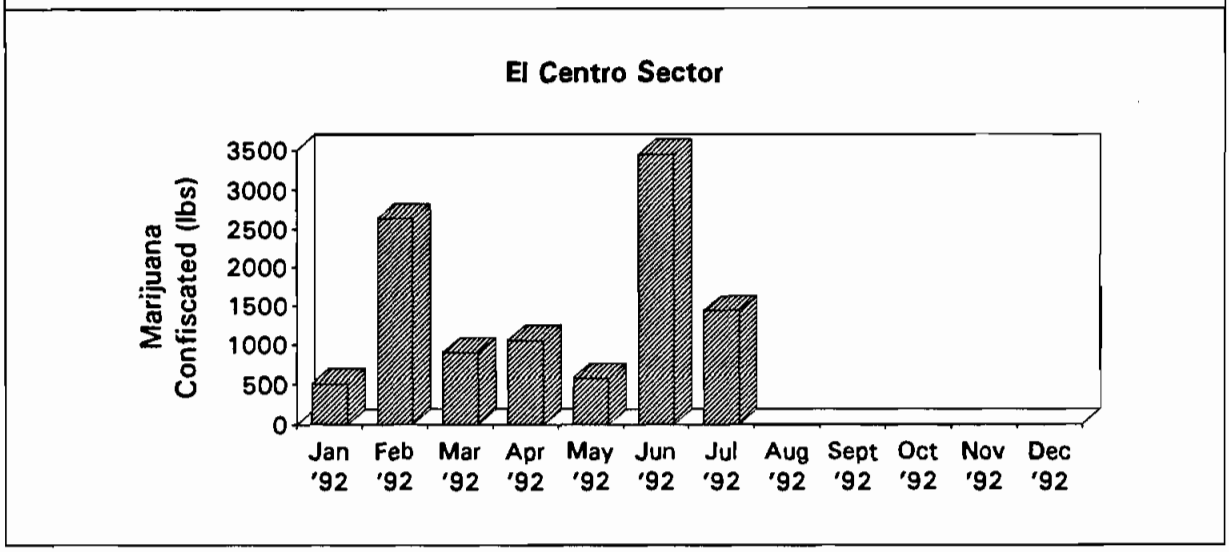

El Centro Sector
Drug Related Arrests
50
40
30
20
10
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

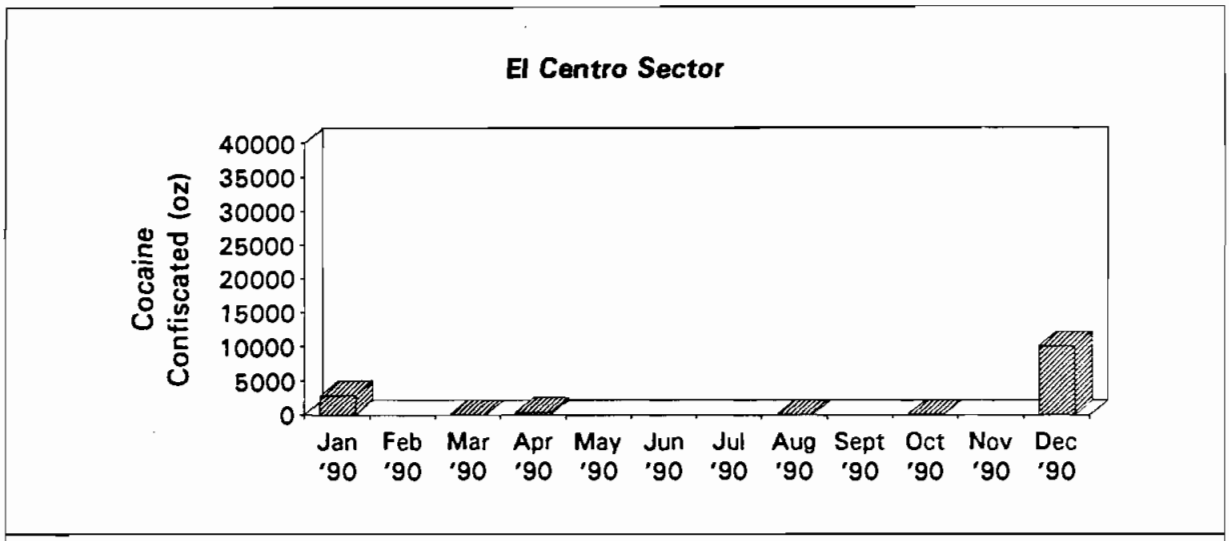

El Centro Sector
Drug Related Arrests
50
40
30
20
10
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

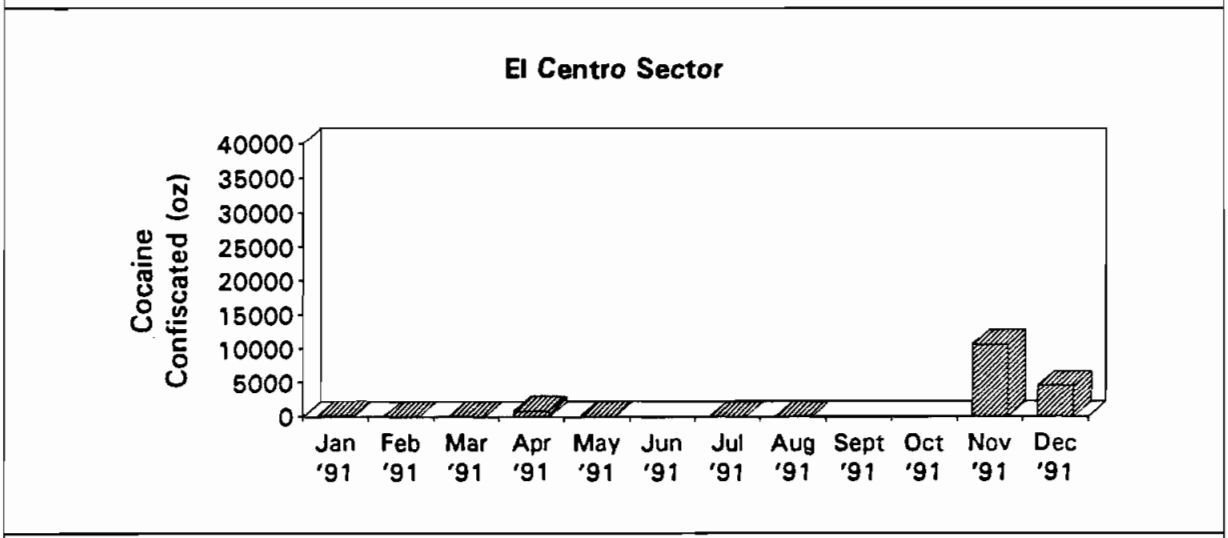

El Centro Sector
Drug Related Arrests
50
40
30
20
10
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

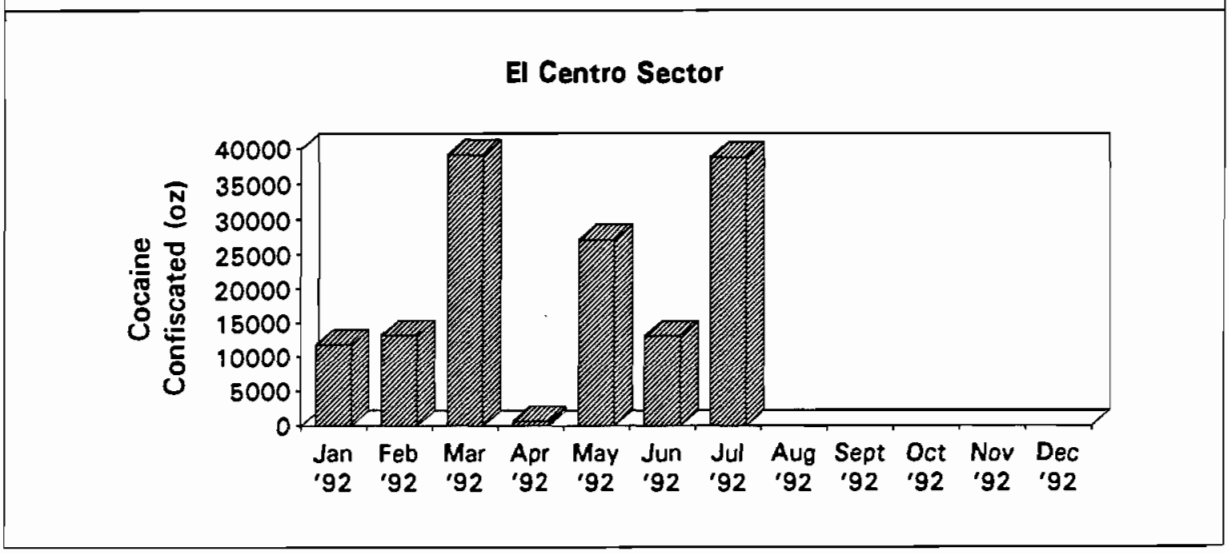

El Centro Sector
Marijuana Confiscated (lbs)
3500
3000
2500
2000
1500
1000
500
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

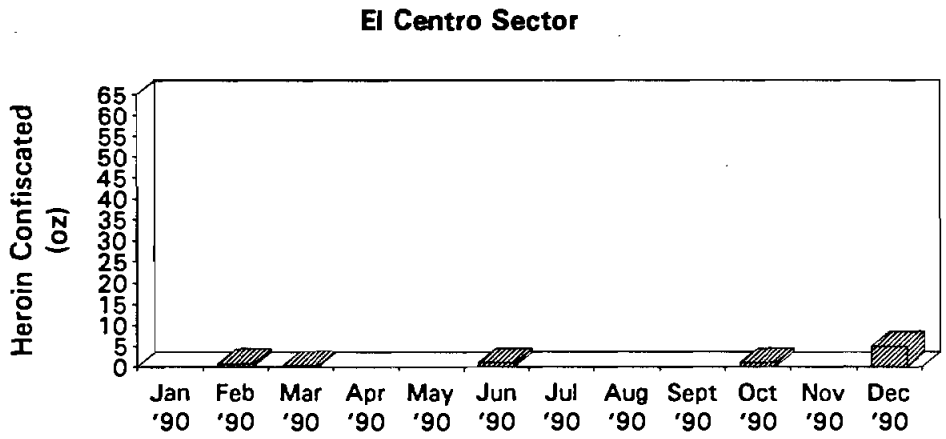

El Centro Sector
Marijuana Confiscated (lbs)
3500
3000
2500
2000
1500
1000
500
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

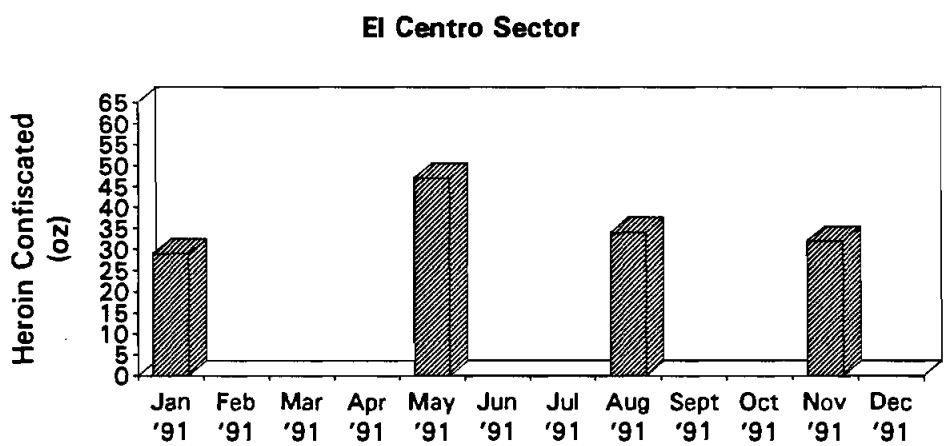

El Centro Sector
Marijuana Confiscated (lbs)
3500
3000
2500
2000
1500
1000
500
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

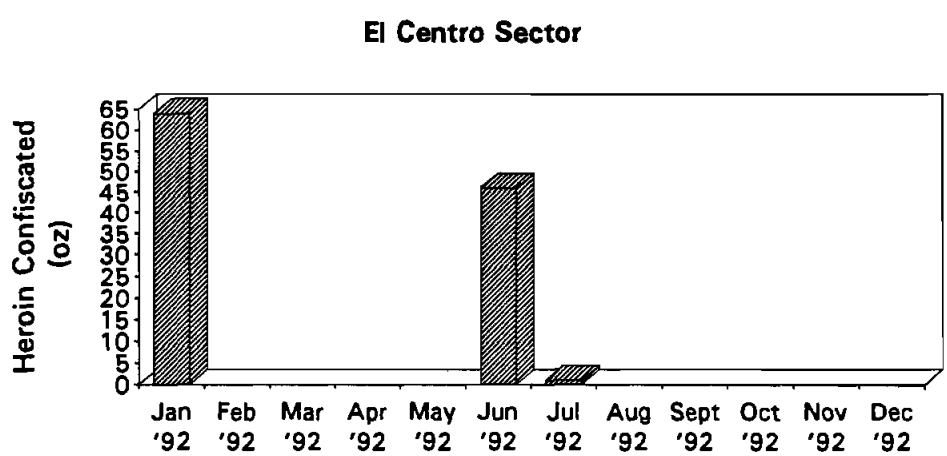

El Centro Sector
Cocaine Confiscated (oz)
40000
35000
30000
25000
20000
15000
10000
5000
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

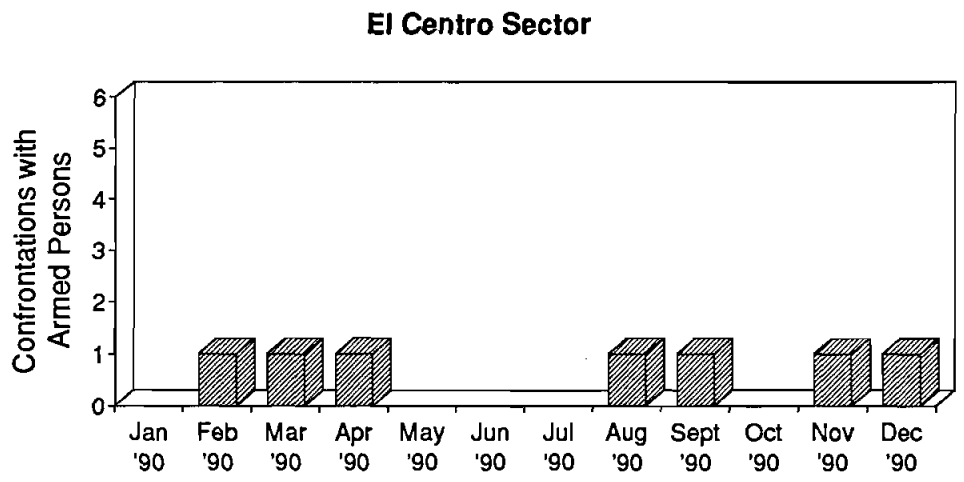

El Centro Sector
Cocaine Confiscated (oz)
40000
35000
30000
25000
20000
15000
10000
5000
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

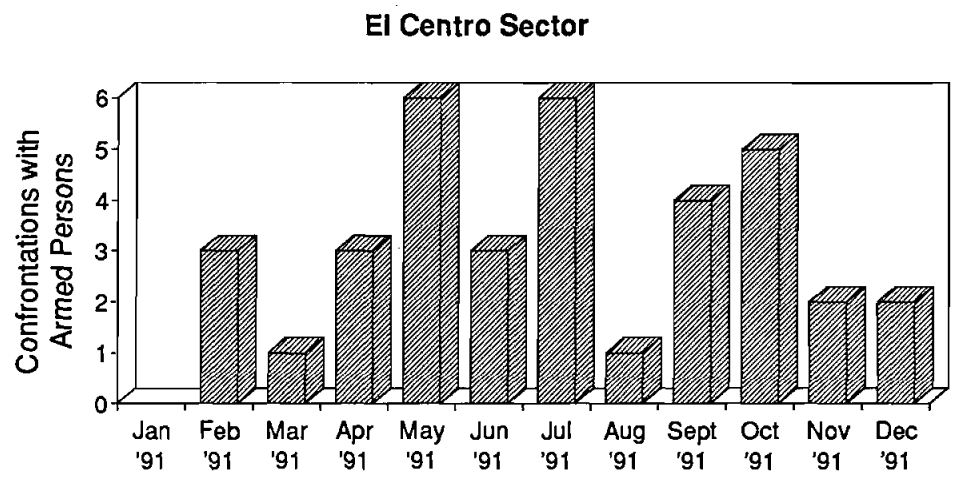

El Centro Sector
Cocaine Confiscated (oz)
40000
35000
30000
25000
20000
15000
10000
5000
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

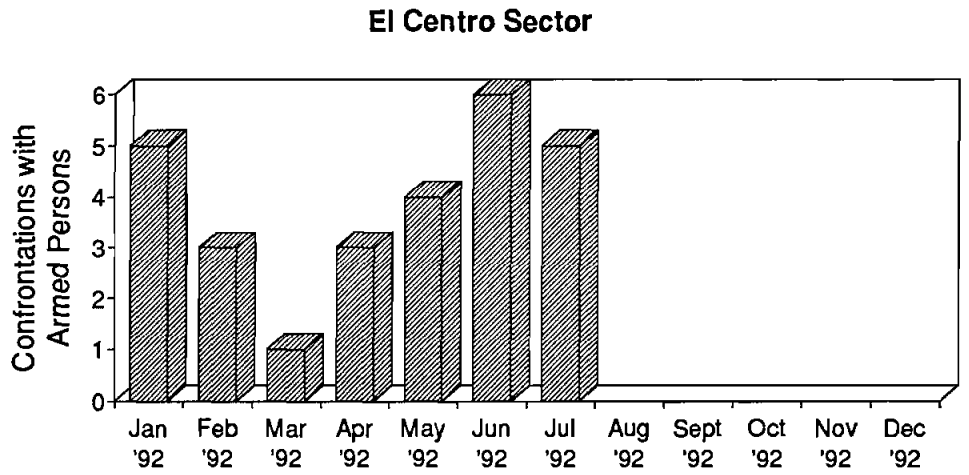

El Centro Sector
Heroin Confiscated (oz)
65
60
55
50
45
40
35
30
25
20
15
10
5
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


El Centro Sector
Heroin Confiscated (oz)
65
60
55
50
45
40
35
30
25
20
15
10
5
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


El Centro Sector
Heroin Confiscated (oz)
65
60
55
50
45
40
35
30
25
20
15
10
5
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92


El Centro Sector
Confrontations with Armed Persons
0
1
2
3
4
5
6
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


El Centro Sector
Confrontations with Armed Persons
0
1
2
3
4
5
6
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


El Centro Sector
Confrontations with Armed Persons
0
1
2
3
4
5
6
Jan '92
Feb '92
Mar '92
Apr '92
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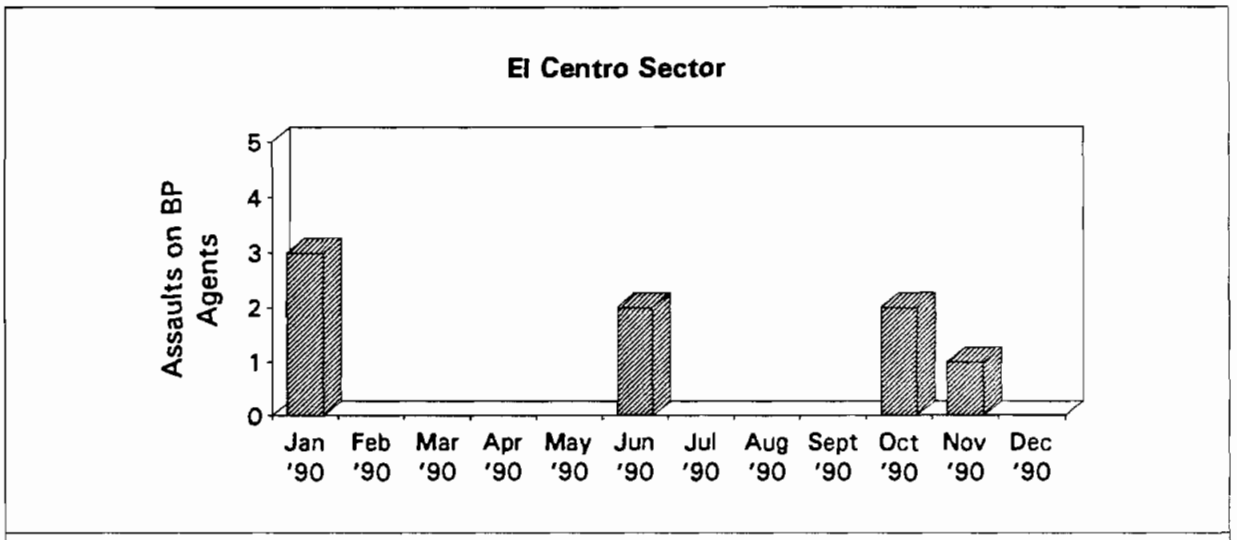
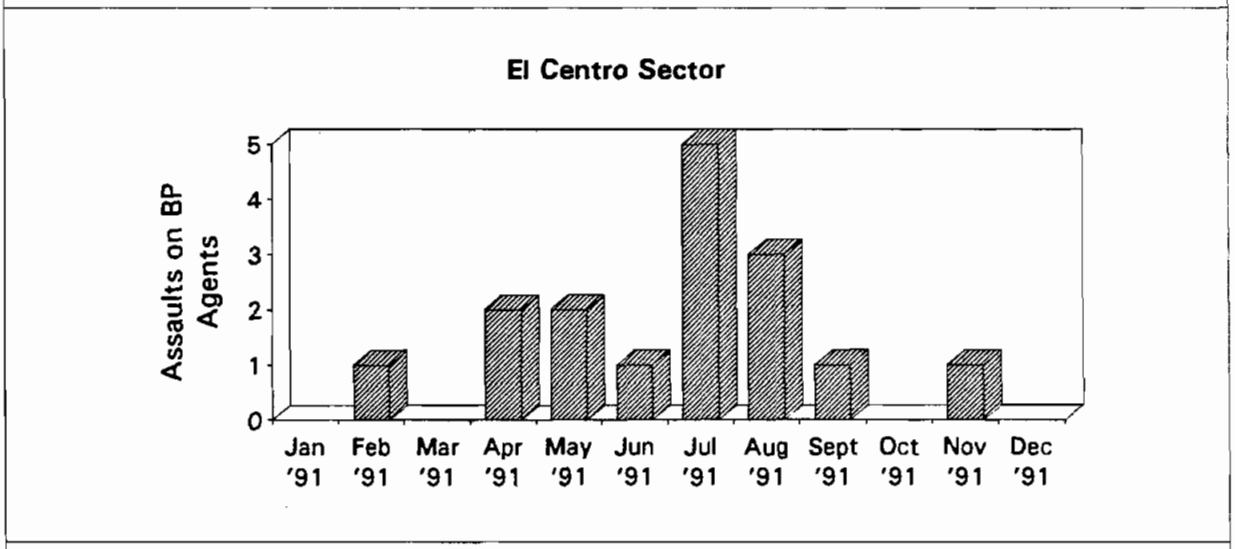
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92


El Centro Sector
Assaults on BP Agents
0
1
2
3
4
5
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


El Centro Sector
Assaults on BP Agents
0
1
2
3
4
5
Jan '91
Feb '91
Mar '91
Apr '91
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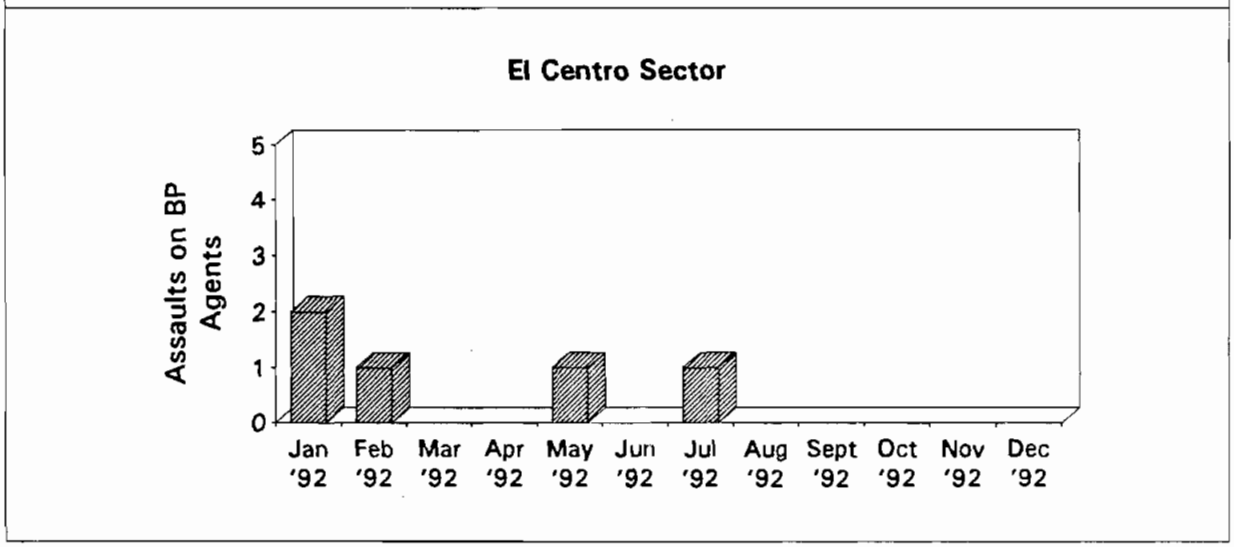
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


El Centro Sector
Assaults on BP Agents
0
1
2
3
4
5
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

## San Diego Recommendations

OUO-7

A (b) (7)(E) [redacted] Detailed design will have to consider the fact that there are some canyons and other areas where it may not be possible to construct barriers. In those areas, a method of channeling any illegal aliens that cross into an area where a concentration of agents can be in control is required.

In addition to the existing checkpoints, the following new ones are needed:

- (b) (7)(E) [redacted]
- [redacted]
- [redacted] This is a small checkpoint with three agents per shift.

The priorities recommended for this sector are those given in the General Recommendations section.

Additional information is given in the San Diego portion of the spreadsheet, which is included below. The $30 million expansion of the San Clemente Highway checkpoint is not included in the spreadsheet.

OUO-7

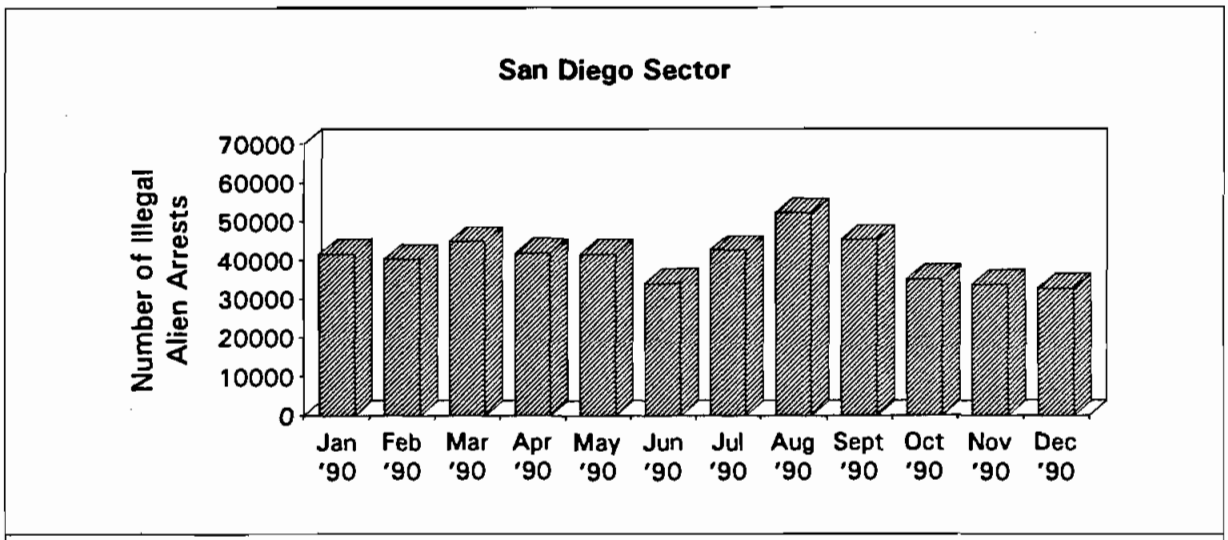
| Equipment Type | San Diego Rcmd | San Diego Ext. Cost | Unit Cost |
|---|---|---|---|
| [redacted] | | 173,250 | $825 |
| | | 70,720 | $260 |
| | | 19,900 | $995 |
| | | 10,235 | $445 |
| | | 8,375 | $1,675 |
| | | 9,200 | $400 |
| | | 59,800 | $1,495 |
| | | 8,050 | $350 |
| | | 7,360 | $320 |
| | | 149,250 | $995 |
| | | 2,340 | $260 |
| | | 9,990 | $4,995 |
| | | 12,475 | $2,495 |
| | | 2,100 | $1,050 |
| | | 0 | $15,000 |
| | | 4,995 | $4,995 |
| Receiver, Portable | 10 | 29,950 | $2,995 |
| Tactical | 9 | 4,230 | $470 |
| **Subtotal, Detectors** | | **$582,220** | |
| Regular Light CCTV | 5 | 8,000 | $1,600 |
| LLTV - Intensified | 3 | 25,500 | $8,500 |
| [redacted] | | 17,268 | $5,756 |
| | | 10,000 | $5,000 |
| | | 3,000 | $300 |
| | | 504,000 | $56,000 |
| | | 400,000 | $200,000 |
| Video & Sensor Cable | 1000 | 15,000 | $15 |
| **Subtotal, Assessment** | | **$982,768** | |
| Voice Comm, Short Range | 33 | 66,000 | $2,000 |
| Voice Comm, Long Range | 1 | 150,000 | $150,000 |
| **Subtotal, Communication** | | **$216,000** | |
| Info Control & Display | 1 | 5,000 | $5,000 |
| [redacted] | | 5,000 | $5,000 |
| **Subtotal, Cntrl & Disp** | | **$10,000** | |
| Checkpoint Shelter, Large | 1.5 | 450,000 | $300,000 |
| Checkpoint Shelter, Small | 2 | 400,000 | $200,000 |
| Checkpoint Personnel | 75 | 6,375,000 | $85,000 |
| Drug Dogs (Procurement) | 18 | 72,000 | $4,000 |
| Dog Support (Food & Vet) | 18 | 18,000 | $1,000 |
| [redacted] | 79200 | 2,376,000 | $30 |
| | 79200 | 5,544,000 | $70 |
| | 36960 | 2,217,600 | $60 |
| Vehicle Barrier | 0 | 0 | $35 |
| Lighting | 79200 | 1,980,000 | $25 |
| Patrol Roads | 79200 | 3,960,000 | $50 |
| Mobile Welder | 1 | 25,000 | $25,000 |
| Welder Operator | 1 | 85,000 | $85,000 |
| **Subtotal, Barriers, Etc.** | | **$23,502,600** | |
| Test Equipment | 1 | 100,000 | $100,000 |
| ILS, New Equipment | 1 | 100,000 | $100,000 |
| ILS, Old Equipment | 1 | 100,000 | $100,000 |
| **Subtotal, Support** | | **$300,000** | |
| **Sector Total** | | **$25,593,588** | |

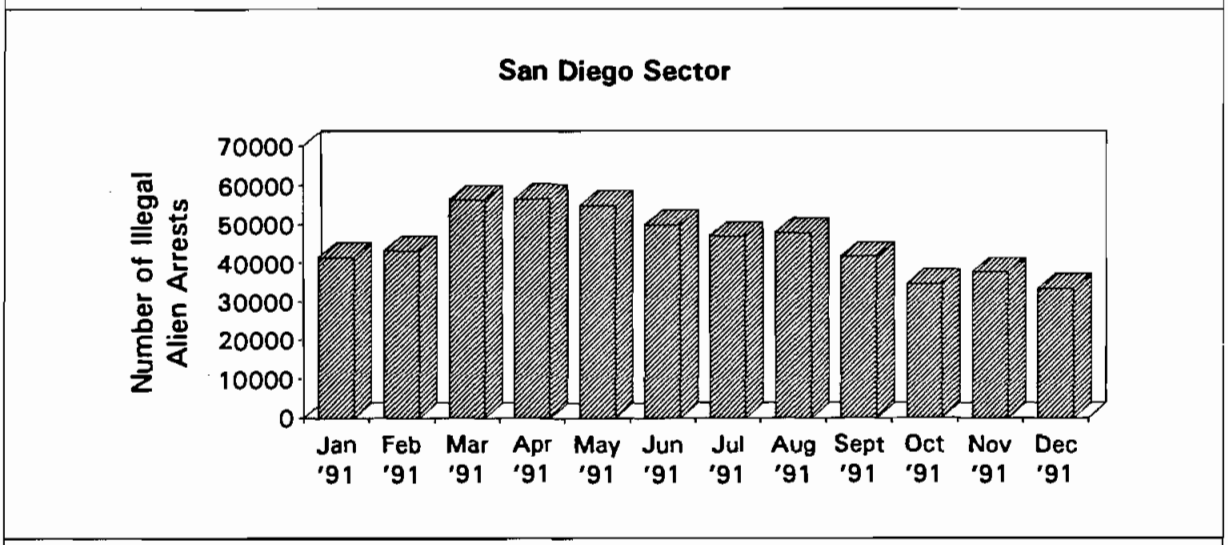
| Recurring Costs | San Diego Ext. Cost | Unit Cost |
|---|---|---|
| 15% of all Detection Assessment and Communications Equipment | $267,148 | 15.0% |
| 50% of Info Control and Display Equipment | $2,500 | 50.0% |
| 10% of the Construction Cost of Check Points for Maintenance & Utilities | $85,000 | 10.0% |
| 100% of Checkpont Personnel Cost and Dog Support | $6,393,000 | 100.0% |
| 5% of Barrier Cost for Maintenance | $704,880 | 5.0% |
| 15% of Lighting Cost for Maintenance & Electricity | $297,000 | 15.0% |
| 100% of Welder Operator | $85,000 | 100.0% |
| 25% of Test Equipment for Calibration, Repair and Upgrading of Equipment | $25,000 | 25.0% |
| 100% of ILS Costs | $200,000 | 100.0% |
| Total Recurring Cost for Each Sector | $8,059,528 | |

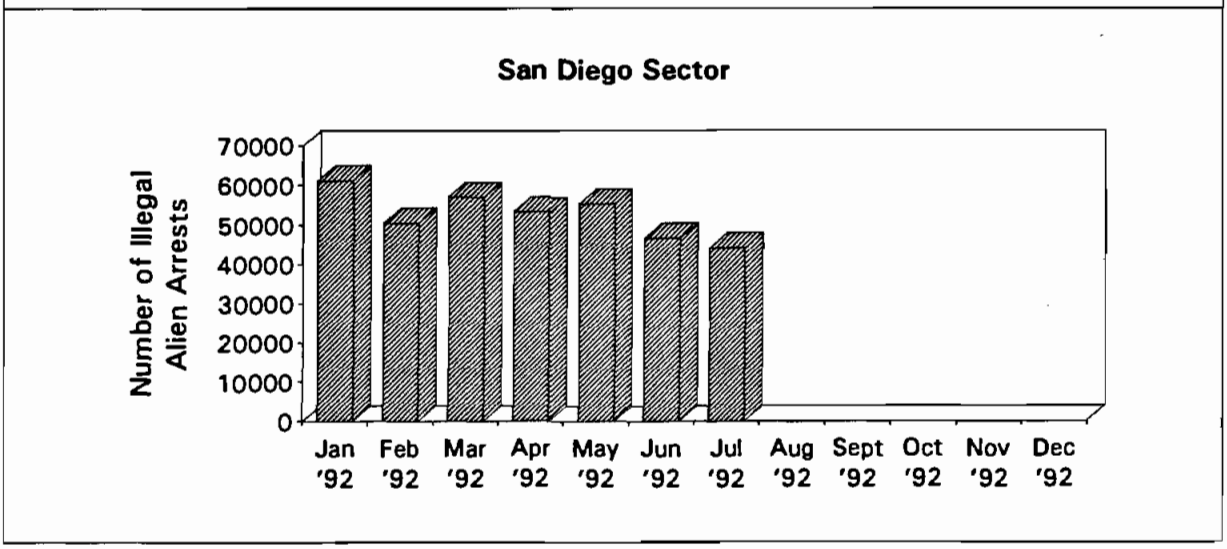
## San Diego Sector Analysis

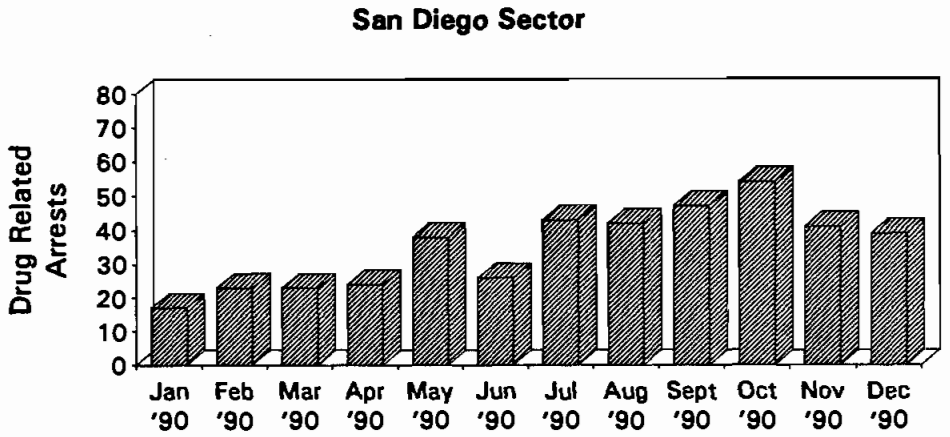
The data given in the San Diego sector discussion of "Contact with Suspects" is plotted on the following charts to show the overall trend of what has been happening in the sector for the years 1990, 1991, and the first half of 1992. The activities of the total Southwest Border are given at the end of this section.

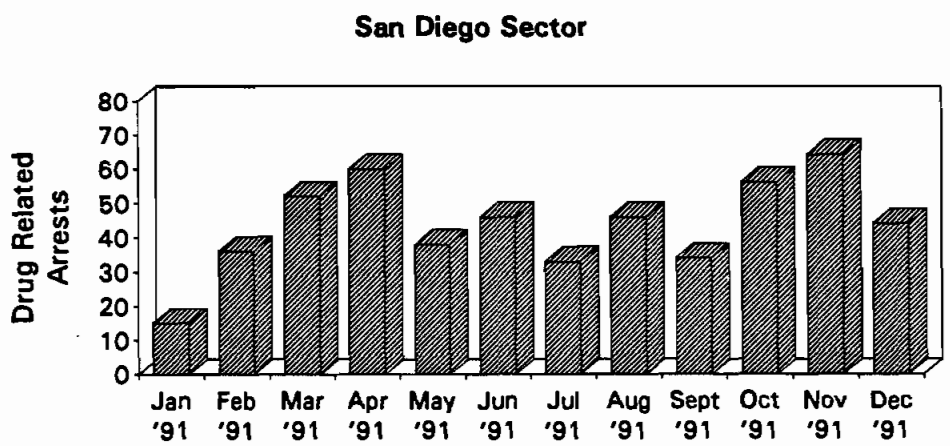
The analysis shows increases in the average numbers of alien arrests per month and drug-related arrests and significant increases in marijuana and cocaine confiscated. The average amount of heroin is decreased. The plots of cocaine and heroin show a few months with large activity mixed with many smaller activity months. The data on confrontations with armed persons and assaults on Border Patrol agents are small averages, but the individual plots show small changes in these areas.

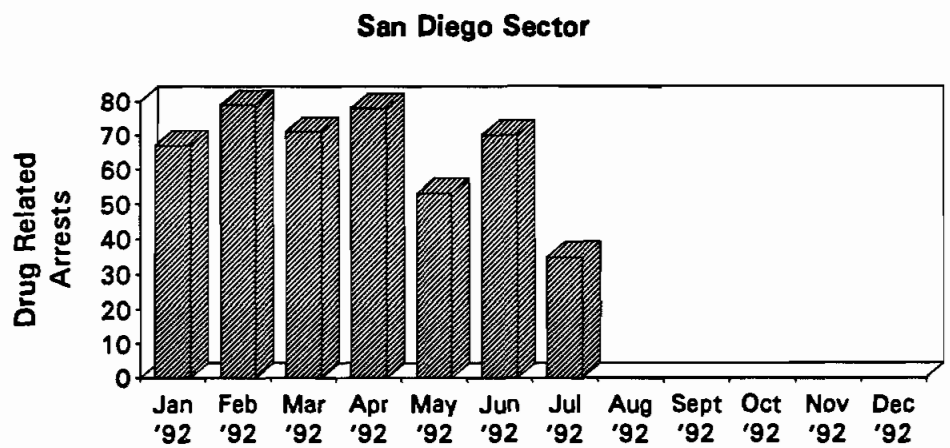

San Diego Sector
Number of Illegal Alien Arrests
70000
60000
50000
40000
30000
20000
10000
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

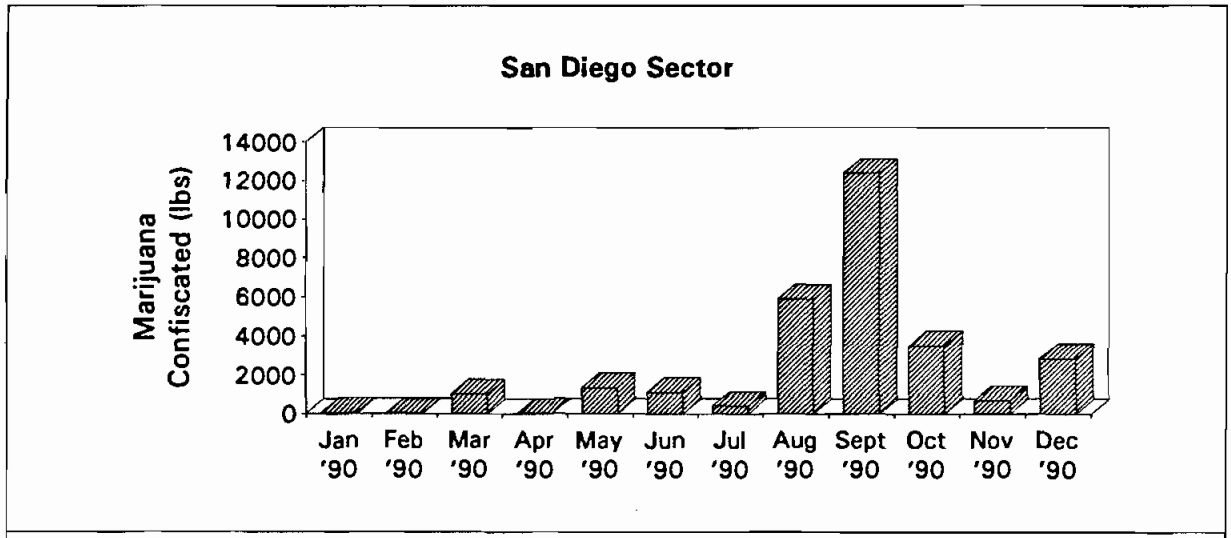

San Diego Sector
Number of Illegal Alien Arrests
70000
60000
50000
40000
30000
20000
10000
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

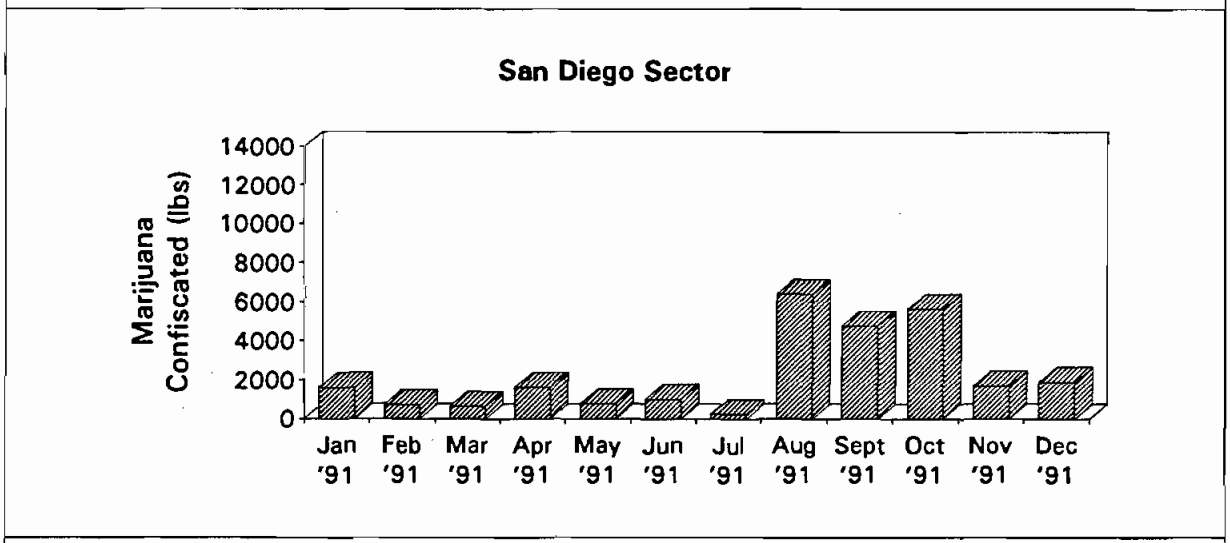

San Diego Sector
Number of Illegal Alien Arrests
70000
60000
50000
40000
30000
20000
10000
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

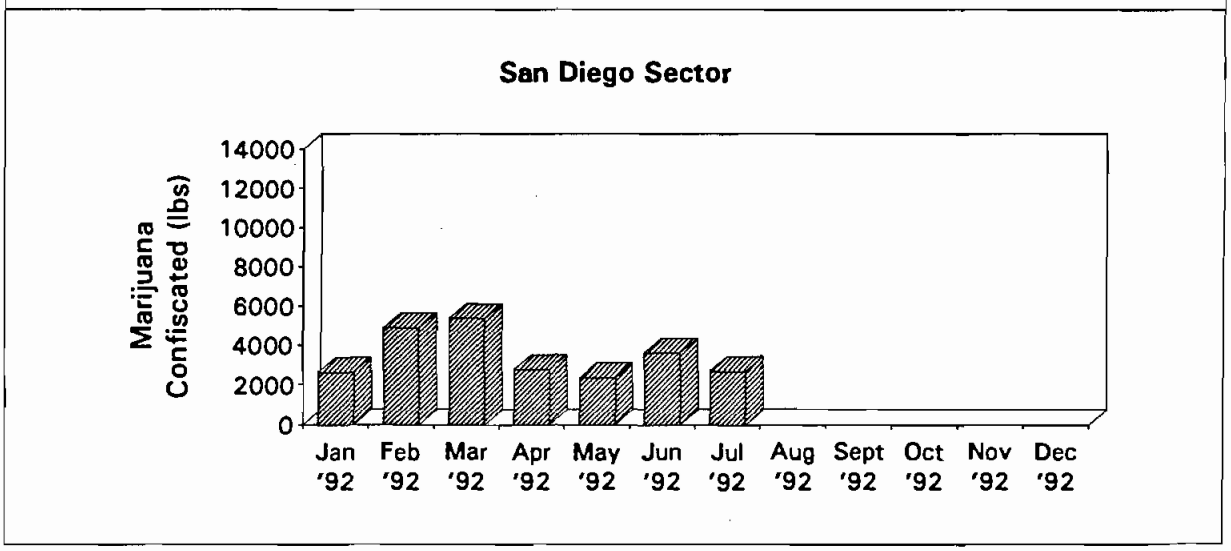

San Diego Sector
Drug Related Arrests
80
70
60
50
40
30
20
10
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

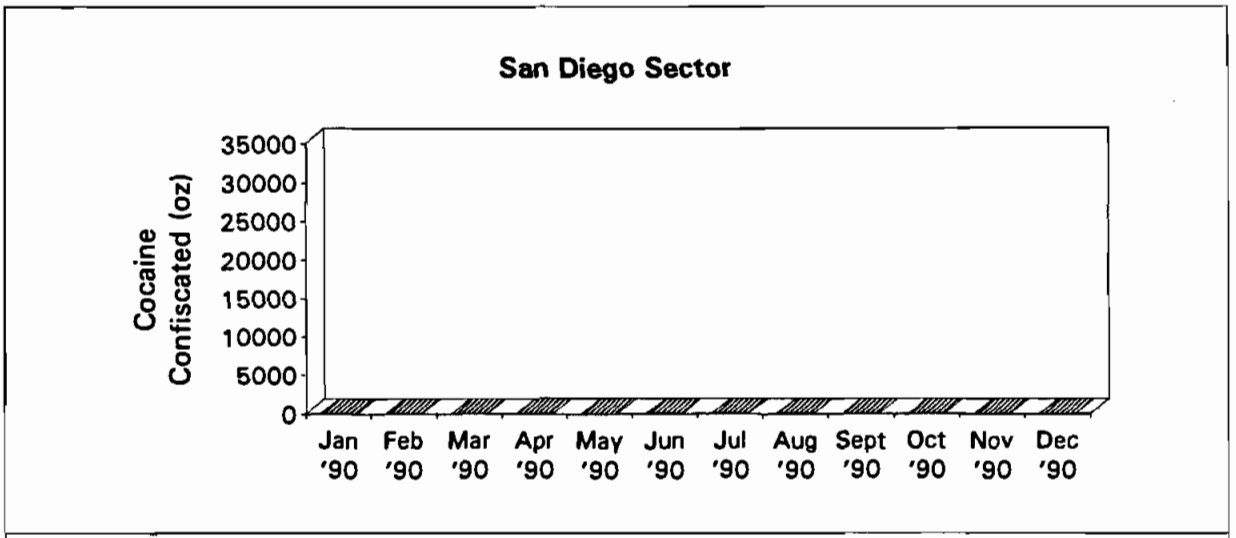

San Diego Sector
Drug Related Arrests
80
70
60
50
40
30
20
10
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

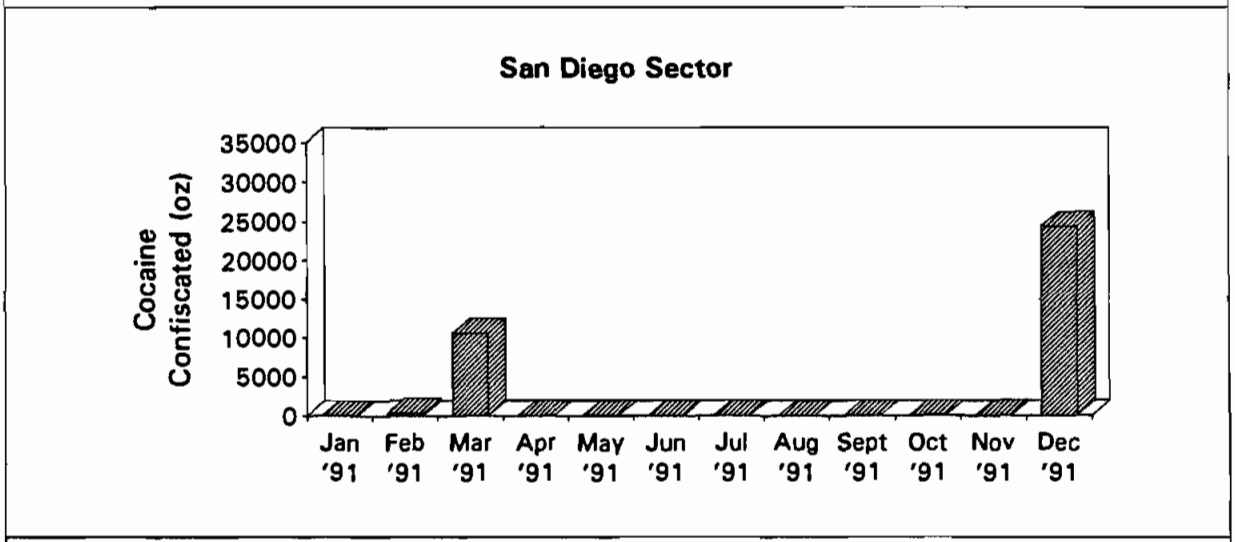

San Diego Sector
Drug Related Arrests
80
70
60
50
40
30
20
10
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

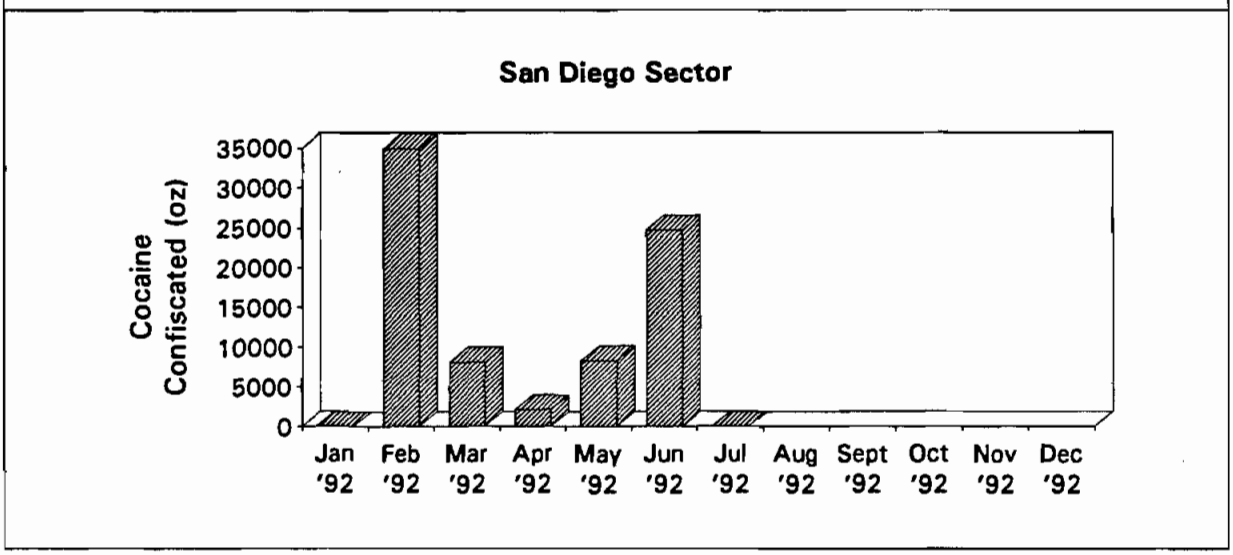

San Diego Sector
Marijuana Confiscated (lbs)
14000
12000
10000
8000
6000
4000
2000
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

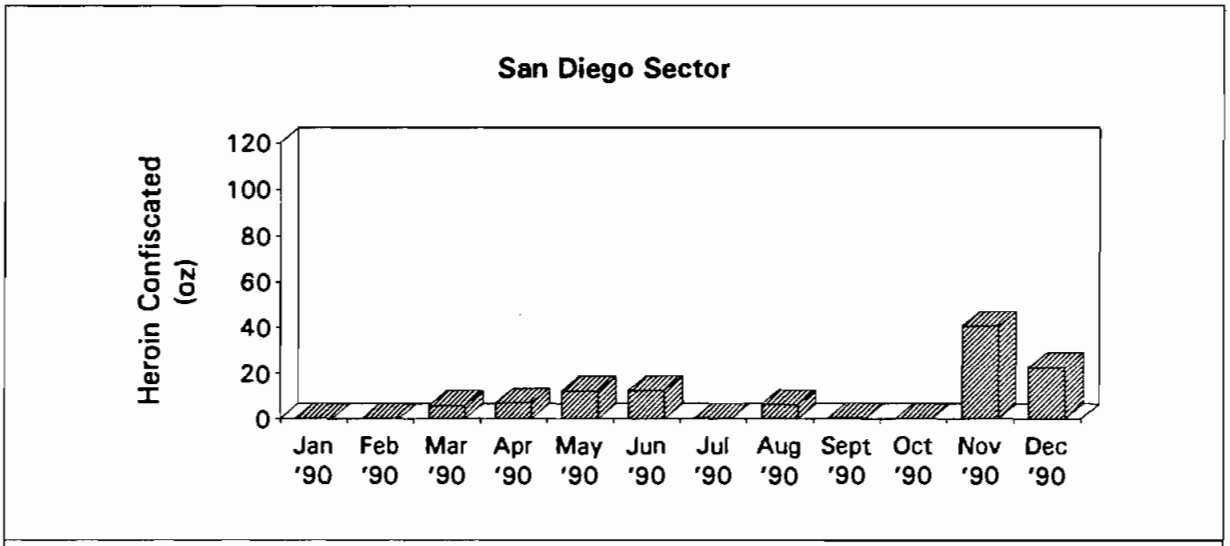

San Diego Sector
Marijuana Confiscated (lbs)
14000
12000
10000
8000
6000
4000
2000
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

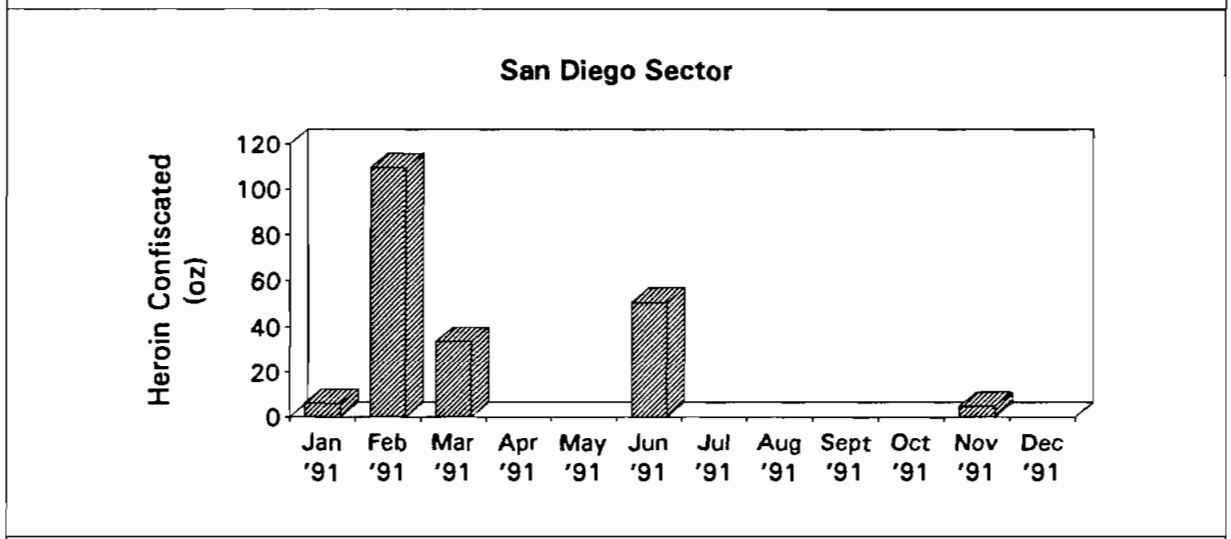

San Diego Sector
Marijuana Confiscated (lbs)
14000
12000
10000
8000
6000
4000
2000
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

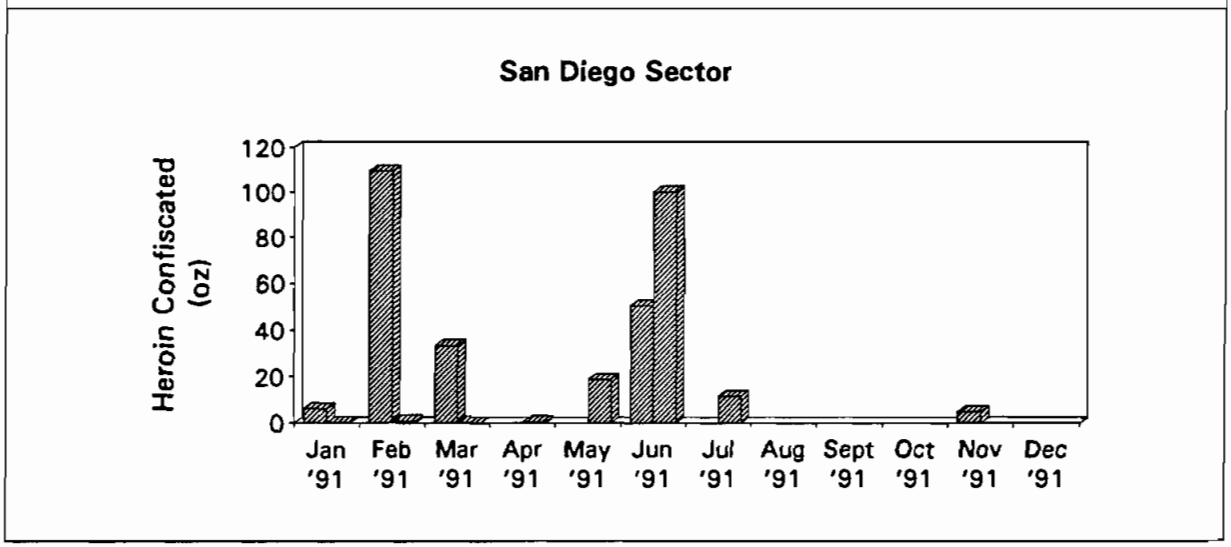

San Diego Sector
Cocaine Confiscated (oz)
35000
30000
25000
20000
15000
10000
5000
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

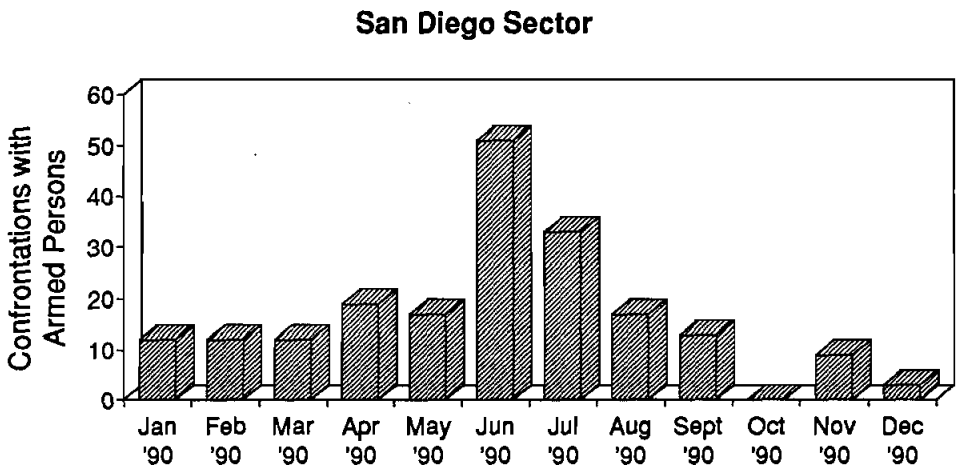

San Diego Sector
Cocaine Confiscated (oz)
35000
30000
25000
20000
15000
10000
5000
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

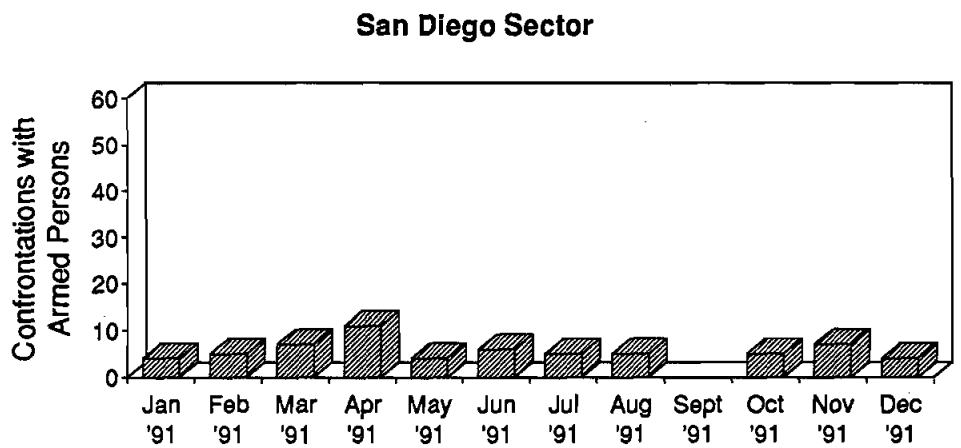

San Diego Sector
Cocaine Confiscated (oz)
35000
30000
25000
20000
15000
10000
5000
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

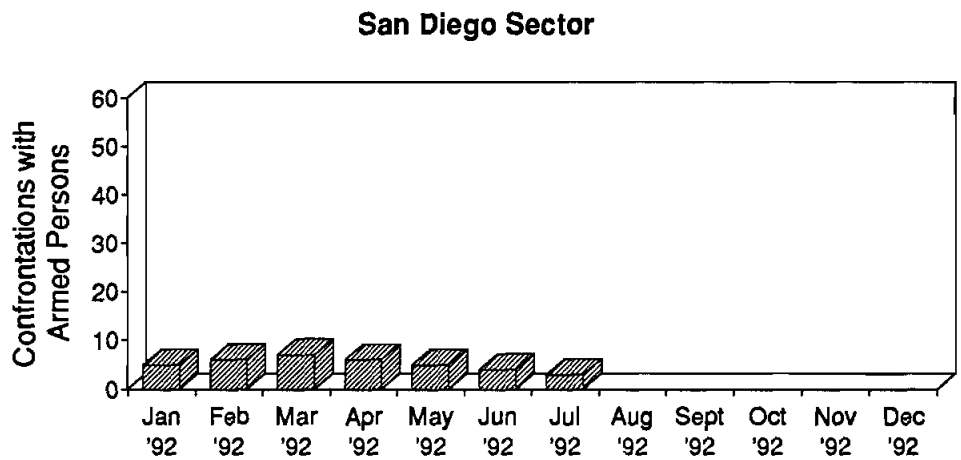

San Diego Sector
Heroin Confiscated (oz)
120
100
80
60
40
20
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

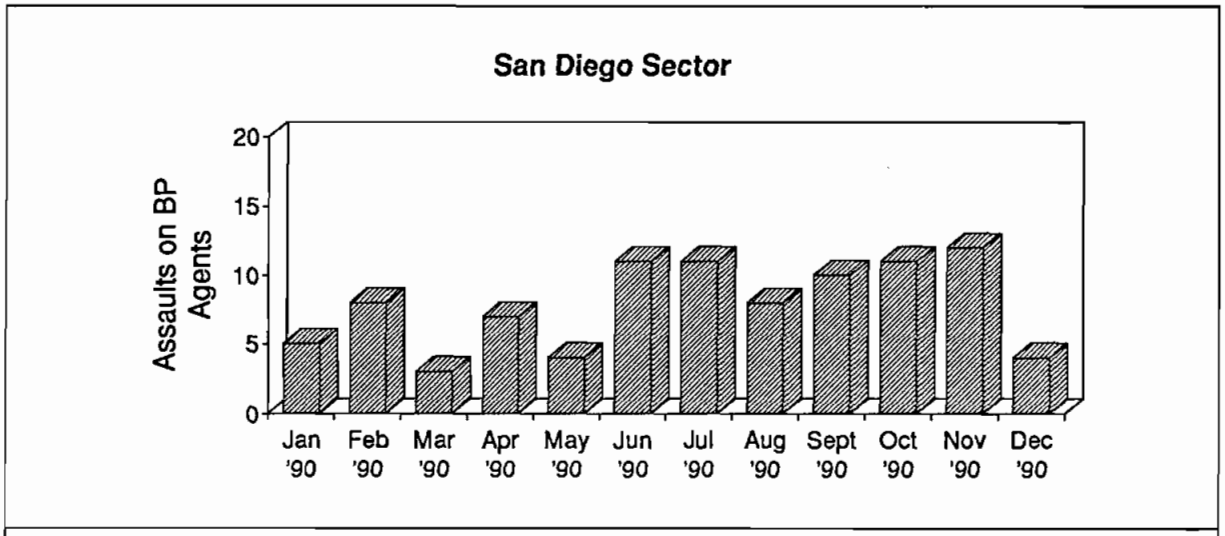

San Diego Sector
Heroin Confiscated (oz)
120
100
80
60
40
20
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

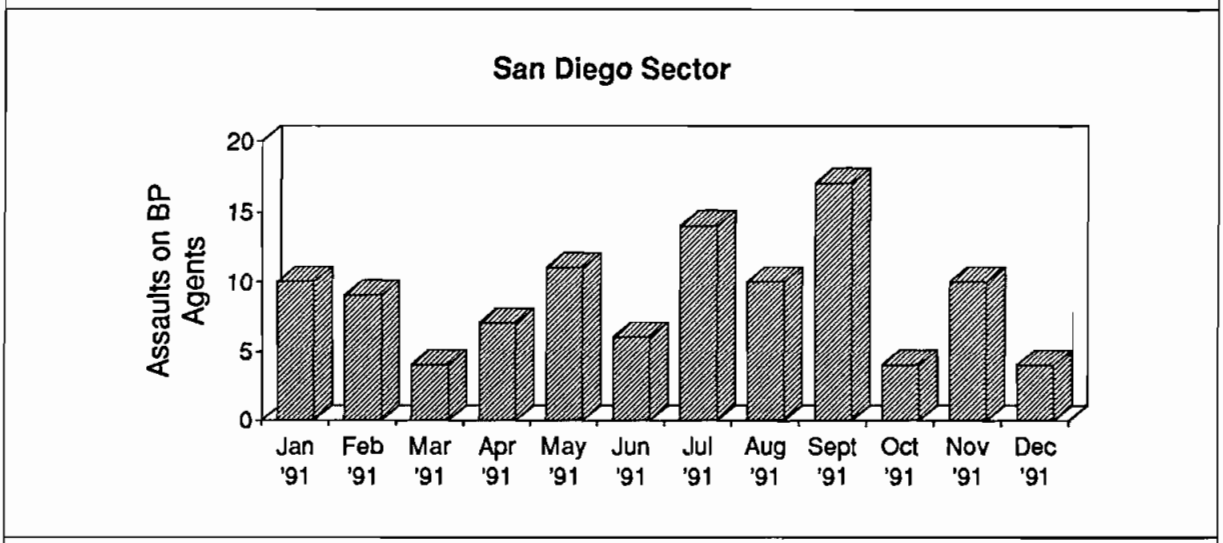

San Diego Sector
Heroin Confiscated (oz)
120
100
80
60
40
20
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91

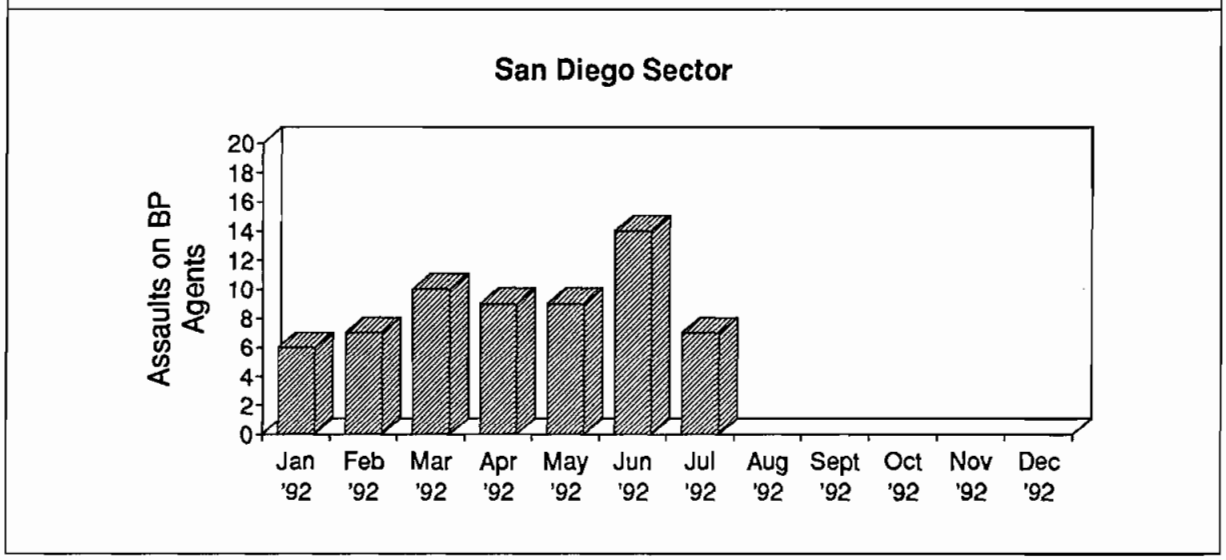

San Diego Sector
Confrontations with Armed Persons
60
50
40
30
20
10
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


San Diego Sector
Confrontations with Armed Persons
60
50
40
30
20
10
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


San Diego Sector
Confrontations with Armed Persons
60
50
40
30
20
10
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92


San Diego Sector
Assaults on BP Agents
20
15
10
5
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


San Diego Sector
Assaults on BP Agents
20
15
10
5
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


San Diego Sector
Assaults on BP Agents
20
18
16
14
12
10
8
6
4
2
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92

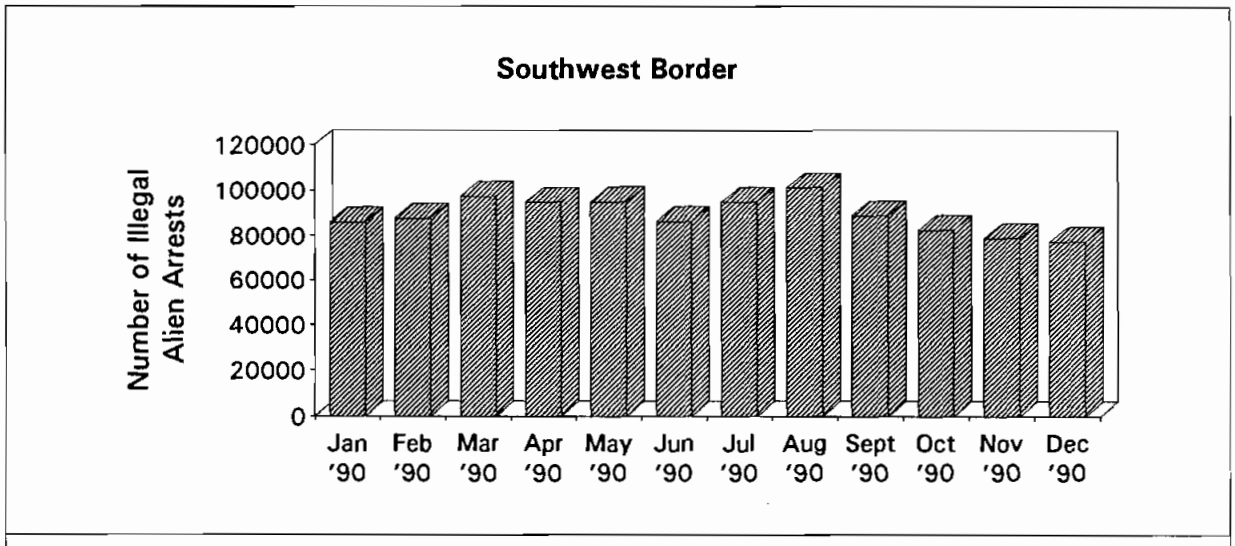
## Southwest Border Analysis

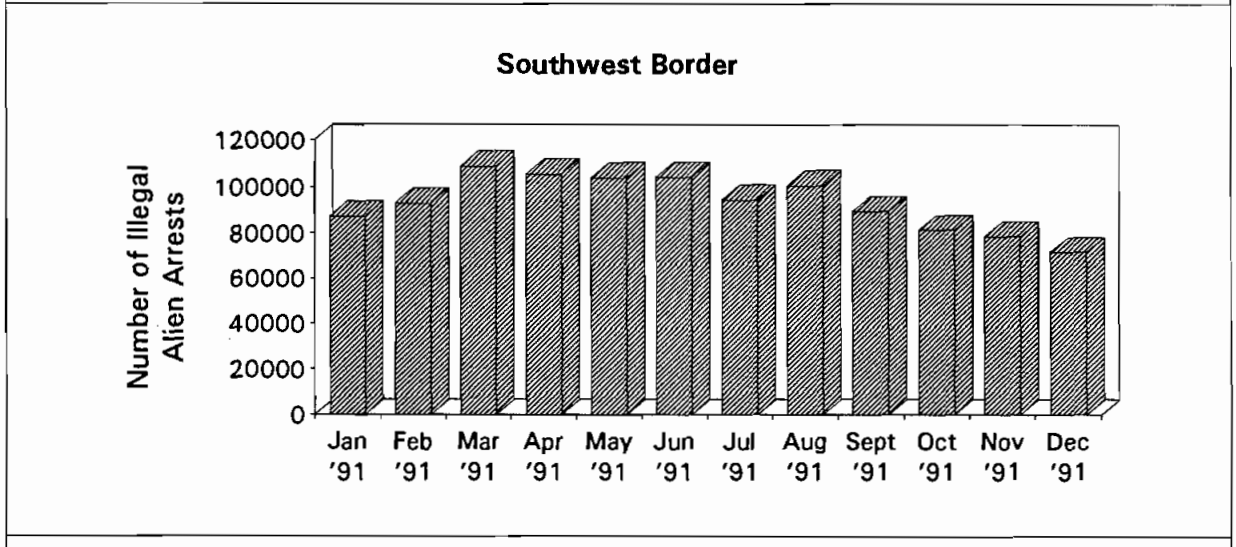
The data given in all of the individual sector discussions of "Contact with Suspects" is plotted on the following charts to show the overall trend of what has been happening on the Southwest Border for the years 1990, 1991, and the first half of 1992.

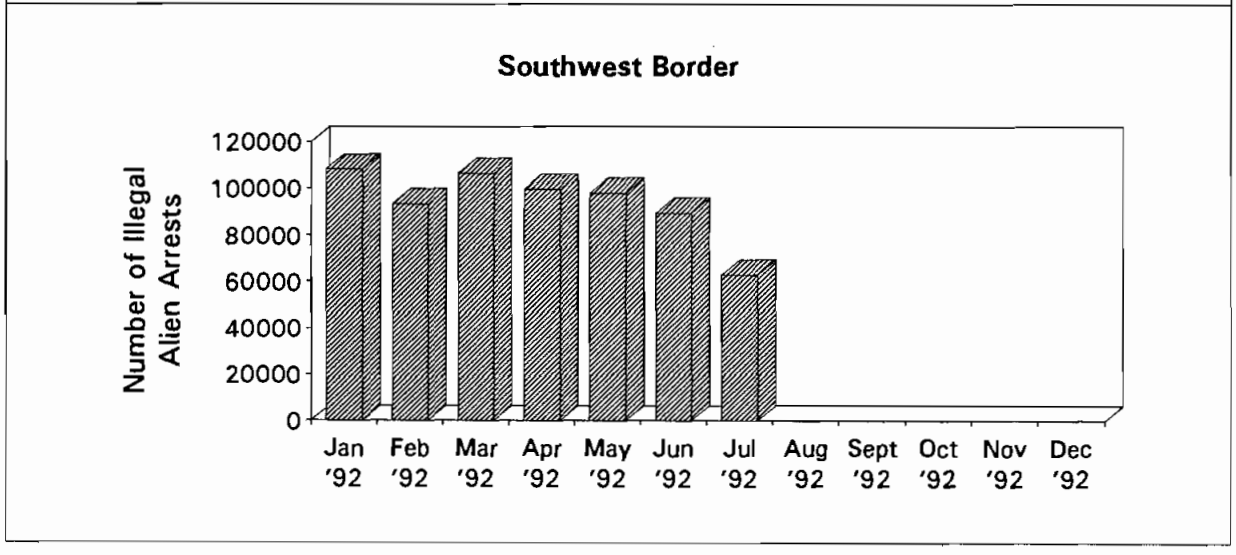
The analysis shows significant increases in the average number of alien arrests per month; drug-related arrests; and marijuana, cocaine, and heroin confiscated. The plots of cocaine and heroin show a few months with large activity mixed with many smaller activity months. The data on confrontations with armed persons and assaults of Border Patrol agents are small averages, but the individual plots show small changes in these areas.

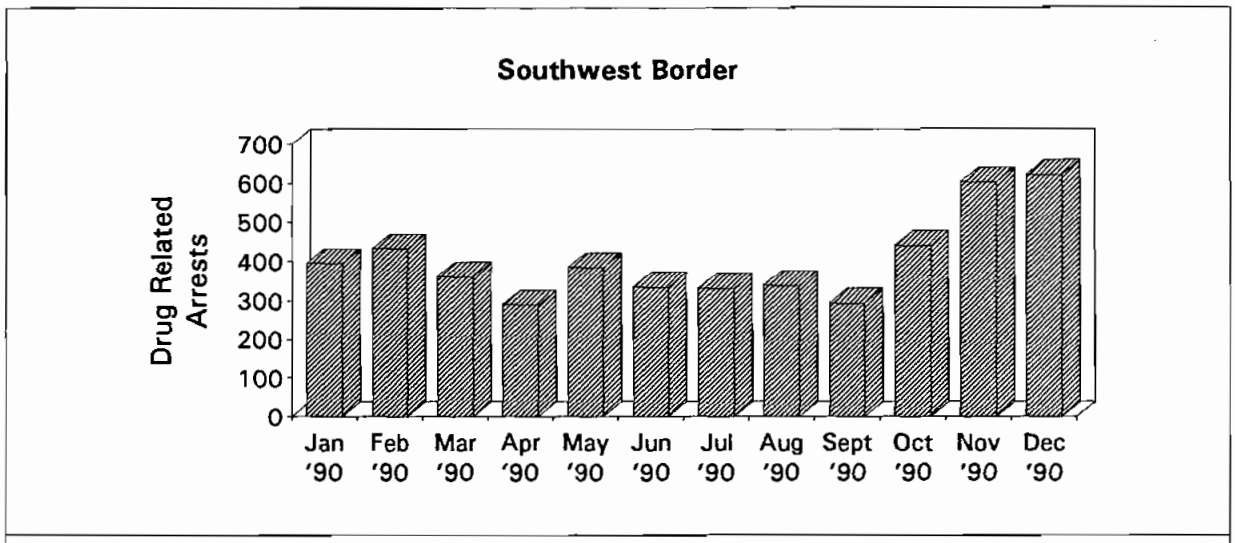
| | | Illegal Alien Arrests * | Drug Related Arrests * | Marijuana Confiscated (lbs) * | Cocaine Confiscated (oz) * | Heroin Confiscated (oz) * | Confrontations with Armed Persons * | Assaults on BP Agents * |
|---|---|---|---|---|---|---|---|---|
| McAllen | 1990 | 8263 | 89 | 11373 | 918 | 5 | 1 | 0 |
| | 1991 | 7477 | 77 | 6952 | 5513 | 2 | 4 | 1 |
| | 1992 | 6620 | 127 | 15211 | 2194 | 79 | 6 | 1 |
| Laredo | 1990 | 7181 | 61 | 4657 | 207 | 3 | 4 | 2 |
| | 1991 | 6000 | 47 | 2625 | 752 | 3 | 4 | 4 |
| | 1992 | 6676 | 53 | 4177 | 1997 | 1 | 4 | 0 |
| Del Rio | 1990 | 3216 | 11 | 663 | 1083 | 1 | 0 | 0 |
| | 1991 | 3229 | 12 | 824 | 0 | 0 | 3 | 0 |
| | 1992 | 3222 | 24 | 1049 | 467 | 1 | 2 | 0 |
| Marfa | 1990 | 618 | 9 | 1193 | 55 | 0 | 0 | 0 |
| | 1991 | 747 | 5 | 183 | 0 | 0 | 0 | 0 |
| | 1992 | 928 | 23 | 911 | 9 | 5 | 0 | 0 |
| El Paso | 1990 | 19664 | 101 | 2913 | 11218 | 1 | 9 | 2 |
| | 1991 | 20454 | 133 | 2996 | 2781 | 15 | 10 | 3 |
| | 1992 | 15826 | 129 | 5238 | 261 | 3 | 10 | 1 |
| Tucson | 1990 | 4366 | 57 | 8994 | 989 | 2 | 3 | 2 |
| | 1991 | 5168 | 53 | 6762 | 309 | 2 | 5 | 3 |
| | 1992 | 6999 | 76 | 9101 | 176 | 6 | 3 | 2 |
| Yuma | 1990 | 2945 | 24 | 273 | 8 | 0 | 1 | 0 |
| | 1991 | 2233 | 22 | 210 | 958 | 5 | 2 | 1 |
| | 1992 | 2279 | 37 | 233 | 477 | 1 | 1 | 1 |
| El Centro | 1990 | 2484 | 15 | 236 | 1112 | 1 | 1 | 1 |
| | 1991 | 2536 | 23 | 342 | 1346 | 12 | 3 | 1 |
| | 1992 | 2585 | 28 | 1506 | 20576 | 16 | 4 | 1 |
| San Diego | 1990 | 40504 | 35 | 2441 | 11 | 9 | 17 | 8 |
| | 1991 | 45381 | 44 | 2246 | 2942 | 17 | 5 | 9 |
| | 1992 | 52580 | 65 | 3465 | 11150 | 19 | 5 | 9 |
| Southwest Border | 1990 | 89240 | 402 | 32742 | 15601 | 21 | 35 | 15 |
| | 1991 | 93225 | 416 | 23141 | 14600 | 55 | 35 | 21 |
| | 1992 | 97717 | 559 | 40890 | 37308 | 131 | 35 | 15 |

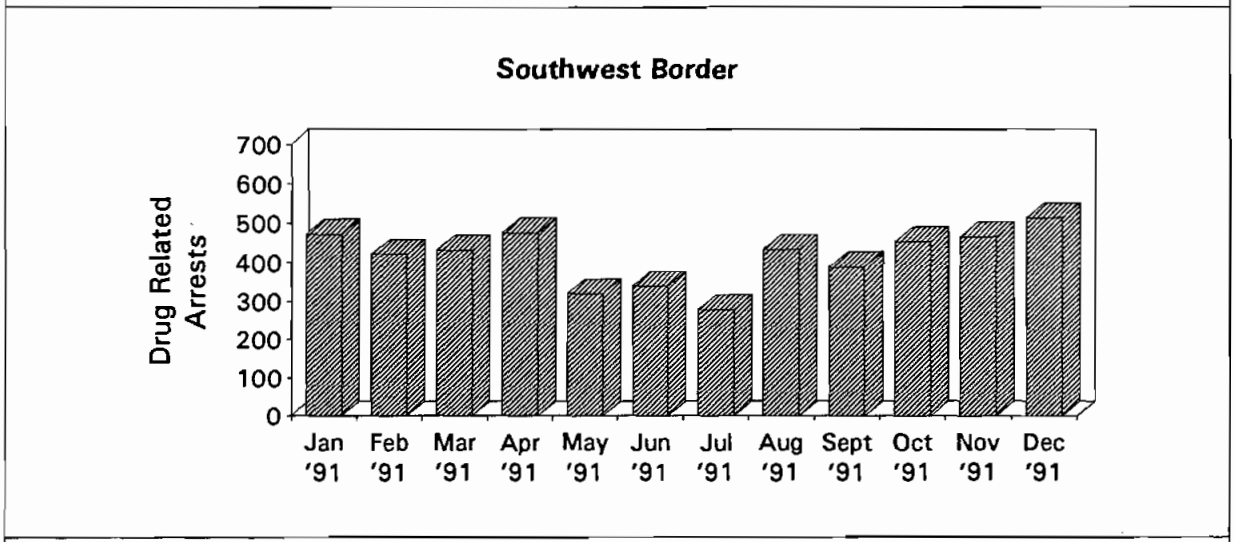
* Average per month

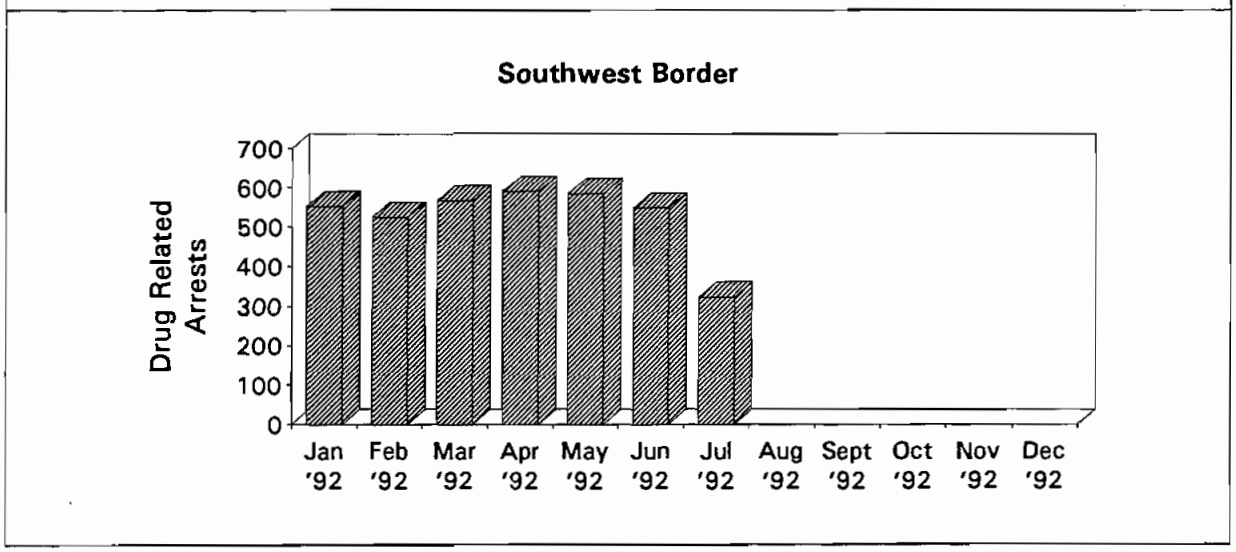

Southwest Border
Number of Illegal Alien Arrests
120000
100000
80000
60000
40000
20000
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90

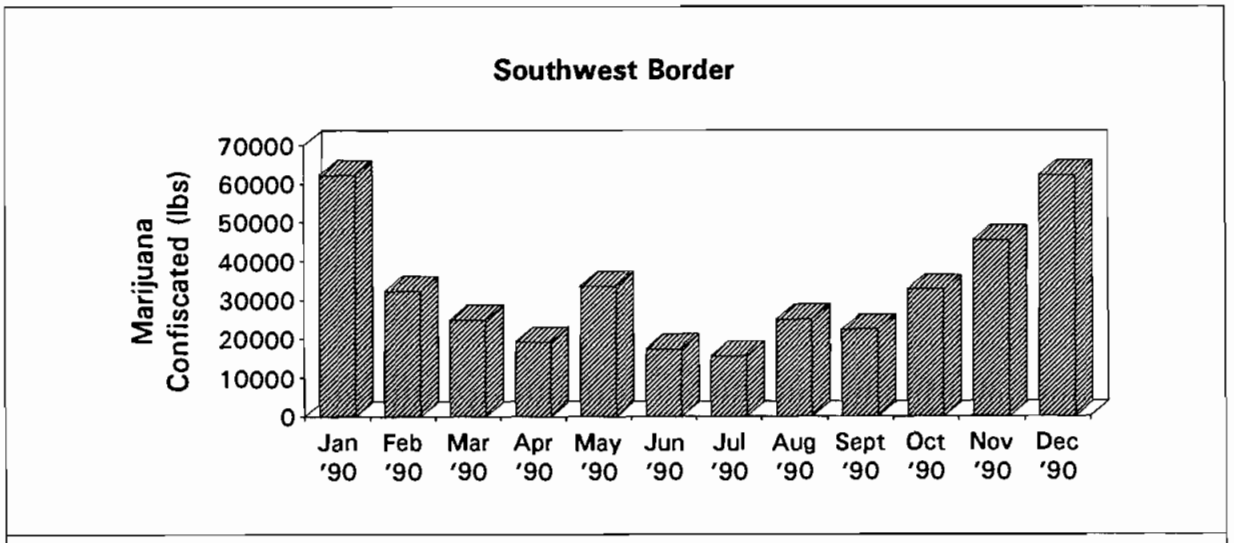

Southwest Border
Number of Illegal Alien Arrests
120000
100000
80000
60000
40000
20000
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


Southwest Border
Number of Illegal Alien Arrests
120000
100000
80000
60000
40000
20000
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92


Southwest Border
Drug Related Arrests
700
600
500
400
300
200
100
0
Jan '90
Feb '90
Mar '90
Apr '90
May '90
Jun '90
Jul '90
Aug '90
Sept '90
Oct '90
Nov '90
Dec '90


Southwest Border
Drug Related Arrests
700
600
500
400
300
200
100
0
Jan '91
Feb '91
Mar '91
Apr '91
May '91
Jun '91
Jul '91
Aug '91
Sept '91
Oct '91
Nov '91
Dec '91


Southwest Border
Drug Related Arrests
700
600
500
400
300
200
100
0
Jan '92
Feb '92
Mar '92
Apr '92
May '92
Jun '92
Jul '92
Aug '92
Sept '92
Oct '92
Nov '92
Dec '92


Southwest Border
Marijuana Confiscated (lbs)
70000
60000
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30000
20000
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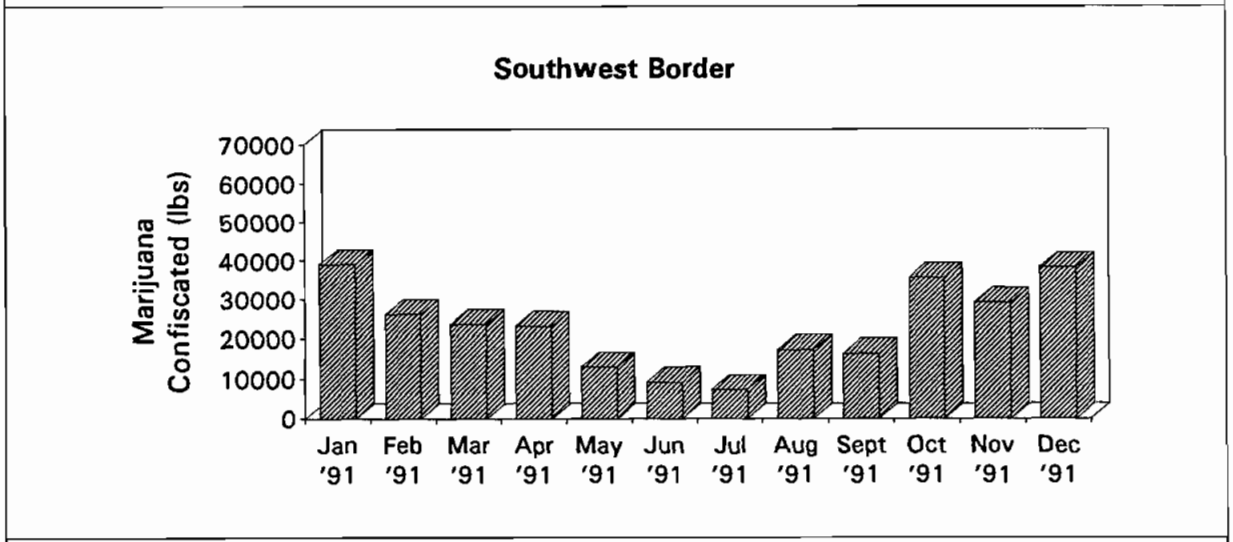
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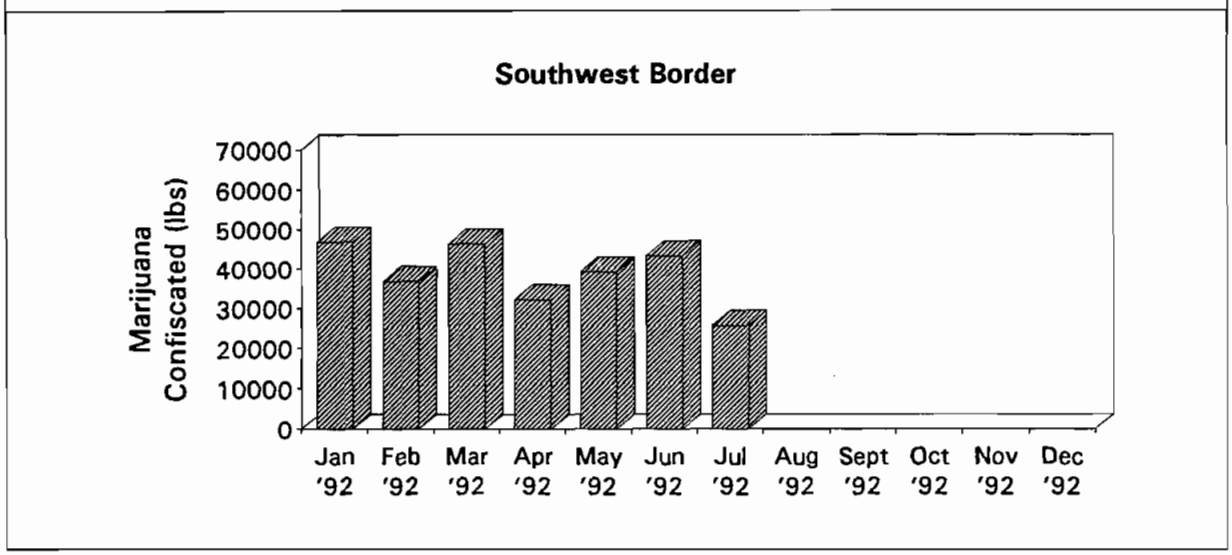
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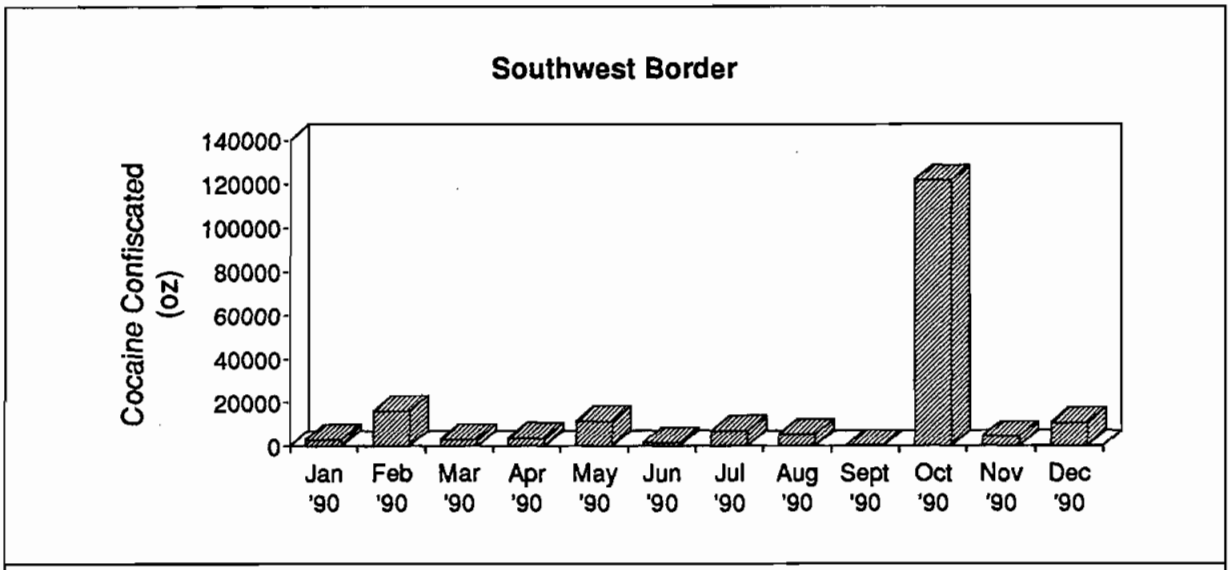
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Cocaine Confiscated (oz)
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120000
100000
80000
60000
40000
20000
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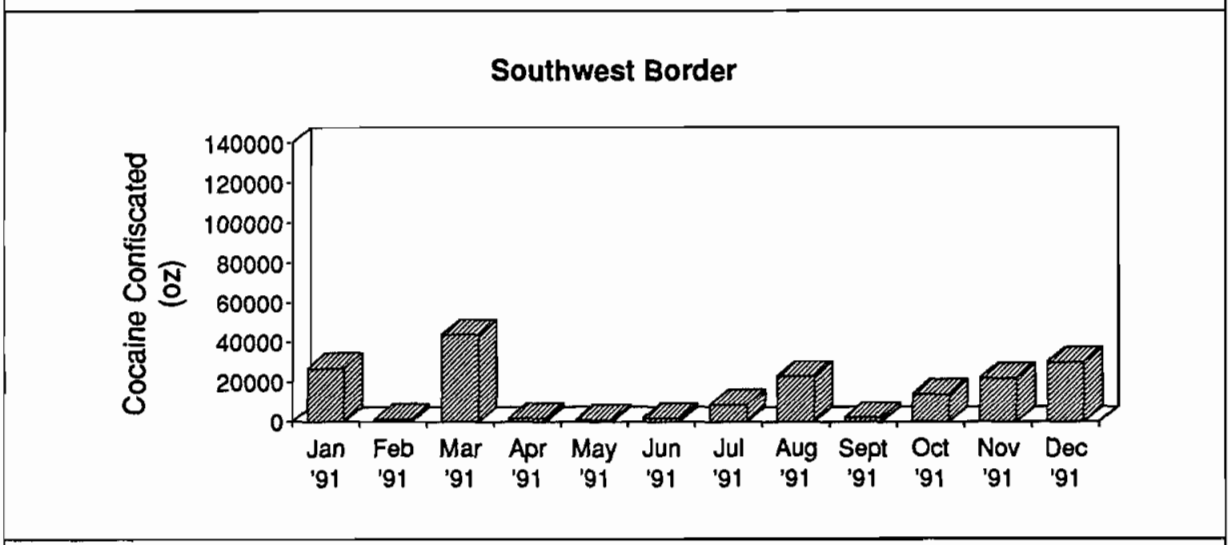
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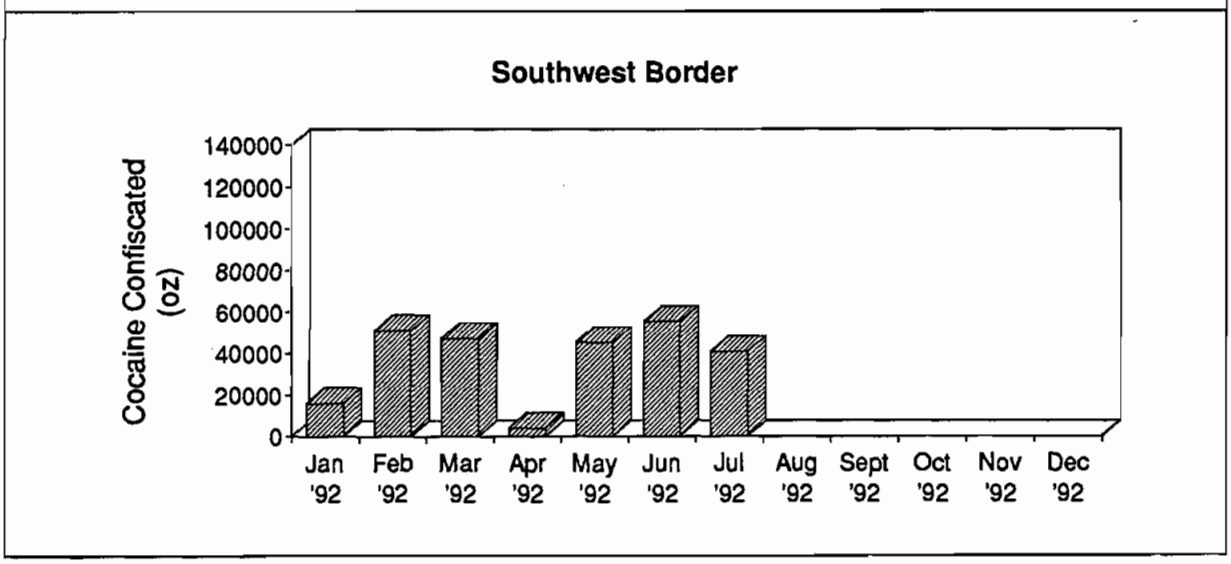
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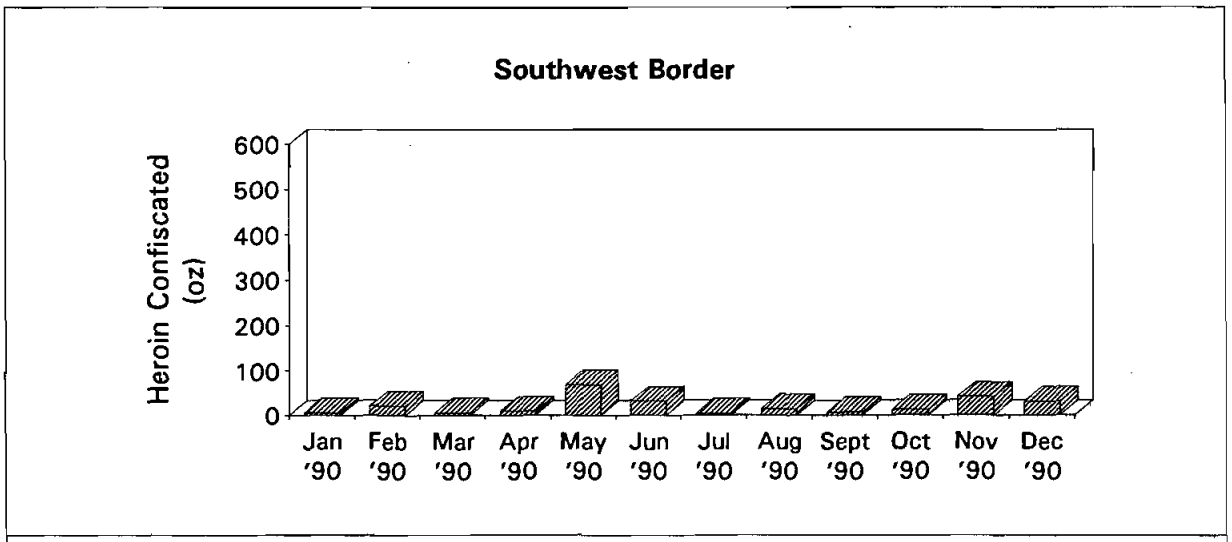
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Heroin Confiscated (oz)
600
500
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Jan '90
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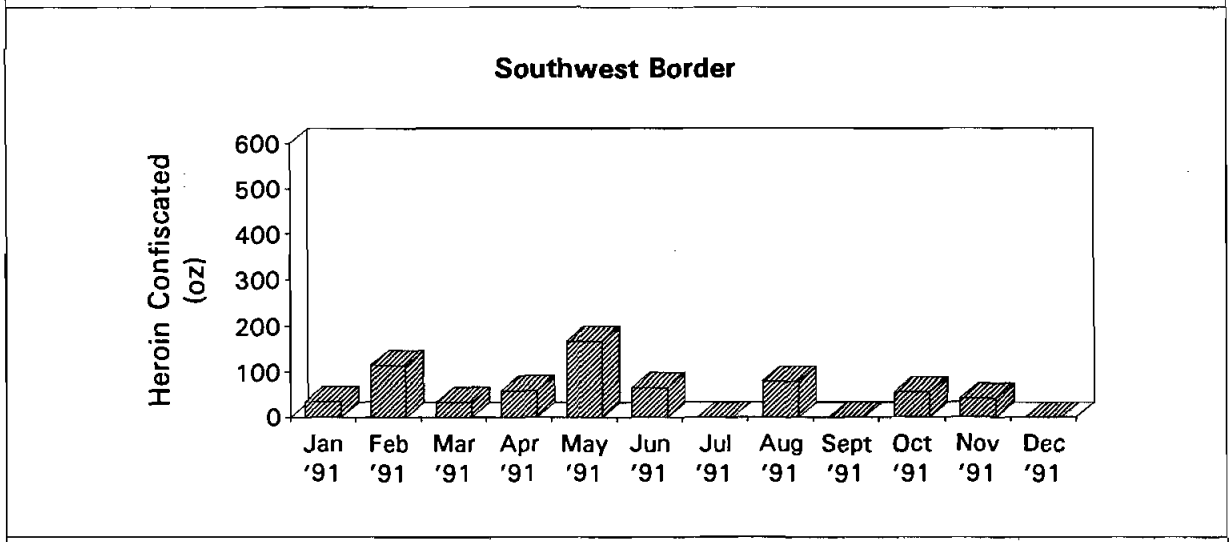
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Heroin Confiscated (oz)
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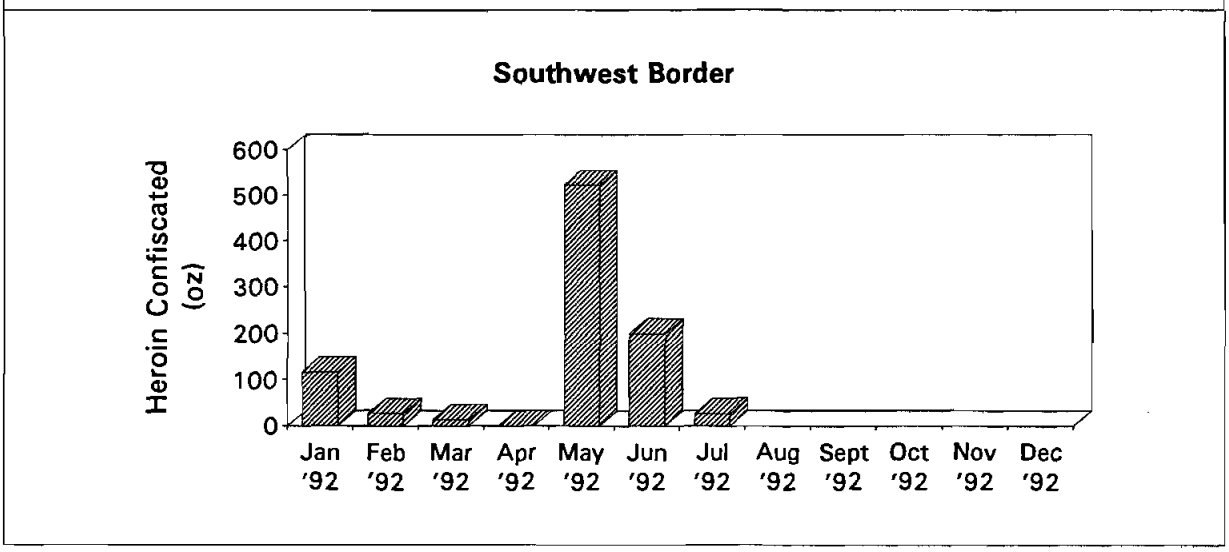
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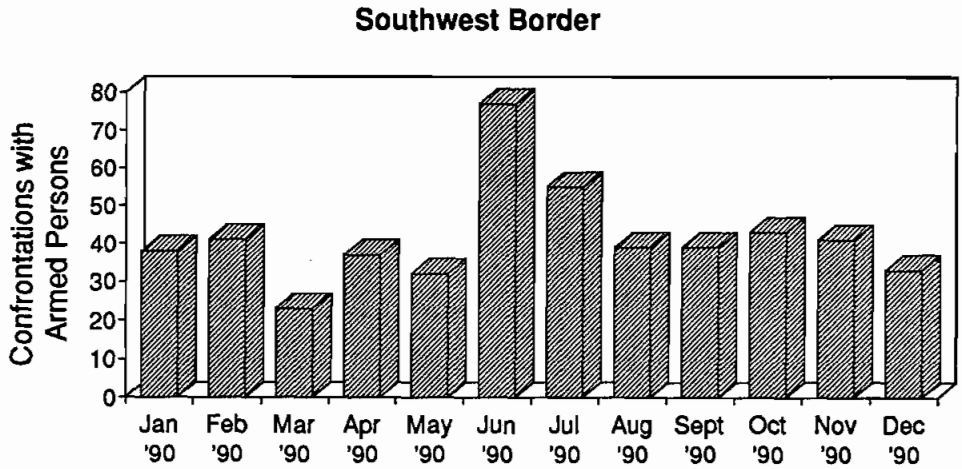
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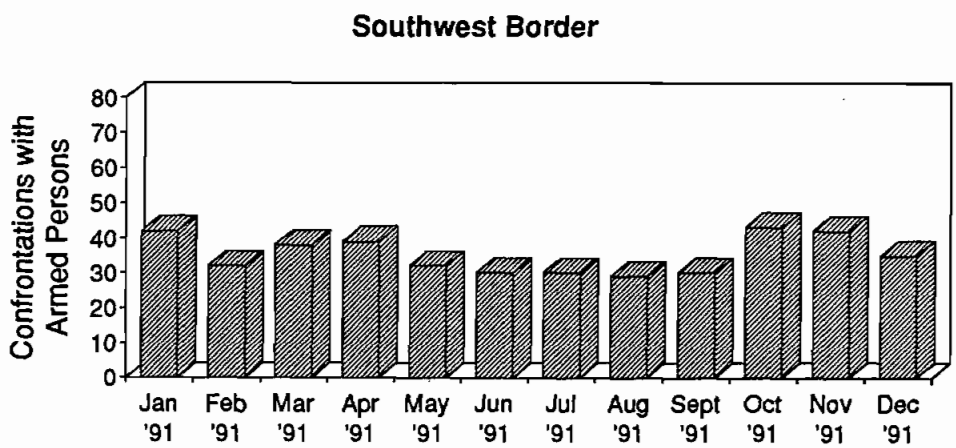
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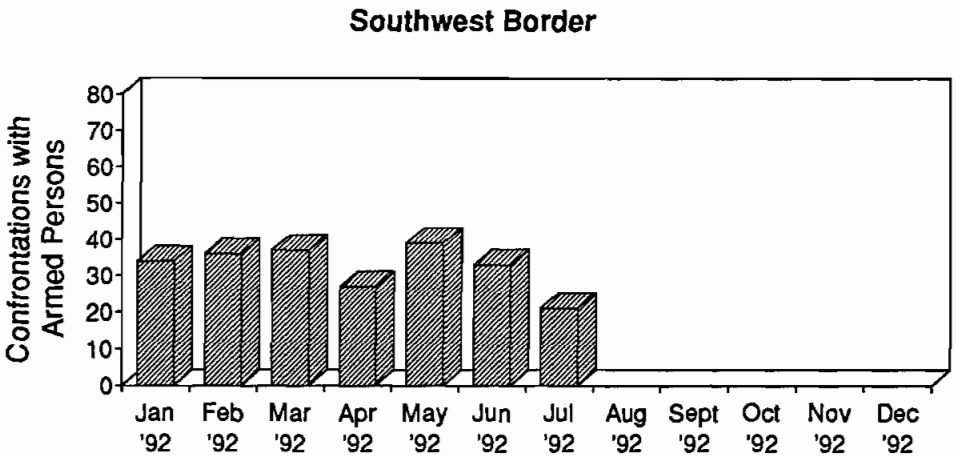
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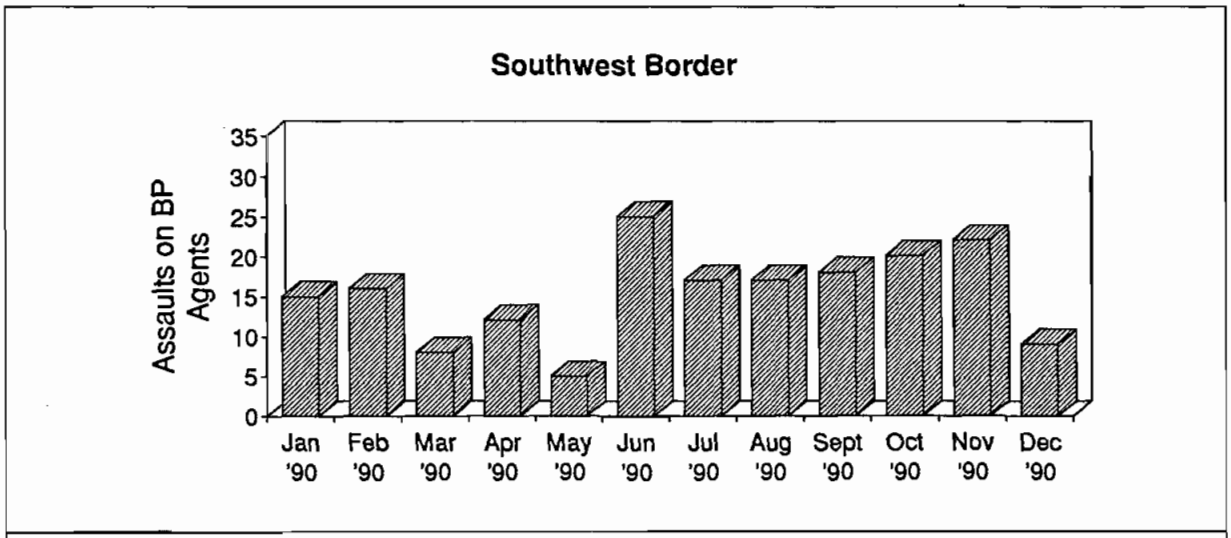
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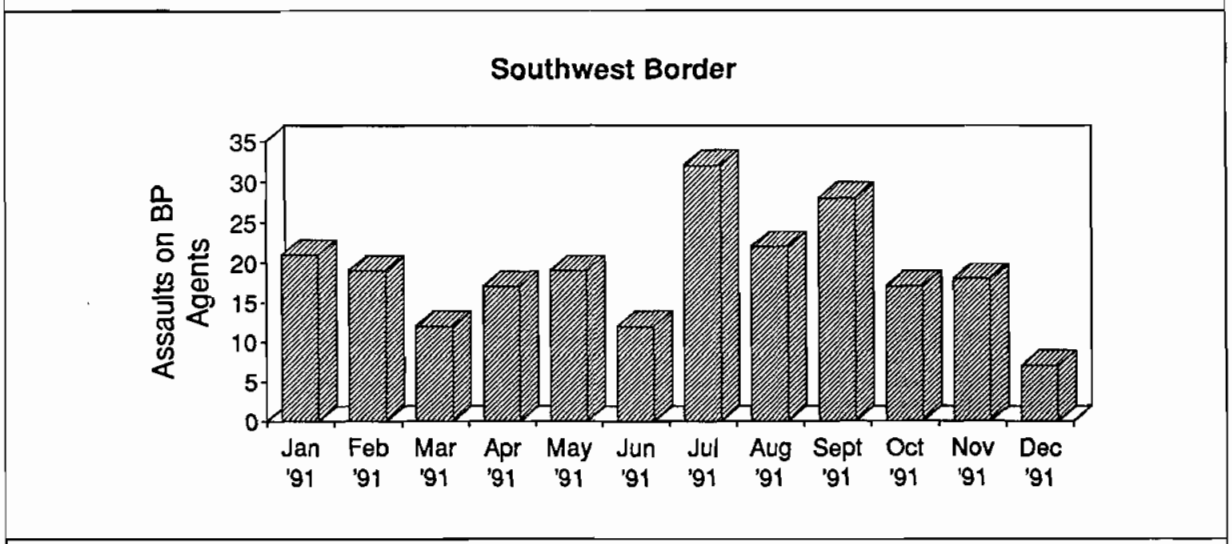
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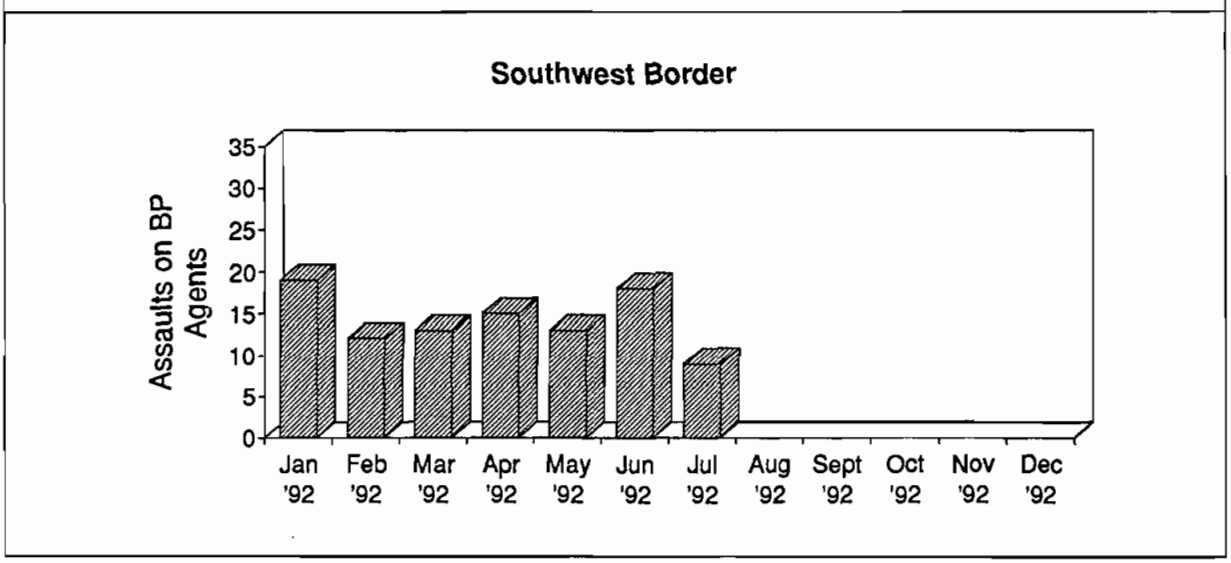
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OUO-7 (ALL)

# National Recommendations

One of the tasks for this study was to rank order projects for different levels of funding.

## Funding Level $0

Maintain present status and do the best that can be done.

## Funding Level $10 Million

Construct the 2 large and 37 small checkpoints. This construction would cost an estimated $8,150,000. The remainder ($1,850,000) could be used for tactical sensors to be used at the checkpoints. If personnel cost had to come from the $10M, then we recommend that the two big checkpoints in [redacted]d [redacted], and five small checkpoints be built and staffed. (The five most critical small checkpoints would be negotiated.)

## Funding Level $25 Million

Construct all the checkpoints (2 large and 37 small) and all of the lighted barriers (15 miles) in the [redacted] sector.

## Funding Level $50 Million

Construct all of the items mentioned for $25M and all of the lighted barriers (18 miles) in the [redacted] sector and as much of the lighted barrier as possible in the [redacted] sector. These recommendations are not inconsistent with our general recommendations that the lighted barriers should be first priority. They are most effective when a continuous section can be built as a completed barrier. In the [redacted] sector some of the lengths are 2 miles and some are 4 miles allowing some portions to be completely built.

## Funding Level $250 Million

Construct the full system in the order mentioned in the recommendations.

# Appendix A

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# Appendix A

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# Appendix B

## Individuals Who Contributed to the Study

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# Appendix B

## Individuals Who Contributed to the Study

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### BP Special Assignment

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(b) (6), (b) (7)(C), Laredo
(b) (6), (b) (7)(C), Del Rio
(b) (6), (b) (7)(C), Marfa
(b) (6), (b) (7), El Paso
(b) (6), (b) (7)(C), Tucson
(b) (6), (b) (7)(C), Yuma
(b) (6), (b) (7)(C), El Centro
(b) (6), (b) (7)(C), San Diego

Sandia National Laboratories

OUO-6 (ALL)

| | |
|---|---|
| (b) (6), (b) (7)(C) | Project proposal<br>Project proposal<br>Project proposal<br>Project execution and report preparation |
| (b) (6), (b) (7)(C) | Project execution and report preparation |
| (b) (6), (b) (7)(C) | Modeling<br>Map preparation<br>Project execution and report preparation |
| (b) (6), (b) (7)(C) | Project execution and report preparation |
| (b) (6), (b) (7)(C) | Modeling |

Thirty persons from throughout Sandia who participated in a brainstorming session.

TechSource Consulting, Incorporated

(b) (6), (b) (7)(C)

K-Tech

(b) (6), (b) (7)(C)

# Appendix C

## *A Discussion of the Application of Regression Analysis to the Development of a Model for a Systematic Analysis of Southwest Border Security*

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# 3

# Systematic Analysis of the Southwest Border

# Volume 3

Prepared for
the Immigration and Naturalization Service

Funded by
the Office of National Drug Control Policy

Prepared by
Advanced Systems Integration Department 9561
Sandia National Laboratories
Albuquerque, New Mexico 87185

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**January 1993**

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# Acronyms

## A

| | |
|---|---|
| A/D | Analog-to-Digital |
| ABS | Acrylonitrile/Butadiene/Styrene |
| AC | Alternating Current |
| ACPA | Assistant Chief Patrol Agent |
| ADNET | Anti-Drug Network |
| ADP | Automated Data Processing |
| ADSID | Air-Dropped Seismic Intrusion Detector |
| AEW | Airborne Early Warning |
| AFB | Air Force Base |
| AGC | Automatic Gain Control |
| AI | Artificial Intelligence |
| AIA | Acting Intelligence Agent |
| AID | Agency for International Development |
| AIS | Air Interdiction System |
| AM | Amplitude Modulation |
| AOB | Air Operations Branch (United States Customs Service) |
| APAIC | Assistant Patrol Agent in Charge |
| ASARS | Advanced Synthetic Aperture Radar System |
| ASR | Airport Surveillance Radar |
| ASSA | Anti-Smuggling Special Agent |
| ASU | Anti-Smuggling Unit |
| ATC | Air Traffic Control |

| | | |
|---|---|---|
| | ATF | Alcohol, Tobacco, and Firearms |
| | AWACS | Airborne Warning and Control System |
| **B** | BAG | Border Alliance Group |
| | BATF | Bureau of Alcohol, Tobacco, and Firearms |
| | BCD | Binary Coded Decimal |
| | BLM | Bureau of Land Management |
| | BMS | Balanced Magnetic Switch |
| | BORCAP | Border Patrol Criminal Alien Program |
| | BP | Border Patrol |
| | BPA | Border Patrol Agent |
| | BWSH | Break Wire Sensor Head |
| **C** | $C^2$ | Command and Control |
| | $C^3$ | Command, Control, and Communications |
| | $C^3I$ | Command, Control, Communications, and Intelligence |
| | CADRE | Computer-Assisted Display and Reporting Enhancement |
| | CB | Citizens Band |
| | CCA | Circuit Card Assembly |
| | CCD | Charge-Coupled Device |
| | CCTV | Closed Circuit Television |
| | CEO | Canine Enforcement Officers |
| | CIA | Central Intelligence Agency |
| | CINC | Commander in Chief |
| | CINCFOR | Commander in Chief, Forces Command |

| | |
|---|---|
| CINCSOUTHCOM | Commander in Chief, Southern Command |
| CIWG | Communications Interoperability Working Group |
| CLASSIC | Covert Local Area Sensor System for Intruder Classification |
| CMOS | Complementary Metal Oxide Semiconductor |
| CN | Counternarcotics |
| CNC | Counternarcotics Center |
| COMM(s) | Communication(s) |
| COMSEC | Communications Security |
| CONUS | Continental United States |
| COPS | Covert Observation Platform System (replacement for IIEV; presently known as TOPS) |
| CPA | Chief Patrol Agent |
| CSOC | Consolidated Space Operations Center |
| CW | Continuous Wave |
| CY | Calendar Year |
| **D** | |
| DARPA | Defense Advanced Research Projects Agency |
| DAVID | Digital Automatic Video Intrusion Detection |
| DB | Database |
| dB | Decibels |
| dBm | Decibel to 1 milliwatt |
| DC | Direct Current |
| DCA | Defense Communications Agency |

| | | |
|---|---|---|
| | DCPA | Deputy Chief Patrol Agent |
| | DEA | Drug Enforcement Administration |
| | DEMUX | Demultiplex |
| | DF | Direction Finder |
| | DI | Drug Interdiction |
| | DIA | Defense Intelligence Agency |
| | DLEA | Drug and Law Enforcement Agency |
| | DMA | Defense Mapping Agency |
| | DoD | Department of Defense |
| | DoJ | Department of Justice |
| | DOT | Department of Transportation |
| | DSB | Defense Science Board |
| **E** | EIDS | Eagle Intrusion Detection System |
| | ELR | Employer Labor Relations |
| | EPIC | El Paso Intelligence Center |
| | ESU | Employer Sanctions Unit |
| | ETU | Encoder Transmitter Unit |
| **F** | FAA | Federal Aviation Administration |
| | FBI | Federal Bureau of Investigation |
| | FDA | Food and Drug Administration |
| | FDIS | Fraudulent Document Index System |
| | FH | Frequency Hopping |
| | FLETC | Federal Law Enforcement Training Center |
| | FLIR | Forward-Looking Infrared (thermal imager) |

| | | |
|---|---|---|
| | FM | Frequency Modulation |
| | FOV | Field of View |
| | FRED | Fast Response Erection Device (also known as IIEV) |
| | FY | Fiscal Year |
| **G** | GAO | General Accounting Office |
| | GB | Ground-Based |
| | GCS | Ground Control Station |
| | GHz | Gigahertz (billion) |
| | GPS | Global Positioning System |
| **H** | HF | High Frequency |
| | HHS | Department of Health and Human Services |
| | HIDAD | High Density Array Development Program |
| | HUMINT | Human Intelligence |
| **I** | I/O | Input and Output |
| | $I^2$CCD | Double Intensified Charge Coupled Device |
| | ICCD | Intensified Charge Coupled Device |
| | ICD | Information Control and Display |
| | ICW | Intercoastal Waterway |
| | ID | Identification |
| | IEC/DOT/RTCM | Industry Approved Test |
| | IEV | Image Enhancement Vehicle |
| | II | Image Intensifier |
| | IIEV | Improved Image Enhancement Vehicle |

| | | |
|---|---|---|
| | ILS | Integrated Logistics Support |
| | IMINT | Image Intelligence |
| | INMARSAT | International Maritime Satellite |
| | INS | Immigration and Naturalization Service |
| | INSCAP | Immigration and Naturalization Service Criminal Alien Program |
| | INSCOM | United States Army Intelligence and Security Command |
| | INTELSAT | International Telecom Satellite |
| | INTERPOL | International Criminal Police |
| | IR | Infrared |
| | IRCA | Immigration Reform and Control Act (1986) |
| | IREMBASS | Improved Remotely Monitored Battlefield Sensor System |
| | IRID | Infrared Intrusion Detector |
| | IRS | Internal Revenue Service |
| | IRST | Infrared Search and Track |
| **J** | JCS | Joint Chiefs of Staff |
| | JTF | Joint Task Force |
| | JTF-6 | Joint Task Force Six |
| **K** | KHz | Kilohertz (thousand) |
| **L** | LEA | Law Enforcement Agency |
| | LED | Light-Emitting Diode |
| | LINK | Communications Network |
| | LLLTV | Low-Light-Level Television |
| | LOCUSP | Low-Cost Uncooled Sensor Prototype |

| | | |
|---|---|---|
| | LORIS | Long-Range Infrared System |
| | LOS | Line of Sight |
| | LP | Listening Post |
| | LPI | Low Probability of Intercept |
| | LPI/D | Low Probability of Intercept or Detect |
| **M** | MAGID | Magnetic Intrusion Detector |
| | MAP | Mobile Aerostat Platform |
| | MATI | Modern Analysis of Traditional Intelligence |
| | MBBD | Mini Break Beam Detector |
| | MBCN | Mini Beacon |
| | MBWD | Mini Break Wire Detector |
| | MCV | Mobile Command Vehicle |
| | MGSH | Magnetic Sensor Head |
| | MHHP | Mini Hand-Held Plotter |
| | MHz | Megahertz (million) |
| | MIDS | Mini Intrusion Detection System |
| | MILSTAR | Military Strategic and Tactical Relay System |
| | MINIMAGID | Miniature Magnetic Intrusion Detector |
| | MLS | Multi-Level Security |
| | MMGD | Mini Magnetic Detector |
| | MOA | Memorandum of Agreement |
| | MOE | Measure of Effectiveness |
| | MOP | Measure of Performance |
| | MOU | Memorandum of Understanding |

| | | |
|---|---|---|
| | MPDM | Mini Portable Display Monitor |
| | MSE | Mobile Subscriber Equipment |
| | MSID | Mini Seismic Intrusion Detector |
| | MUX | Multiplex |
| | MXMT | Mini Transmitter |
| **N** | NAS | Naval Air Station |
| | NCIC | National Crime Information Center |
| | NCNC | National Center for Narcotics Control |
| | NDCS | National Drug Control Strategy |
| | NDIC | National Drug Intelligence Center |
| | NF | Noise Factor |
| | NG | National Guard |
| | NIDA | National Institute on Drug Abuse |
| | NIIS | National Immigrant Information System |
| | NNBIS | National Narcotics Border Interdiction System |
| | NODLR | Night Observation Device, Long Range |
| | NORAD | North American Air Defense |
| | NPS | National Park Service |
| | NSA | National Security Agency |
| | NTIA | National Telecommunications and Information Administration |
| | NTIC | Naval Technical Intelligence Center |
| | NWS | National Weather Service |

| | | |
|---|---|---|
| **O** | OA | Operation Alliance |
| | OC | Operations Center |
| | OIC | Officer In Charge |
| | OMD | Omnidirectional Motion Detector |
| | ONDCP | Office of National Drug Control Policy |
| | OP | Observation Post |
| | OPFAC | Operational Facility |
| | OPR | Optical Pattern Recognition |
| | OPSEC | Operations Security |
| | OTAR | Over-the-Air Rekeying |
| | OTH | Over the Horizon |
| | OTM | Other Than Mexican |
| **P** | PA | Patrol Agent |
| | PAIC | Patrol Agent in Charge |
| | PC | Personal Computer |
| | PD | Probability of Detection |
| | PEP | Peak Envelope Power |
| | PEWS | Platoon Early Warning System |
| | PFA | Probability of False Alarm |
| | PIRH | Passive Infrared Head |
| | PL | Pulse Length |
| | PLRS | Position Location Reporting System |
| | PM | Portable Monitor |
| | POE | Port of Entry |
| | PRR | Pulse Repetition Rate |

| | | |
|---|---|---|
| | PSID | Portable Seismic Intrusion Detector |
| | PVC | Polyvinyl Chloride |
| | PVD | Portable Video Display |
| **Q** | QA | Quality Assurance |
| **R** | RAC | Regional Agent in Charge |
| | RAM | Random Access Memory |
| | RCS | Radar Cross Section |
| | REMBASS | Remotely Monitored Battlefield Sensor System |
| | RF | Radio Frequency |
| | RMSS | Remotely Monitored Security System |
| | RPV | Remotely Piloted Vehicle |
| | RSVP | Remote Sensor Video Pack |
| **S** | SADS | Surveillance and Detection System |
| | SAR | Synthetic Aperture Radar |
| | SASS | Small Aerostat Surveillance System |
| | SATC | Seismic/Acoustic Target Classifier |
| | SBPA | Supervisory Border Patrol Agent |
| | SBTD | Southwest Border Telecommunications Database |
| | SDC | Strategic Defense Command |
| | SDLS | Secure Data Link System |
| | SDR | Signal Data Recorder |
| | SEIWG | Security Equipment Integration Working Group |
| | SHF | Super-High Frequency |
| | SIA | Supervisory Intelligence Agent |

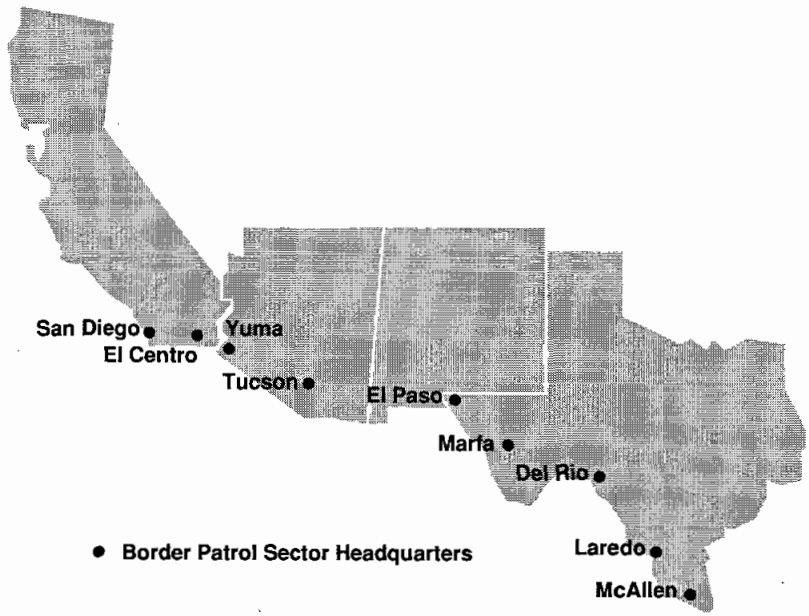
| | | |
|---|---|---|
| | SID | Seismic Intrusion Detector |
| | SIGINT | Signal Intelligence |
| | SINCGARS | Single-Channel Ground and Air Radio System |
| | SNL | Sandia National Laboratories |
| | SNR | Signal-to-Noise Ratio |
| | SPA | Senior Patrol Agent |
| | SSC | Surveillance Support Center |
| | SSPA | Station Senior Patrol Agent |
| | STC | Seismic Target Classifier |
| | STU | Secure Telephone Unit |
| **T** | TAC | Tactical Air Control Center |
| | TI | Texas Instruments |
| | TNC | A Type of Coaxial Connector |
| | TOPS | Transportable Observation Platform System (formerly known as COPS; replaced the IIEV) |
| | TRANSEC | Transmission Security |
| | TRITAC | Tri-Service Tactical Communication System |
| | TRSS | Tactical Remote Sensor System |
| | TV | Television |
| **U** | UAV | Unmanned Air Vehicle |
| | UGS | Unattended Ground Sensor |
| | UHF | Ultra-High Frequency |
| | UI | User Interface |
| | USA | United States Army |

| | |
|---|---|
| USAF | United States Air Force |
| USAMICOM | United States Army Missile Command |
| USASC | United States Army Signal Center |
| USBP | United States Border Patrol |
| USCG | United States Coast Guard |
| USCS | United States Customs Service |
| USFS | United States Forest Service |
| USIA | United States Information Agency |
| USMC | United States Marine Corps |
| USMS | United States Marshalls Service |
| USN | United States Navy |
| USPS | United States Park Service |
| UV | Ultraviolet |
| **V** | |
| VEH | Vehicle |
| VHF | Very High Frequency |
| VHF-FM | Very High Frequency-Frequency Modulation |
| VIDS | Visual Information Display System |
| VR | Voluntary Return (or Voluntary Departure) |
| VSWR | Voltage Standing Wave Ratio |

# Executive Summary

In September 1991 Sandia National Laboratories was tasked by the Office of National Drug Control Policy through the Immigration and Naturalization Service (INS) Research and Development Program to conduct a systematic analysis of the security along the United States/Mexico Border (Figure ES-1) between Ports of Entry (POEs) and to recommend measures by which control of the border could be improved. The recommendations and conclusions in this report are those of the Sandia National Laboratories staff associated with this project.

*Figure ES-1. Southwest Border Between the United States and Mexico*




The control of drug-related traffic across the US/Mexico Border involves the participation of some 41 agencies. These include federal agencies with charters and authority directed at drug and smuggling activities; federal agencies with only peripheral involvement, but wishing to share in both the budget and the asset forfeiture program; and state, county, and local law enforcement agencies directly concerned with illegal drug and smuggling activities in their jurisdictions. Most of these agencies participate in counternarcotics at a secondary level. The principal federal agencies with border control responsibilities are the following:

- INS/US Border Patrol
- Drug Enforcement Administration (DEA)
- US Customs Service
- Federal Bureau of Investigation (FBI)
- Operation Alliance

- US Coast Guard
- Joint Task Force Six (JTF-6)
- El Paso Intelligence Center (EPIC).

Recent congressional actions have also provided funds to support the National Guard in these interdiction operations. As a result of this action, the National Guard has become increasingly active in supporting the other agencies at the border and at "hot spots" within the US.

As the enforcement arm of the INS, the US Border Patrol is charged with the responsibility to detect and interdict all crossings of the US borders except at designated POEs.

The law requires that persons must report to POEs for entry into the US, and the Border Patrol enforces this law. The Border Patrol, therefore, has the most concentrated presence along the entire length of the Southwest Border of all of the agencies listed. The primary statutory mission of the agency is the apprehension of illegal aliens, and the agents have arrest and search authority within 100 miles of the border to enforce citizenship and entry requirements. The Border Patrol has been granted collateral authority to interdict drug traffic by the DEA because line patrol and highway checkpoints inevitably intercept drug smugglers as well as aliens. It is important to note that drug interdiction is a subset of the Border Patrol's activity and that the drug search and seizure authority is derived from the alien apprehension authority. Therefore, this study is heavily oriented toward the Border Patrol. Additional information about other agencies' responsibilities is given in Volume 2.

When this analysis was proposed, there was a belief that significant improvements in border control could be achieved by introducing new or improved technologies and that the application of these could lead to reduced manpower and significant control of the Southwest Border. During the first phase of the study, in which all of the Southwest sectors of the Border Patrol were visited, we realized that those beliefs were, in our opinion, incorrect. Our conclusions and recommendations about how to make significant improvements in border control are contained in Volume 1 of this study. A catalog of equipment that could be procured (Volume 3) has also been prepared. Additionally, to fulfill the contractual requirements of this study, we prepared Volume 2, which follows the outline of the original Sandia proposal and provides the detail for the budget suggested in Volume 1.

Our study consisted of characterizing the current border security environment, compiling a catalog of currently available or readily modifiable technologies, developing an implementation plan that provided optimal use of these technologies based on present staffing levels, and generating an implementation plan that allows a moderate increase in personnel.

Even though this study is limited to the Southwest Border between POEs, we have approached the study from an integrated system point of view. Over a 3-month period, we visited all nine sectors of the Southwest Border where we analyzed the problem by questionnaire and discussions with field and headquarters personnel. In addition, time was spent flying over many of the border areas and driving along the border to examine the terrain surrounding the area, touring all of the facilities (including the electrical maintenance and vehicle maintenance facilities), observing the agents work in the field (including several apprehensions), and meeting with the agents to discuss the problems they face and the ways in which their work could be made easier. We also reviewed many of the available reports on this topic (see Bibliography, Volume 2).

As of May 1, 1992, the portion of the El Paso sector east of a line through Cornudas and Hilltop, Texas, became part of the Marfa sector. Also, the responsibilities and personnel count of some of the stations within a few sectors have changed. The conclusions of this report are not affected by these changes, but the text, maps, and spreadsheet within this report reflect the information that was available before May 1 when the sector visits were made.

Most of the recommendations made in this report are not new; the basic problems have remained unchanged for years and have been individually studied by many qualified people with appropriate expertise. This report views the entire Southwest Border as a system and combines our observations with many of the previous recommendations in a systematic way.

We make suggestions within the report regarding sensor procurement; those suggestions represent less than 15% of the total cost for implementing all of the recommendations. The sensors we suggest will simply augment existing capabilities but, more importantly, will serve to replace a dilapidated inventory. A conclusion of this study is that the Southwest Border is being overrun, and the use of more sensors will only identify more targets that can be neither apprehended using current manpower

nor accommodated within existing facilities. In some rural areas verification techniques (*e.g.,* slow-scan closed circuit television [CCTV]) to reduce Border Patrol agents' responses to sensor alarms caused by legal activity have been effective. Additional research into making verification techniques consume less power, be easy to install, and be more covert are needed.

Our recommended strategy for improved control of the border is based on two tactics:

OUO-7 (ALL)

- **Border Enforcement:** the use of heavily patrolled multiple barriers on the border to control the large number of illegal aliens and drugs crossing in the urban areas of the border

- **Containment:** additional 24-hour highway checkpoints to minimize the number of illegal aliens and quantity of drugs leaving the border region if they get into the country.

Gaining control of the situation in large urban areas is important not only for purposes of border law enforcement, but because the uncontrolled situation puts the illegal aliens and US residents living near the border very much at risk. The containment strategy, reinforced by efficient deployment of sensor and surveillance technology and effective use of intelligence resources, will reduce the risks that illegal aliens face when dealing with alien smuggling organizations and will enhance the safety of enforcement agents by providing them with needed tactical advantages and eventually reducing the volume of illegal trafficking.

An important fact observed is that 66% of all illegal alien apprehensions occur in 4.7% of the border. That portion is totally contained in two sectors, San Diego and El Paso. Because of the huge numbers of illegal aliens involved, these two sectors also put a heavy demand on the alien transport and detention activities and the logistics that go along with the processing of large numbers of illegals. Many of these resources could be redirected to controlling drug and illegal alien traffic in other sectors if the illegal alien traffic in these sectors were controlled. The mat fence in the San Diego sector was nearly completed in late CY 1992; we expect that its existence may cause a shift in illegal alien activity to other sectors. The illegal aliens who attempt to cross rugged, uninhabited terrain (mountains, desert, *etc.*) will experience higher risks. Because many of these persons are expected to be uninformed, desperate, or criminal, the risk to Border Patrol agents may also be higher. Other urban areas on the border have similar problems, but to a much smaller extent.

[redacted] This is a technological solution that allows the immediate implementation of available technology to modify the situation at the border and reduce the number of persons who will cross only if they can do so easily. The solution is to channel and direct a significantly reduced level of traffic to places where the Border Patrol agents can adequately deal with it. We understand that the combination of budget, procurement, and installation may not allow immediate adaptation of the available technology, but all recommendations should be implemented as soon as possible.

[redacted] What is required to enforce the laws prohibiting illegal entry into the US is significantly increased discouragement that requires the use of multiple tools and substantial time and tires the [redacted] violators to the point [redacted] that they can be consistently apprehended or turned back.

*Figure ES-* [redacted]

OUO-7
(ALL)

[redacted]

[redacted]

[redacted]

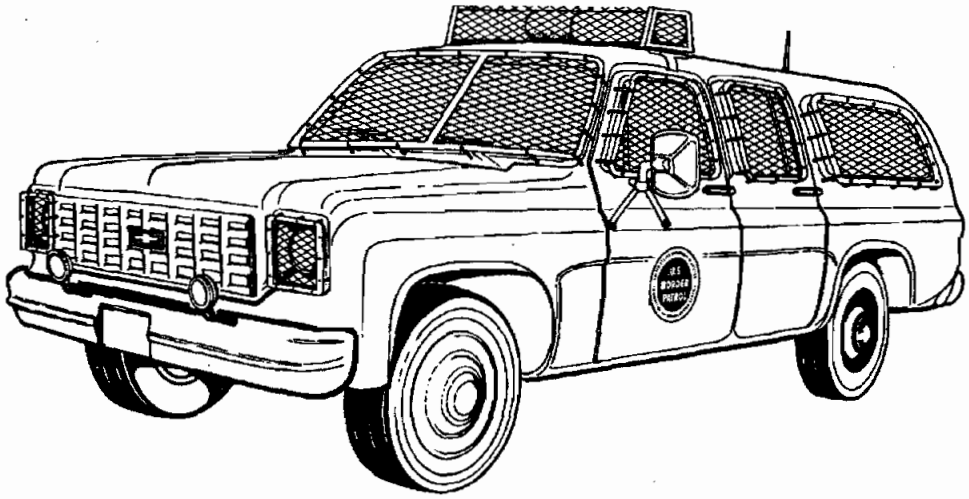
*Figure ES-3.* [redacted]

*Figure ES-4.* [redacted]

OUO-7
(ALL)

[redacted]

*Figure ES-5.* [redacted]



[redacted] It should also be noted that as illegal aliens find ways to defeat the obstacles placed in their path, new technology will need to be developed.

The conclusions reached in our study are listed below:

- The illegal alien traffic must first be brought under control in the urban areas of the Southwest Border, especially in

1. *Ten Steps to Securing America's Border,* Federation for American Immigration Reform, January 1989.

OUO-7 (ALL)

San Diego and El Paso, so that existing resources can be reallocated to control the drug and illegal alien traffic in other sectors. We believe that control must be gained as soon as possible and that it can be accomplished with existing technology for less than 3% of the $11.7 billion National Drug Control budget for FY 1992.

- Control of the illegal alien and drug traffic can be gained by

  - [redacted]

- The Immigration Reform and Control Act (IRCA) of 1986[2] included provisions to increase the number of Border Patrol agents. Congress has ordered increases in Border Patrol personnel twice since then, but neglected to provide any additional funding. We believe that with presently authorized levels of Border Patrol personnel, in conjunction with the issues addressed above, control of the Southwest Border can be gained. The redistribution of personnel now required in the urban areas and the elimination of Border Patrol agents performing nonagent jobs (clerical, auto and facilities maintenance, transportation of deportees, *etc.*) will also increase enforcement effectiveness. It is very likely that future improvements in sensors and sensor fusion programs and other advanced enforcement technology will allow the number of Border Patrol personnel to decrease through normal attrition to some lower level after control is firmly gained.

- There are an adequate number of organizations and structure available on the Southwest Border to produce an

2. *Immigration Reform and Control Act (IRCA) of 1986,* Public Law 99-603, November 6, 1986.

effective security environment. The personnel and equipment of each of the individual organizations need to be better coordinated in order to better enforce the existing US laws.

- The integrated system can become more effective by strengthened policy and procedures, such as positive personnel identification of all apprehended illegal aliens, graded penalties for repeat offenders, adequate incarceration facilities for criminal aliens and those who refuse voluntary return, deep deportation, and fast judicial actions.

- Because the Nation's drug control program is an integrated system, emphasis applied to one part of the system increases pressure on the other parts. For example, if the percentage of total illegal alien apprehensions increases without a corresponding decrease in total illegal traffic, then problems in the processing, transportation, detention, and deportation of illegal aliens are intensified. The approach of significantly reducing the number of illegal aliens entering the country will reduce pressure on all of the other parts of the system except the POEs themselves. Additional and more sophisticated technology must then be applied at the POE to assist in handling this increased pressure.

It is imperative that control of the border be gained as soon as possible because of the problems caused by the uncontrolled illegal alien and drug traffic in our border communities and large inland population centers. It is also clear that we must be concerned about the inhumane treatment of these illegal aliens by alien and drug smugglers who are determined to profit from the plight of the illegal aliens. If we stop the illegal alien traffic, crimes (such as rape, robbery, and murder) being committed against illegal aliens crossing the border will also stop. If the reason to assemble on the Mexico side is eliminated, the crimes being committed there should also decrease.

The role of intelligence gathering, processing, and assessment will become even more important to help determine where to deploy Border Patrol assets as persons who are determined to cross the border are forced to make their attempts in more remote areas.

A good public relations program is also recommended—one which emphasizes the fact that the barriers are not an act of unfriendliness, but an act of control in order to allow more deserving immigrants and fewer of the criminal aliens, drug traffickers, or other undesirable persons to enter the US.

# Physical Security Systems

## Introduction

In September 1991 Sandia National Laboratories was tasked by the Office of National Drug Control Policy through the Immigration and Naturalization Service (INS) Research and Development Program to conduct a systematic analysis of the security along the US/Mexico Border between Ports of Entry (POEs) and to recommend measures by which control of the border could be improved. OUO-7

When this analysis was proposed, there was a belief that significant improvements in border control could be achieved by introducing new or improved technologies and that the application of these could lead to reduced manpower and significant control of the Southwest Border. During the first phase of the study, in which all of the Southwest Border sectors were visited, we realized that these beliefs were, in our opinion, incorrect.

Our recommended strategy for improving control of the border is based on two controlling tactics:

- **Border Enforcement:** The use of heavily patrolled barriers on the border to control the large number of illegal aliens and drugs crossing in the urban areas of the border

- **Containment:** Additional 24-hour highway checkpoints to minimize the number of illegal aliens and quantity of drugs leaving the border region if they get into the country.

Gaining control of the situation in large urban areas is important not only for purposes of border law enforcement, but because the uncontrolled situation puts the illegal aliens very much at risk. The containment strategy, reinforced by efficient deployment of sensors and surveillance technology and effective use of intelligence resources, will reduce the risks that illegal aliens face when dealing with alien smuggling organizations and will enhance the safety of enforcement agents by providing them with needed tactical advantages and eventually reducing the amount of illegal traffic. This volume is devoted to describing the technologies that exist and providing catalog-type information. A general description of physical security systems is given in the following section. Technology descriptions follow, and finally, we have included data sheets describing the technologies.

## Overview

Physical protection systems for industrial and high-risk facilities are designed to provide protection against acts of sabotage and theft of special material or other items being protected. Four elements must react in a timely manner to form an effective physical protection system:

- Detection and assessment systems must expose and verify any intrusion attempt from outside or any malevolent act by insiders or outsiders.
- Communications systems must bring all pertinent information to the point(s) where appropriate action may be taken.
- Delay systems must impede continued efforts to penetrate into, or exit from, the protected area.
- Response systems (or forces) must counteract adversary activity and neutralize the threat.

For border security, many of the concepts of a conventional physical security system do not apply. Instead of attempting to keep unauthorized persons out of a protected area, the goal is to keep illegal aliens from crossing the border into the US. The length of the Southwest Border is approximately 1,600 miles; therefore, using sensors along the entire length is not affordable or maintainable. Sensors are used to provide detection at specific activity locations along the border.

Experience has shown that [redacted]. In areas where many illegal aliens cross, multiple barriers should be used. Also, between the [redacted] A number of different types of intrusion detection equipment can be beneficial to the border control endeavor:

- [redacted]
- Assessment is being able to tell what is happening in a given area or to determine what caused a sensor to alarm.

Assessment devices include regular and low-light television cameras, intensified television cameras, and thermal imagers. Portable (tactical) devices include binoculars, night vision scopes, and hand-held thermal imagers.

- Communication equipment is used to send the sensor alarm signals to a central point and to allow communication between law enforcement personnel.
- Information control and display equipment is used to collect and display the alarms from the sensors and to display the output from assessment devices.
- Barriers are useful to discourage illegal entry at certain points and to funnel the determined traffic into locations that are more advantageous to the law enforcement personnel.

Included in the planning and analysis of any equipment to be installed is the development of the following:

- a system philosophy, including techniques to reduce or tolerate nuisance alarms
- a preliminary system design, including site survey and characterization techniques
- onsite and offsite experience and evaluation, including sensor test methods and acceptable performance criteria
- final system design
- construction and evaluation
- a program schedule
- cost considerations
- procurement procedures
- maintenance and operation of the system over its intended lifetime.

These steps will lead to an "operationally effective" system. The expression operationally effective is used to describe systems that have achieved a reasonable balance among optimization of system hardware and comprehension, acceptance, and efficient use of the system by the persons designated to operate the system.

Sensors cannot operate by themselves; they are part of a total system that must be designed and maintained. Important considerations that must be included in the design of a system are the following:

- [redacted]
- [redacted]
- [redacted]
- [redacted] When testing a system, it is important that all subsystems be tested independently, followed by a full system test.

Important environmental factors must be considered when designing, installing, and maintaining a system:

- Wind – speed and temperature, cyclic behavior
- Humidity – relative and range, effect on equipment
- Other Considerations (*e.g.*, sand storms) – effect on equipment both corrosive and blocking openings
- Current and Tides (particularly near rivers or other bodies of water) – tidal variation, speed of current
- Precipitation – number of inches per month (time of year) for rain and snow
- Closed Circuit Television (CCTV) – pot-shots by hunters, particularly near hunting regions
- Electrical Power – what dedicated standards exist, voltage and cycle supply fluctuation (voltage 10% and frequency 1-2%)
- Soil Composition
- Availability of Water
- Sewage

- Fuel Oil/Natural Gas Lines
- Adjacent Buildings – any nearby to provide undetected cover to assailants.

## Costs

**Procurement** – The listed commercial prices have been given for planning purposes. Some of the manufacturers offer quantity discounts and some offer special discounts to the Border Patrol.

**Installation** – The installation costs of video systems, transmission systems, command and control equipment, and fixed repeaters can equal or exceed the cost of the equipment. These costs vary with the distance of the installation from permanent power, the amount of trenching, type of pole or tower required, and the difficulty of gaining access to the site. The installation costs of the sensors themselves are limited to the time it takes Border Patrol personnel to determine where the sensors should be located and the time required to bury them.

**Maintenance** – The major routine maintenance costs are those associated with changing the batteries in the sensors/processors/transmitters. Repair costs are considered in the Integrated Logistic Support (ILS) section.

## Recommendations

Where possible, we have listed items that could be purchased immediately. This list is not exhaustive and relies on the needs and experience of the field offices. Sandia has not evaluated all of the equipment listed, and it is not the intent of Sandia or of this document to help or hinder any manufacturer.

## Integrated Logistic Support

ILS includes all of those items that are required to install and keep equipment operational throughout its life. It includes test and evaluation, installation, technical manuals, training, additional personnel required to operate and maintain the equipment, spare parts, human factors, quality assurance, reliability, and drawing configuration control.

Reasonable estimates of ILS costs are best obtained from past records; however, some reasonable estimates for planning purposes are listed below:

- An additional vehicle will be required for each two patrolmen added to a sector.

- The cost of ownership for a two-wheel-drive vehicle mainly driven on hard surface road is about $0.30 per mile based on 40,000 miles per year and depreciated to zero after 120,000 miles. (This figure of $12,000 per year includes all gasoline, routine maintenance, repairs, oil and lubrication, tires, brakes, depreciation, and reserve for insurance.)

- The cost of ownership for a four-wheel-drive vehicle driven on all types of terrain is about $0.40 per mile based on 40,000 miles per year and depreciated to zero after 120,000 miles. (This figure includes all of the items listed above for the two-wheel-drive vehicle.)

- About 15% of the purchase cost of CCTV equipment should be allocated every year for parts and labor.

- About 56% of the purchase cost of computer equipment should be allocated every year for an all-inclusive maintenance contract.

- For sensors, communication links, and CCTV equipment, 12-15% more of each item should be ordered than the installation requires. About one out of eight units shipped will be dead on arrival, and the excess equipment will allow the installation to be completed. System spare parts must also be provided. Essential items, for which only 1 to 10 are used at a facility, will require as much as 100% extra for such low use items. The percentage of spares required for other items will be determined by their failure rate.

- A single control system operator can monitor up to [redacted] CCTV monitors. If more monitors are added in a control station, then an additional control station and operator will probably be required.

- A single CCTV technician can keep a system of [redacted] cameras and their associated transmission links and monitors working. If a system is expanded beyond this number, an additional technician will probably be required.

- Part of this study requested recommendations in which there was to be no increase in personnel; therefore, funding for contract maintenance, sensor installation, and training must be budgeted for any net increase in the amount of equipment per sector. In the part in which increases are allowed, contract personnel could be replaced by Border Patrol personnel. Two contract technicians per sector are recommended: one to assist in the repair and maintenance of new and existing equipment and one to provide training and assistance to the agents who install the sensors. The

contract cost of personnel is estimated to be about $100K per person.

- If every sector plans to repair the equipment that fails in the sector, then every sector needs a complete set of test and diagnostic equipment. Customized circuit board testers, which help the technician locate the faulty component(s) on the malfunctioning board, are recommended. Sensors and video and communications equipment must be serviced and repaired. Some sectors have some good test equipment. However, to complete the testing capabilities and to provide enough equipment for the contract personnel, it is estimated that each sector should receive $100K for new equipment. Another method of accomplishing the repair of faulty equipment is to establish a central repair depot. This concept is not popular with sector personnel.

## Intrusion Detection Systems

OUO-7

After visiting all of the Southwest Border sectors, we have concluded that the majority of sensors used and needed are unattended ground sensors. It is recommended that physical barriers be constructed in all of the areas where large numbers of illegal aliens are crossing (especially in the urban areas). Later, after the barriers are well established, it may be expedient to install sensors on one of the fences.

A large number of sensors that now exist in the sectors are old; repair parts are not available; and, in some cases, the manufacturer is no longer in business. The absence of a uniform procurement specification, in-plant inspection and acceptance, and uniform testing procedures and equipment have contributed to problems in the field.

For sensors that can be purchased immediately, we found nothing different from that which is already in use or has been tested by the Border Patrol: the [redacted], which are unattended ground sensor families that are primarily strategic sensors. With field receivers and monitors installed, these sensors can also be used as tactical sensors. The Qual-Tron Mini Intrusion Detection System (MIDS) is strictly tactical [redacted] and will not report into the present sensor communication system. In those areas in which assessment equipment is available, video motion detection equipment could be considered to provide some automatic detection. The Senstar Digital Automatic Video Intrusion Detection (DAVID) 200 is the best performing commercially available video motion detection sensor that has been evaluated by Sandia. It is also one of the most expensive, so the costs must be carefully weighed against the unit performance.

In the short term, the US Army's Improved Remotely Monitored Battlefield Sensor System (IREMBASS) could be available. However, although it has greater capabilities than the MIDS, it is considerably more expensive. In the long term, the Marine Corps-sponsored Tactical Remote Sensor System (TRSS) may be available. Like the IREMBASS, it may also be too expensive to be a viable candidate.

The INS Research and Development Program is developing a prototype system similar to the unattended ground sensor mentioned in the paragraph above. This system will have a government-owned design and a set of build-to-print drawings that can be competitively bid by private industry. Build-to-print has the disadvantage that it is difficult to hold the manufacturer responsible for performance of the equipment. If a performance specification is produced, then it must define how the performance is measured and with what type of measurement equipment. It must also provide sufficient interface and configuration control drawings that equipment from different manufacturers and from the same manufacturer bought at different times will be compatible. OUO-7

A new tool identified in this report for use by the Border Patrol is the National Technical Means (NTM). The details of this tool are classified so only a general description is given here. The capability of this tool could be demonstrated within a few months. Some of the advantages of the NTM are the following:

- It is possible to look on both sides of the border without the knowledge of those being observed.
- The remote sensors and infrastructure to interpret any information obtained is already available.
- All types of terrain can be observed.
- For at least some types of terrain, indicators of activity such as vehicle and perhaps horse traffic can be established.

Potential disadvantages of using this tool are the following:

- The political issues of observing both US and Mexican activities. (This may not be a problem because, other than the Mexican staging, most of the useful information can be gained by looking only on the US side.)
- Security issues involved in using information obtained from a classified source.

## Assessment Systems

Assessment systems are used to view activities that occur at some remote location or a location beyond that which can be seen with the naked eye. Because of the distances involved, the transmission equipment required, and the fact that the assessment devices are difficult to make covert, CCTV-type systems are usually only used by the Border Patrol in or near urban locations. Portable or vehicle-mounted devices can be used at any location.

Assessment devices are identified by a number of terms: regular CCTV, low-light CCTV, very low-light CCTV, intensified CCTV, double intensified CCTV, starlight CCTV or scope, pyroelectric vidicons, and thermal imagers.

Regular, low-light, and very low-light CCTV cameras used to be all vacuum tube devices (vidicons). They are now mostly solid-state devices. One of the primary limitations of standard vidicons in security applications is their susceptibility to image burn-in when operating in fixed positions for extended periods of time. Regular light vidicons are usually made with an antimony trisulfide photo-sensitive surface. Low-light and very low-light cameras typically have image devices (vidicon or solid state) having greater sensitivity, wider spectral response, and greater resistance to image burn-in. One such device is the silicon diode array vidicon whose photo-sensitive imaging surface is composed of discrete silicon photodiodes. Silicon diode array tubes are available under the following commercial trade names: Epicon, Sidicon, Sivicon, S-T Vidicon, Trivicon, and Ultracon.

A second type of low-light-level image tube is the hetero-junction type, which has a light sensitive surface of cadmium and zinc tellurides. The hetero-junction image tubes are more commonly called by their trade name Newvicon.

Over the last few years, solid-state light-sensitive imaging devices have been developed. Only recently have they been developed with resolution and sensitivity to make them competitive with the image tubes. A solid-state imaging device is made up of discrete cells of silicon that are inherently immune to image burn-in. Within the imaging device, the conversion from light to an electrical signal can be done by any of the following types of solid-state devices:

- Charge coupled device (CCD)
- Charge injection device (CID)

- Charge primed device (CPD)
- Metal oxide silicon (MOS) imager.

These devices vary from each other in the manner in which the electrical charge is read from the light-sensitive surface and in the read-out method. The CCD is the device most commonly found in commercially produced video cameras at this time.

In the tube vidicons, an electron beam scans the light-sensitive surface to produce a video signal whose amplitude is proportional to the amount of light at a given point. The solid-state imager does not require an electron beam to create a video signal. The charge from the light sensitive cells is read out serially to produce the video signal.

Solid-state devices are smaller, consume less power, and have lower maintenance costs. The Border Patrol does not presently use many regular light cameras because external lighting is required to operate the regular light cameras at night.

In some security applications, providing adequate lighting for standard image-tube or solid-state cameras is not possible or desirable from an operational standpoint. These imagers can be equipped with image intensifiers (light amplifiers) to increase the sensitivity of the imager. Some manufacturers offer two intensifiers and they are known as double intensified imagers. Because intensified CCTV systems will also work in the daylight, these units are often used exclusively.

The range of light levels over which the imagers discussed above operate varies from 100,000 lux (one foot-candle is equal to 10.76 lux) in bright sunlight to 0.0001 lux in overcast starlight. The type of imager chosen will depend upon the amount of light available. Solid-state imagers exhibit extremely long life similar to a transistor, but the image intensifiers have a wear out mechanism and must be replaced periodically.

Image Intensification (II) devices have come a long way since they were first used by the military in the mid 1960s. II improves visibility under very low lighting conditions by amplifying the faintest reflections of moonlight or starlight from an object. Because there must be at least some light to intensify, image intensifying equipment will not work in complete darkness. Thus far, three generations of II have been developed:

- First generation equipment (Gen 1) was quite cumbersome because it required as many as three II devices in series to sufficiently amplify the light. Multiple components also meant large power requirements.

- Second generation (Gen 2) showed great improvement over Gen 1 because of the invention of the Microchannel Plate (MCP). The MCP is a very thin wafer composed of millions of fiber-optic channels. (A wafer the size of a quarter contains about two million of these channels.)

- Third generation (Gen 3) was primarily different from Gen 2 in that the photo cathode was coated with gallium arsenide, which is more sensitive than the phosphor used in Gen 2. Most commercially available devices are Gen 1 and Gen 2. The Gen 3 devices are presently available only to the military.

A Night Vision Device (NVD) is an opto-electronic device that gathers the available visible light and near-infrared (IR) energy reflected from the observed scene, greatly amplifies this energy with one of the II devices mentioned above, and visually presents it to the observer as a display similar to a picture on a small, green, phosphor TV screen. NVDs come as pocket scopes, telescopes, and goggles. These devices can be used as observation devices, as night driving aids, or in conjunction with an IR aiming light.

The thermal imaging device is operated on a completely different principle from the NVD. The NVD intensifies the available visible and near-IR energy out to approximately 0.9 microns. The IR device uses the energy in the 3-5 micron band or the 8-12 micron band that is radiated from all objects that are at a temperature above absolute zero.

IR energy radiating from the viewed scene passes through a special IR window, or lens, on the device to a thermal detector. These devices have evolved from a rotating mirror arrangement to reflect the IR energy onto a cooled detector array to the newest of solid-state technology, which does not require cooling (see the Low-Cost Uncooled Sensor Prototype [LOCUSP] in the catalog section).

Because IR devices respond to radiated temperature differences rather than reflected ambient light, they do not require any light at all to form a picture. By using the IR device, people or animals can be detected at great distances in completely dark or dimly lit areas. A trained observer using the ANTAS-6A, for example, can detect a rabbit at a distance of a mile or more and can identify other animals by their size and manner of walking.

For all of the imaging devices mentioned in this section, the question, "how far can I see with the device," is often asked.

In all cases, the lens determines the Field of View (FOV) of the device, both in width and in depth. All lenses are defined in terms of focal length and "f number." The f number is related to both the focal length and the aperture, which is determined by the diameter of the exposed part of the lens. The f number is determined by dividing the focal length (in millimeters) by the front lens effective diameter (in millimeters). For any given lens, the f number may be varied by adjusting the iris, which changes the aperture. This is usually done automatically, allowing the device to adapt to changing light conditions.

The focal length of the lens determines the angular FOV; a wide FOV is obtained with a short focal length and vice versa. Thus, a wide angle lens may have a focal length of 4 millimeters, while a telephoto (narrow angle) lens could have a focal length of 75 millimeters or more. Reasonably priced 75-millimeter lenses will produce an acceptable FOV at 50-100 meters. Much more expensive lenses (*e.g.*, a 300-millimeter lens) will allow observation out to 300 meters. Even though the long focal length will allow one to see that far, the FOV will be quite narrow and it may be difficult to spot or track a target. For example, one might be able to read a license plate at 300 meters if the car could be located and the device held still enough to keep the FOV on the license plate. Lenses for IR thermal imagers do not pass visible light and must be made from materials other than glass. Therefore, lenses for thermal imagers are more expensive than for optical cameras, and long focal length lenses for thermal imagers are either not available or are very expensive.

Most of the assessment equipment listed in the catalog has been, or is being, evaluated by the Border Patrol.

## Communication

There are several types of communication systems that are of interest to the Border Patrol. Information about the state of the sensors must be communicated to either the strategic or the tactical receiver. Long-range, wide area communication is desired so that any agent can communicate with sector or station headquarters, and tactical communication is required so the agents can communicate with each other on local operations. The deep canyons along some parts of the border can pose problems for all of these types of communication systems. Most of the equipment considered is well known to the Border Patrol. A type of satellite communication equipment manufactured by QUALCOMM (see data sheet in the Communication System Section) and a meteor communication system offer promise for overcoming this problem.

## Information Control and Display

Information control and display systems are made by Sparton and Eagle. Personal computer programs, both commercially available and custom (such as the Computer-Assisted Display and Reporting Enhancement [CADRE] system), can also be used to display the status of the sensors. In addition, there are numerous commercially available or rapidly configurable systems available. Rather than listing some number of these, it is recommended that a specification be prepared and sent to multiple bidders.

Expert systems can be used to establish movement along known trails and can assist in determining where and when to apprehend illegal aliens. It may be more economical to include "Processing Logic" into the Information Control and Display System rather than trying to build it into the sensors.

## Barriers

There are several types of barriers considered for the border. A solid wall of steel or concrete is effective but is expensive and may be politically unacceptable. Chain link or weld mesh fences are easier to install, but less effective. One particular type, called [redacted], is included in this catalog.

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# Technology Description

## Seismic Sensors

Seismic sensors are an important member of the family of sensors commonly known as Unattended Ground Sensors (UGSs). Seismic sensors convert earth movement into analog electrical signals that are proportional to either displacement, velocity, or acceleration. The basic unit in many seismic sensors is a device called a geophone. A geophone transducer consists of a tubular seismic mass wound with a coil of fine wire and a cylindrical permanent magnet. The magnet is fixed to the geophone housing, and the seismic mass is suspended in spring balance around the magnet. When the geophone is acted upon by external mechanical forces, acceleration from these forces displaces the housing and permanent magnet, while the seismic mass remains at rest. As the permanent magnet moves through the coil, the windings cut the magnetic lines of force. As the windings pass through the magnetic field, an Electromotive Force (EMF) is induced into the coil. The magnitude and frequency of the induced analog signal is proportional to the magnitude and frequency of the external accelerations.

Seismic sensors detect intruders by sensing their ground vibrations. Other sources such as wind, rain, and aircraft can also activate the sensor.

### Operational Environment

- **Time of Day:** The operation of this type of sensor is independent of the time of day or night.
- **Environments:** The detection range of the seismic sensor varies widely with different types of soil and conditions. In general, the range for a particular gain setting decreases when the surface of the ground is soft. Specific sensor data sheets contain more detail.
- **Adjustability:** Many of the seismic sensors have sensitivity adjustments that allow the sensor to be optimized for range and acceptable nuisance alarm rate. Some of the new seismic sensors have automatic gains.
- **Nuisance Alarm Sources:** Wind, rain, aircraft, tree or root movement from wind or growth, burrowing animals, buried pipes carrying fluids, movement of very heavy vehicles (trains several miles away), and other sources of noise or seismic activity can cause nuisance alarms.
- **Directionality:** The geophone is placed vertically in the ground (to orient the seismic mass and coil properly). A properly installed geophone is omnidirectional. (Geophones

are sometimes used as fence sensors; in these instances one can choose between vertical or horizontal motion of the fence by changing the orientation of the sensor.)

- [redacted].

## Threat

- **Targets and Range:** The seismic sensors can be used to detect persons and/or vehicles. [redacted]. Detection range is highly variable and depends on target mass, mode of travel, site characteristics, and the nature and extent of seismic background. [redacted]

- **Classification:** The basic geophone has no capability of classifying targets; however, the geophone signals are often amplified and sent to a signal processor where they may be processed for duration, frequency content, size, shape, *etc.* The signal processing adds to the cost of the sensor and in many cases (except those for ideal conditions), the classification schemes are unreliable.

## Logistics and Operations Considerations

- **Settling Time:** Most geophones will settle in a few seconds. This time may also be dependent upon the processor used.

- **Implantation Problems:**

  - **Aboveground** – The unit must be buried in the ground. It is usually covered with a thin layer of compressed dirt.

- **Camouflage** – The burial process usually camouflages the sensor. [redacted]

- **Battery Pack, Processor, and Transmitter** – All of these units must be suitably hidden from the intruder. For daytime and long-term use, they are usually hidden in the ground. The burial location must then be made to resemble the undisturbed earth around it.

- **Special Installation Tools** – Equipment is required to dig a hole big enough to bury the units. Usually a shovel is sufficient unless the soil is very hard or rocky.

❖ **Maintenance Considerations:** The major maintenance problem is changing batteries. Additionally, the connectors should be protected from corrosion, and the system must be protected from mechanical damage during transport and installation. Many of the UGS systems are either potted so that they cannot be serviced or hermetically sealed for factory maintenance. Skilled technicians in a well-equipped electronics shop may be able to repair some failures.

❖ **Cost:** Individual data sheets contain cost information.

❖ **Interface Considerations:** The individual sensor must be mated with the processor for which it was designed. Some UGS systems have a separate processor for each sensor type. Some of the newer systems have processors that will accept more than one sensor, and the sensor is coded so that the processor knows which type of sensor is being used. Other interface considerations include knowing the proper batteries to use and that the processor/transmitter used will communicate with the monitoring station.

❖ **Availability:** The data sheets in the Detection Systems Section on [redacted] give additional information.

## Magnetic Sensors

Magnetic sensors operate on the principle of detecting the presence or movement of a ferromagnetic body in a homogeneous field. A simple magnetic sensor detects the passage of a ferromagnetic target by sensing the disturbance in the magnetic field caused by the target's passage. A magnetic direction sensor consists of two such sensors in order to be able to determine the direction of movement of the target in the field. Magnetic sensors are one of the important sensors in the family of sensors commonly known as UGSs. The basic unit in many magnetic sensors is a device called a magnetometer. In addition to one or more magnetometers, the magnetic sensor also has a signal processor and a transmitter. The signal processor and transmitter may or may not be one integral unit.

Magnetic sensors detect targets by sensing their ferromagnetic properties. If the sensor moves even small amounts, it may produce an output. Sensor movement can be caused by high winds, plant root movement due to winds or growth, geophysical disturbances such as earth tremors and shifting terrain, sonic booms, explosions, vehicles, aircraft, and machinery.

### Operational Environment

- **Time of Day:** The operation of this type of sensor is independent of the time of day or night.

- **Environments:** The detection range of the magnetic sensor varies with the target's speed and magnetic characteristics. Two identical vehicles may have different magnetic characteristics. In some instances a smaller vehicle may even have a larger detection range. [redacted] Specific sensor data sheets contain more detail.

- **Adjustability:** Some magnetic sensors have a sensitivity adjustment and some do not.

- **Nuisance Alarm Sources:** High winds, plant root movement due to winds or growth, geophysical disturbances such as earth tremors and shifting terrain, sonic booms, explosions, vehicles, aircraft, and machinery are possible sources of nuisance alarms.

- **Directionality:** A magnetic sensor is surrounded by the earth's magnetic field. Therefore, unless it measures the total field, it has a directional characteristic. However, the directional characteristic is usually small. In some magnetic

sensors, the sensor case may be rectangular. In these instances, instructions are usually given about how to orient the sensor relative to the expected route of travel of the target.

- [redacted]

**Threat**

- **Targets and Range:** The magnetic sensors can be used to detect vehicles and/or persons carrying ferromagnetic material. [redacted].

- **Classification:** The magnetic sensor has no capability of classifying targets.

**Logistics and Operations Considerations**

- **Settling Time:** Most magnetic sensors will settle in a few minutes.

- **Implantation Problems:**

  - **Aboveground** – The unit can be installed aboveground. Because it does not require a line-of-sight environment for operation, it can also be installed underground.

  - **Camouflage** – If the sensor is buried, the burial process usually camouflages the sensor. It can also be camouflaged behind shrubs or other forms of non-metallic concealment. [redacted]

- **Battery Pack, Processor, and Transmitter** – All of these units must be hidden from the intruder. For day-time and long-term use, they are usually hidden in the ground. The burial location must then be made to resemble the undisturbed earth around it.

- **Special Installation Tools** – Equipment is required to dig a hole big enough to bury the units. Usually a shovel is sufficient unless the soil is very hard or rocky. When the magnetic direction sensor is used, there are usually two probes that must be buried.

❖ **Maintenance Considerations:** The major maintenance problem is changing batteries. Additionally, the connectors should be protected from corrosion, and the system must be protected from mechanical damage during transport and installation. Many of the UGS systems are either potted so that they cannot be serviced or hermetically sealed for factory maintenance. Skilled technicians in a well-equipped electronics shop may be able to repair some failures.

❖ **Cost:** Individual data sheets contain cost information.

❖ **Interface Considerations:** The individual sensor must be mated with the process for which it was designed. Some UGS systems have a separate processor for each sensor type. Some of the newer systems have processors that will accept more than one sensor, and the sensor is coded so that the processor knows which type of sensor is being used. Other interface considerations include knowing the proper batteries to use and that the processor/transmitter used will communicate with the monitoring station.

❖ **Availability:** The data sheets in the Detection Systems Section on [redacted] give additional information.

## Passive Infrared Sensors

Passive Infrared (IR) sensors are an important member of the family of sensors commonly known as UGSs. Passive IR sensors detect the presence of an intruder either by sensing the body heat or thermal energy in the IR frequency range emanating from the intruder or by sensing changes in the thermal energy background as a result of the intruder's shadowing the background while moving through the sensor's Field of View (FOV). Some passive IR sensors can determine the direction of motion through the sensor's FOV.

Passive IR sensors detect intruders by sensing their body heat. Other sources that may be detected include animals, the sun, and the self-radiation of the atmosphere. Hot, windy conditions or suddenly changing light conditions, such as fast-moving clouds, can cause nuisance alarms at high gain settings.

### Operational Environment

- **Time of Day:** The operation of this type sensor is not really dependent upon the time of day or night, but heat from the sun (shining on the sensor) or the sun's reflection (shining on the sensor) may cause nuisance alarms.

- **Environments:** The detection range of the passive IR sensor varies widely with the temperature and size of the target. In general, the range for a particular gain setting decreases when the target is heavily clothed or wet.

- **Adjustability:** Many of the passive IR sensors have sensitivity adjustments that allow the sensor to be optimized for range and acceptable nuisance alarm rate.

- **Nuisance Alarm Sources:** Animals, the sun, the self-radiation of the atmosphere, hot and windy conditions, or suddenly changing light conditions (such as clouds) can cause nuisance alarms at high gain settings.

- **Directionality:** The passive IR sensor has a FOV of a few degrees. In some senses, it is like a telescope—the sensor is sometimes incorrectly referred to an IR telescope. The sensor is installed so the expected direction of movement of the intruder will pass through the sensor's FOV.

- [redacted]

manner by performing intelligence assessments of infor- [redacted]

## Threat

- **Targets and Range:** The passive IR sensors can be used to detect persons and/or vehicles. The best conditions for using the sensor are clear calm days and nights. A properly adjusted passive [redacted]

- **Classification:** The basic passive IR sensor has no capability of classifying targets, however, some of the sensors can determine the direction that the target is moving through the FOV.

## Logistics and Operations Considerations

- **Settling Time:** Most passive IR sensors will settle in a few seconds. The setting time may be dependent upon the processor used.

- **Implantation Problems:**

  - **Aboveground** – The sensor must be installed above the ground. It can be mounted on a ground stake or installed on a post or tree. It must have an unobstructed line-of-sight from the sensor to the target (not through glass or from a reflecting mirror).

  - **Camouflage** – The installation process usually calls for installing the sensor so that it is hidden (or at least camouflaged) from the target.

  - **Battery Pack, Processor, and Transmitter** – All of these units must be hidden from the intruder. For daytime and long-term use, they are usually hidden in the ground. The burial location must then be made to resemble the undisturbed earth around it.

  - **Special Installation Tools** – Equipment is required to dig a hole big enough to bury the battery pack, processor, and transmitter units. Usually a shovel is sufficient unless the soil is very hard or rocky. A small wrench or pair of pliers may be required if a tree screw is used.

- **Maintenance Considerations:** The major maintenance problem is changing batteries. Additionally, the connectors should be protected from corrosion, and the system must be protected from mechanical damage during transport and installation. The lens area of the sensor must be clean. This should be checked during installation and periodically thereafter, especially during severe dust conditions. Many of the UGS systems are either potted so that they cannot be serviced or hermetically sealed for factory maintenance. Skilled technicians in a well-equipped electronics shop may be able to repair some failures.

- **Cost:** Individual data sheets contain cost information.

- **Interface Considerations:** The individual sensor must be mated with the processor for which it was designed. Some UGS systems have a separate processor for each sensor type. Some of the newer systems have processors that will accept more than one sensor, and the sensor is coded so that the processor knows which type sensor is being used. Other interface considerations include knowing the proper batteries to use and that the processor/transmitter used will communicate with the monitoring station.

- **Availability:** The data sheets in the Detection Systems Section on [redacted] give additional information.

## Active Infrared Sensors

Active IR sensors are an important member of the family of sensors commonly known as UGSs. Active IR sensors detect the presence of an intruder by the fact that an IR beam, which usually passes from the transmitter to the receiver, has been interrupted. Visible beam-break sensors operate on an identical principle. The IR beam is not visible to the human eye. If two beams are used, the direction of travel of the target can be determined. Sources of nuisance alarms include animals; the sun, if it shines into the receiver; moving vegetation; and blowing debris.

### Operational Environment

- **Time of Day:** The operation of this type of sensor is not really dependent upon the time of day or night.
- **Environments:** The detection range of the active IR sensor is determined by the separation between the transmitter and receiver. This separation is dependent upon the power of the transmitter, the optics of the IR system, and the visibility between transmitter and receiver.
- **Adjustability:** Many of the active IR sensors have sensitivity adjustments that allow the sensor to be optimized for range and acceptable nuisance alarm rate.
- **Nuisance Alarm Sources:** Animals, insects on the lens, rain, snow, hail, and blowing grass or foliage are all possible sources of nuisance alarms.
- **Directionality:** The active IR sensor is directional in that there will be no detection unless the beam of IR light going from transmitter to receiver is interrupted.
- [redacted]

## Threat

- **Targets and Range:** The active IR sensors can be used to detect persons and/or vehicles. The best conditions for using the sensor are clear calm days and nights.

- **Classification:** The basic passive IR sensor has no capability of classifying targets, however, two of the sensors can determine the direction that the target is moving. Multiple beam systems can be configured to determine height and shape of a target (these types would not be suitable for use in situations in which the sensor should be hidden).

## Logistics and Operations Considerations

- **Settling Time:** Most active IR sensors will settle in a few seconds.

- **Implantation Problems:**

  - **Aboveground** – The sensor must be installed above the ground. The transmitter and receivers can be mounted on ground stakes or installed on posts or trees. There must be an unobstructed line-of-sight from the transmitter to the receiver. Some active IR sensors have their transmitter and receiver built into the same unit, and a passive reflector is used to reflect the transmitter beam back into the receiver.

  - **Camouflage** – The installation process usually calls for installing the sensor so that it is hidden (or at least camouflaged) from the target. Because the distance between transmitter and receiver can vary widely, camouflage is sometimes easy to achieve.

  - **Battery Pack, Processor, and Transmitter** – All of these units must be hidden from the intruder. For daytime and long-term use, they are usually hidden in the ground. The burial location must then be made to resemble the undisturbed earth around it.

  - **Special Installation Tools** – Equipment is required to dig a hole big enough to bury the battery pack, processor, and transmitter units. Usually, a shovel is sufficient unless the soil is very hard or rocky. A small wrench or pair of pliers may be required if a tree screw is used. For long distance units, a bore sight device may be required for aligning the transmitter with the receiver.

- **Maintenance Considerations:** The major maintenance problem is changing batteries. Additionally, the connectors should be protected from corrosion, and the system must be protected from mechanical damage during transport and installation. The lenses of the transmitter and receiver must be clean. They should be checked during installation and periodically thereafter, especially during severe dust conditions. Many of the UGS systems are either potted so that they cannot be serviced or hermetically sealed for factory maintenance. Skilled technicians in a well-equipped electronics shop may be able to repair some failures.

- **Cost:** Individual data sheets contain cost information.

- **Interface Considerations:** The individual sensor must be mated with the processor for which it was designed. Some UGS systems have a separate processor for each sensor type. Some of the newer systems have processors that will accept more than one sensor, and the sensor is coded so that the processor knows which type of sensor is being used. Other interface considerations include knowing the proper batteries to use and that the processor/transmitter used will communicate with the monitoring station.

- **Availability:** The data sheets in the Detection Systems Section on [redacted] contain additional information.

## Break-wire Sensors

Break-wire sensors are a member of the family of sensors commonly known as UGSs. They detect the passage of a target when the target breaks a fine wire (like a human hair). After the wire is broken, the detector becomes nonfunctional and transmits an alarm. Because the detector is a one-shot device, it is normally used on higher priority applications.

### Operational Environment

- **Time of Day:** The operation of this type of sensor is not really dependent upon the time of day or night.
- **Environments:** The sensor can be used in all environments that are not so severe that the environment breaks the fine wire.
- **Adjustability:** There are no sensitivity adjustments necessary.
- **Nuisance Alarm Sources:** A nuisance alarm can be caused by anything that breaks the wire, usually an animal.
- **Directionality:** This sensor is directional in that there will be no detection unless the wire is broken.
- [redacted]

### Threat

- **Targets and Range:** The break-wire sensor is generally used to detect personnel, but it can also be used for vehicles.
- **Classification:** The basic break-wire sensor has no capability of classifying targets; however, if two of the sensors alarm, the direction that the target is moving can be determined.

## Logistics and Operations Considerations

- **Settling Time:** Most break-wire sensors will settle in a few seconds.

- **Implantation Problems:**

  - **Aboveground** – The sensor must be installed above the ground, usually at a height of 6 inches for boots, but animals may break the wire at this height. Chest-high installation will eliminate this problem, but at that height a crawling person will not be detected.

  - **Camouflage** – The installation process usually calls for installing the sensor so that it is hidden (or at least camouflaged) from the target. Because the distance between the sensor head and the transmitter can vary widely, camouflage is sometimes easy to achieve.

  - **Battery Pack, Processor, and Transmitter** – All of these units must be hidden from the intruder. For day-time and long-term use they are usually hidden in the ground. The burial location must then be made to resemble the undisturbed earth around it.

  - **Special Installation Tools** – Equipment is required to dig a hole to bury the battery pack, processor, and transmitter units. Usually a shovel is sufficient unless the soil is very hard or rocky. A small wrench or pair of pliers may be required if a tree screw is used.

- **Maintenance Considerations:** The major maintenance problem is changing batteries. The connectors should be protected from corrosion and the system must be protected from mechanical damage during transport, installation and moving it to a new location. Replacement wire comes on spools with 250 meters of two-conductor wire. After the wire is broken, the two conductors can be melted with a match flame to reestablish continuity and then reused. Many of the UGS systems are either potted so that they cannot be serviced or hermetically sealed for factory maintenance. Skilled technicians in a well-equipped electronics shop may be able to repair some failures.

- **Cost:** Individual data sheets contain cost information.

- **Interface Considerations:** The individual sensor must be mated with the processor for which it was designed. Some UGS systems have a separate processor for each sensor type. Some of the newer systems have processors that

will accept more than one sensor, and the sensor is coded so that the processor knows which type of sensor is being used. Other interface considerations include knowing the proper batteries to use and that the processor/transmitter used will communicate with the monitoring station.

- **Availability:** The data sheets in the Detection Systems Section on [redacted] contain additional information.

## Video Motion Sensors

A Video Motion Detector (VMD) is an electronic device that monitors a video camera output signal and detects changes in brightness in the video scene. A change is detected when the brightness of the detection area becomes either lower or higher than a stored reference level by a predetermined threshold. Depending on the complexity of the VMD system, an external alarm is generated either at the time of detection of the change or after a number of additional conditions are satisfied. After an alarm is generated, the VMD highlights the section where the detection has occurred on the Closed Circuit Television (CCTV) monitor to the person monitoring the CCTV to assess the alarm.

### Operational Environment

- **Time of Day:** The operation of this type of sensor is independent of the time of day or night. However, the input to the VMD may have day/night limitations. A daylight camera will work only in the time when the light level is high enough (external lights may be required), an intensified camera will work in considerably less light, and a thermal imager will work both day and night.

- **Environments:** The detection range of the VMD varies widely with various types of video signal source (cameras) and their optical systems, lighting conditions, and visibility. In general, the further one desires to look (range) the narrower the FOV. Reasonably priced 75-millimeter lenses will produce an acceptable FOV at 50 to 100 meters. Much more expensive lenses (*e.g.*, a 300-millimeter lens) will allow observation out to 300 meters.

- **Adjustability:** All VMDs have sensitivity adjustments and some of them have the ability to ignore portions of the FOV in which there is no interest or known motion is occurring.

- **Nuisance Alarm Sources:** Wind (that causes the camera to move, that blows leaves or other objects into the FOV, or causes tree branches to move), heavy rain, aircraft, birds, and animals are possible sources of nuisance alarms. In summary, anything that causes motion to appear on the CCTV screen is a potential alarm source.

- **Directionality:** The VMD is directional in that it only detects motion in the FOV of the camera and the camera only looks in one direction.

- **Mission:** This type of sensor can be used in the [redacted]

[redacted]

## Threat

- **Targets and Range:** VMDs can be used to detect persons and/or vehicles. The best conditions for using the VMD are when the visibility is good and the light conditions are constant (for visible light cameras). See discussion above about range.

- **Classification:** Classification can occur naturally because the image of what caused the alarm appears on the CCTV monitor at the same time as the alarm is sounded, thus allowing immediate visual assessment.

## Logistics and Operations Considerations

- **Settling Time:** A reference frame has to be established within the VMD, but this happens in a fraction of a second. Therefore, the settling time and reset times are almost instantaneous.

- **Implantation Problems:**

  - **Aboveground** – The VMD itself is usually smaller than 9 x 18 x 15 inches, and it is usually installed near the CCTV monitors.

  - **Camouflage** – In any unattended location, the cameras will usually need to be camouflaged. The VMD itself does not require camouflage, and it is not obvious to an adversary that a VMD is installed on a video system.

  - **Battery Pack, Processor, and Transmitter** – This is not applicable to the VMD. The VMD is usually alternating current powered and located in the control center.

  - **Special Installation Tools** – No special equipment is required. The installation is as simple as removing the video signal input from the monitor and installing the VMD in series with this line. Because the connections are usually all coaxial, they can often be done with no tools at all.

- **Maintenance Considerations:** There is regular maintenance required on the CCTV portion of the system. The VMD itself may periodically require sensitivity adjustments. The electronics are all solid state and should not require any preventive maintenance.

- **Cost:** Individual data sheets contain cost information.

- **Interface Considerations:** As mentioned above, there are really no major interface problems.

- **Availability:** The data sheets in the Detection Systems Section on [redacted] contain additional information.

# Catalog

The catalog information that follows contains data on equipment that could be purchased now or in the near future. Much of it has been used or evaluated by the Immigration and Naturalization Service (INS) or the Border Patrol. The main purpose of it being discussed in the introductory material in this volume and being included in the catalog is to present the purpose of the various pieces of equipment and to show what is generally available. Inclusion or exclusion of a manufacturer is of no significance. Not all of the equipment mentioned has been evaluated by Sandia, the INS, or the Border Patrol, and it is not the intent of this document to help or hinder any manufacturer. All of the manufacturers are listed in the Contents and the manufacturers for specific areas (detection, assessment, *etc.*) are given at the beginning of those sections.

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# Detection Systems

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## Component Prices

| | |
|---|---|
| [redacted] | $825.00 |
| | $1,475.00 |
| | $875.00 |
| | $995.00 |
| | $1,495.00 |
| | $1,675.00 |
| | $4,995.00 |
| | $300.00 |
| | $2,995.00 |
| | $4,995.00 |
| | $2,495.00 |
| | $995.00 |

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# Assessment Equipment


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# Remote Sensor Video Pack

(b) (7)(E)

[redacted]

(b) (7)(E)

[redacted]

## Remote Sensor Video Pack (Concluded)

(b) (7)(E)

[redacted]

(b) (7)(E)

# Low-Light-Level Solid State Intensified Charge-Coupled Device Cameras

(b) (7)(E)

[redacted]

(b) (7)(E)

[redacted]



OFFICIAL USE ONLY

# Low-Light-Level Environmentalized Intensified Charge-Coupled Device Cameras

(b) (7)(E)

[redacted]

(b) (7)(E)

[redacted]

## Low-Light-Level Environmentalized Intensified Charge-Coupled Device Cameras (Concluded)

(b) (7)(E)

[redacted]

# Ultra-Low-Light-Level Solid State Double Intensified Charge-Coupled Device Cameras

(b) (7)(E)

[redacted]

(b) (7)(E)

[redacted]

# Ultra-Low-Light-Level Solid State Double Intensified Charge-Coupled Device Cameras (Concluded)

(b) (7)(E)

[redacted]

# Ultra-Low Light-Level Environ-mentalized Double Intensified Charge-Coupled Device Cameras

(b) (7)(E)

[redacted]

(b) (7)(E)

[redacted]

# Ultra-Low-Light-Level Environmentalized Double Intensified Charge-Coupled Device Cameras (Concluded)

(b) (7)(E)

[redacted]

# Night Vision Goggles

(b) (7)(E)

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# Starlight Scope

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# Infrared Scanner and Telescope

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# Long Range Infrared System

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# Hand-Held Thermal Imager

(b) (7)(E)

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# Night Observation Device, Long Range

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# Low-Cost Uncooled Sensor Prototype

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# Low-Cost Uncooled Sensor Prototype (Concluded)

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# Communication Systems

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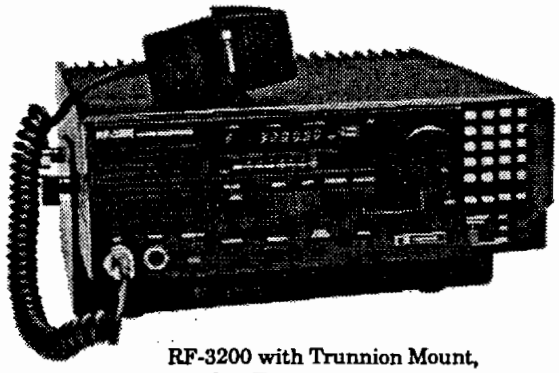
# RF-3200 Series High Frequency Transceivers

***for 12 volts direct current (DC) operation 125 watts - 1.6 to 30 megahertz***



RF-3200 with Trunnion Mount, Two-Tone Alarm Option

**Harris Corporation**
**RF Communications Group**
**1680 University Avenue**
**Rochester, NY 14610-9983**
**(716) 244-5830**

The RF-3200 series of high-frequency (HF) transceivers combine high-performance capability with a cost-effective design to provide long-range voice and data communications at a reasonable price. This radio group includes the RF-3200 transceiver and RF-3281 digital coupler for 125-watt operation.

When additional power is required for reliable communications, the RF-3200-10 1 kilowatt solid-state fast-tuning system provides 1,000 watt output with either the RF-601A or RF-2601 antenna coupler or RF-1933 family of broadband antennas.

## Specifications

### RF-3200 Transceiver

- 125-watt peak envelope power (PEP)
- 1.6-30 megahertz
- Microprocessor Controlled
- 10 hertz Synthesized Steps
- 320 Channels (Simplex or Half-Duplex)
- Group Scan
- Knob/Keyboard Control of Channels and Frequency
- Vacuum Fluorescent Display with Dimmer
- Received Signal/Transmit Level Indicators
- Syllabic Voice Controlled Squelch
- Simplicity and Ease of Operation

## RF-3200-10 1 kilowatt Solid-State

### *HF Fast-Tuning System*

- 1 kilowatt PEP/Average
- 1.6 to 30 megahertz
- Frequency Agile Tuning
- Built-In Test Metering and Indicators
- Built-In Redundancy
- Remotely Controllable
- Adjustable Reduced Power Output
- Automatic Bypass Mode

## RF-3281 Digital Antenna Coupler

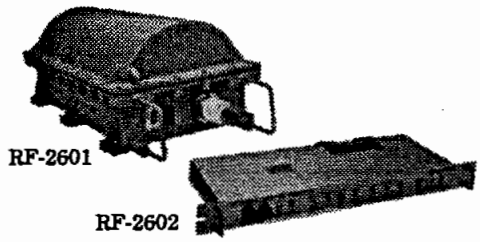
- 1.6-30 megahertz
- 125-watt PEP
- Multiplex Coupler Control (No Control Cable Required)
- Matches 9-Foot Whip to 150-Foot Long Wire
- 25 microseconds Tuning Time from Memory
- Fully Automatic
- Automatic Retune on Voltage Standing Wave Ratio (VSWR) Degradation

## Estimated Costs

| | |
|---|---|
| RF-3200 | $4,400.00 |
| RF-3200-10 | $40,000.00 |
| RF-3281 | $1,500.00 |
| RF-2601 | $15,000.00 |

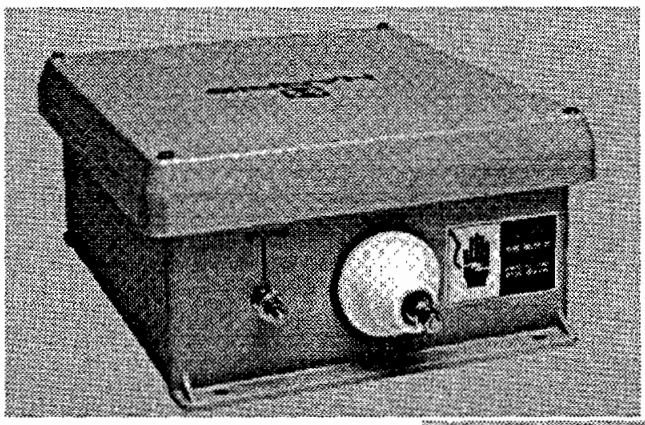
# RF-2601 1-Kilowatt Fast-Tune Antenna Coupler

The RF-2601 Fast-Tune Antenna Coupler efficiently and automatically matches the output of 1 kilowatt transceivers and transmitters to a wide variety of whip, dipole, and long-wire antennas over the frequency range of 1.6-30 megahertz. Tuning time from memory is less than 75 milliseconds.

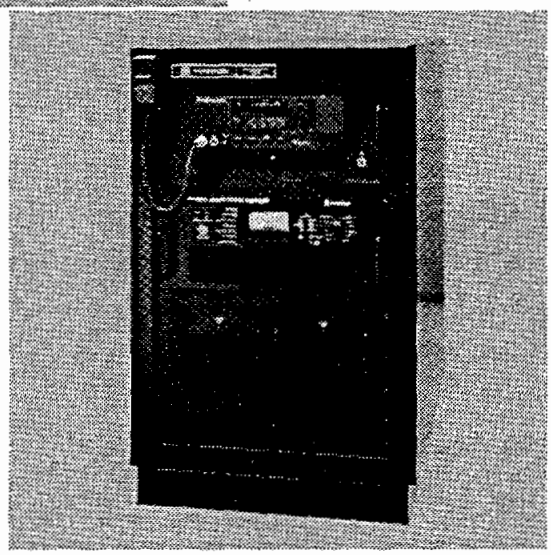



The RF-2601 Fast-Tune Coupler is designed specifically for applications in adaptive communications systems where very fast frequency change is necessary. Rugged and reliable, it will operate continuously under the most severe environmental conditions in vehicular, transportable, shipboard, and fixed-station applications. The RF-2601 is fully compatible with the AUTOLINK® series of systems.

The RF-2601 provides security by permitting remote location of the antenna up to 500 feet from the associated radio transceiver or transmitter. The RF-2602 status monitor is included with the RF-2601.



*RF-3281*



*RF-3200-10*

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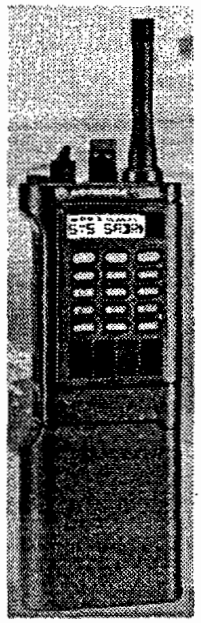
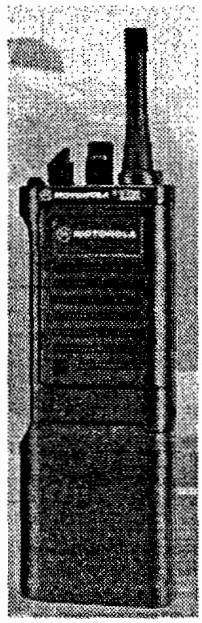
# Systems Saber

**Motorola**
**1301 East Algonquin Rd.**
**Shaumburg, IL 60196**
**(800) 247-2346**

The Saber family offers Motorola's most advanced and sophisticated two-way portable radios. The advanced microcomputer (MC68HC11) and custom-designed integrated chip set provide a small, lightweight, high-performance, totally field programmable portable with superior specs.



***Saber III***



***Saber I***

***FM Portable Radio for SECURENET SMARTNET II Systems***

The Saber III radio puts maximum radio flexibility and systems capability at your fingertips with a full 3 x 5 key keypad. In conjunction with the selector switch on top of the radio, you can now access up to 120 channels and 10 zones. Enhanced performance and ease of operation team up with small size in Saber III.

## Specifications

### Systems Saber III FM Portable Radio

- 225 Modes (Trunked Talkgroups/Conventional Channels)
- 16-Position Rotary Switch
- 15-Button Keypad
- Alpha-Numeric Display
- SECURENET Capability
- SMARTNET II
- Priority/Nonpriority Scan (Mode Slaved or Auto Scan)
- Operator Selectable Scan
- Low Battery Alert Tone
- Emergency Alarm and Call
- Telephone Interconnect

## Systems Saber (Continued)

- Mode Select Capabilities:
  - Receive Frequency
  - Transmit Frequency
  - Transmit Power Level
  - Time-out Timer
  - Tone or Digital Squelch Codes
  - Squelch Level
  - Encryption
- Field Programmability
- Enhanced Audio Performance
- Wide Bandwidth
- Easy Access Controls
- Battery Status Indicator
- Mil Std. 810 C and D Environmental Specs
- Program, Tune, and Test without Opening Radio

### Systems Saber I FM Portable Radio

- 16 Modes (Trunked Talkgroups/ Conventional Channels)
- 16-Position Rotary Switch
- SECURENET Capability
- SMARTNET II
- Submersible Models
- Auto Scan (Priority/Nonpriority)
- Low Battery Alert Tone
- Emergency Alarm and Call
- Mode Select Capabilities:
  - Receive Frequency
  - Transmit Frequency
  - Transmit Power Level
  - Time-out Timer
  - Tone or Digital Squelch Codes
  - Squelch Level
  - Encryption
- Enhanced Audio Performance
- Wide Bandwidth
- Easy Access Controls
- Battery Status Liquid Crystal Display (LED)

## Systems Saber (Continued)

- Mil Std. 810 C and D Environmental Specs
- Field Programmability
- Program, Tune, and Test without Opening Radio

**Dual Mode Operation** – All Systems Saber radios are designed to operate in both ultra high frequency (UHF) trunked and UHF and very high frequency (VHF) conventional systems. Up to 225 modes on Systems Saber III or 16 modes on Systems Saber I can be used to access any combination of trunked or conventional modes.

**Scan Operation** – Systems Saber offers the most advanced scan capability offered in a two-way portable radio. The conventional Scan menu includes 16 slaveable scan lists with up to 2 priority and 14 nonpriority channels each, nuisance channel delete, and a predetermined transmit channel per scan list. The 3 x 5 button keypad on Systems Saber III gives you the ability to create your own unique scan list. The trunked Scan menu includes nonpriority trunked talkgroup scan, Priority Monitor, and 16 trunked scanlists with up to 16 talkgroups.

**3 x 5 Button Keypad (Systems Saber III only)** – The Systems Saber III keypad consists of 15 buttons, all of which have control over certain features and/or functions. The Systems Saber III radio uses the "Unipress" or single button method of feature operation. By separating particular functions under different keys, it makes it simpler for the user to initiate a desired radio feature. Any feature is just a few keystrokes away.

**Zone and Talkgroup Operation (Systems Saber III only)** – The MODE button, in conjunction with the channel/talkgroup selector switch, provides the means to select up to 225 modes. It serves as a frequency management function by allowing you to segment channels into many different groups.

**Mode Select Operation** – Mode select operation is a major feature of all Systems Saber radios. A "mode" is a list of characteristics or functions performed on a talkgroup or channel. With mode select operation, popular auxiliary functions can be "slaved" to the talkgroup/channel selector switch, thus eliminating separate controls and switches. The microcomputer "reads" the "slaved" information from the reprogrammable EEPROM. Mode Select Operation enables you to simultaneously select:

- Dual Mode (Trunked/Conventional operation)
- Private-Line, Digital Private-Line or Carrier Squelch
- Time-out Timer
- Transmit Power Level
- Identification Codes
- Scan Lists
- Trunked Systems Information
- Encryption.

**Submersible Models (Systems Saber I only)** – Certain Systems Saber I models are fully submersible in up to 3 feet of freshwater for 2 hours. These models pass MIL-STD 810C and D, Method 512.2, Procedure I for immersion.

**Telephone Interconnect (Systems Saber III only)** – Allows the ability to make telephone calls in either a trunked or conventional system.

**Radio Lock (Systems Saber III only)** – Radio lock gives the ability to completely disable the Systems Saber III (all menus and transmit and receive functions) every time it is turned off.

**Password Menu (Systems Saber III only)** – A standard offering with radio lock. The password menu allows creation and change of the numeric password that unlocks the radio.

**Mute Key (Systems Saber III only)** – The MUTE key allows the audible keypad tones to be turned on and off by a single keypress.

**Liquid Crystal Display (LCD) Alpha Naming (Systems Saber III only)** – The 8-character, alpha-numeric display on the Systems Saber III is used to display channel/talkgroup and feature information. The display can also be illuminated for night use.

**Battery Status Indicator (Systems Saber III only)** - A battery symbol is designed to flash when the battery's charge is low.

**Programmable Time-Out Timer** – The transmission time can be automatically terminated after a preprogrammed time. An audible tone is sent to the operator before termination to alert him/her. After dekeying, the operator can key-up again for the next transmission.

**Variable RF Power** – Transmit power output is variable on a per channel or talkgroup basis, from 2 to 5 watts on UHF high-power models, and from 2.5-6 watts on VHF high-power models.

**Multi-Function Light-Emitting Diode (LED)** – A top mounted, multi-function, dual color (red/green) LED illuminates to indicate transmission, low battery (Systems Saber I), channel busy, private conversation, or call alert reception.

**Squelch** – Three types of squelch are available in the Systems Saber , Private-Line, Digital Private-Line, and carrier. The Systems Saber micro-computer permits all three squelch code in one radio and gives the user the flexibility to assign different codes to each channel. Also, transmit codes may be assigned differently from receive codes.

**Transmit and Receive Channel Separation** - In UHF band, transmit and receive frequencies can be separated by up to 30 megahertz with full radio frequency (RF) performance. In VHF/HF band, transmit and receive frequencies can be separated by up to 26 megahertz, with power degradation to 5 watts, on high-power models.

**Universal Connector** - The universal connector on Systems Saber radios serves as an interface for various audio accessories and tuning and programming cables.

## Systems Saber (Concluded)

## Estimated Costs

| | |
|---|---|
| Saber III with encryption | $2,000.00 |
| Saber I with encryption | $2,000.00 |

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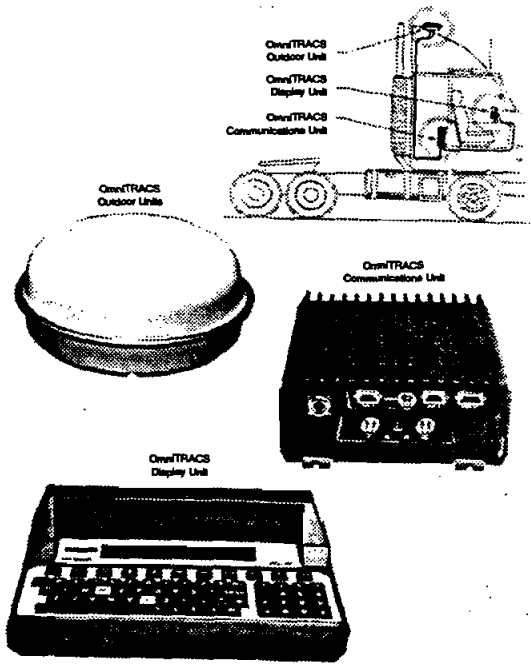
# OmniTRACS Mobile Communications System




**QUALCOMM, Inc.**
**10555 Sorrento Valley Rd.**
**San Diego, CA**
**(619) 587-1121**

The OmniTRACS Mobile Communications System provides reliable, low-cost, two-way satellite communications to mobile units anywhere in the continental US using existing Ku-band transponders. The OmniTRACS components consist of the OmniTRACS Mobile Terminal installed in each vehicle and the OmniTRACS Network Management equipment at a central Network Management Facility.

Individual customer dispatch facilities connect to the OmniTRACS Network Management Facility to *send a message to* any mobile terminal or to *receive a message from* any mobile terminal in their fleet. Messages are sent using *existing* Ku-band satellite transponders.

## Text Messages

### Network Management Facility to Mobile Terminal

The customer can send standard or emergency, free form or macro-encoded (predefined) text messages to any OmniTRACS terminal, or group of terminals (by group name), within their fleet. Messages may be up to 2,000 characters in length. The OmniTRACS Network Management Facility accepts the message or macro number from the customer equipment and relays (via satellite) the message to the vehicle. The Network Management Facility then waits for an acknowledgment (via satellite) from the vehicle confirming that the message was received correctly. If an acknowledgment is not received, the Network Management Facility automatically re-transmits the message and waits again for an acknowledgment according to a system wide retransmission algorithm.

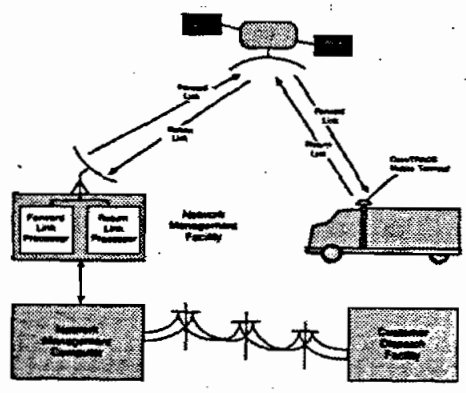
## Mobile Terminal to Network Management Facility

Any mobile terminal can reply to a free form or macro-encoded text message or initiate a free form text or macro-encoded (predefined) message to send to the Network Management Facility. Messages may be up to 2,000 characters long. The vehicle waits for an acknowledgment from the Network Management Facility confirming that the message was received correctly at the Network Management Facility. If an acknowledgment is not received, the OmniTRACS terminal automatically retransmits the message and waits again for an acknowledgment according to a system wide retransmission algorithm. The customer equipment can then retrieve the message from the Network Management Facility at customer-determined intervals.

# OmniTRACS Equipment

## OmniTRACS Mobile Terminal

The OmniTRACS Mobile Terminal is located in each of the customer vehicles. The terminal monitors the link for either messages or commands from the Network Management Facility. The mobile terminal is capable of storing many messages according to their time of arrival at the OmniTRACS terminal. The OmniTRACS Mobile Terminal consists of three units: the Outdoor Unit, the Communication Unit, and the Display Unit. The OmniTRACS terminal can operate in a temperature range between -30°C and +70°C.



## Outdoor Unit

The outdoor unit contains the antenna assembly and front-end electronics. The unit (including antenna) is approximately 11 1/2 inches in diameter, 6 3/4 inches high, and weighs approximately 11 pounds. The outdoor unit can be mounted on a vehicle roof or a mast (for a truck cab).

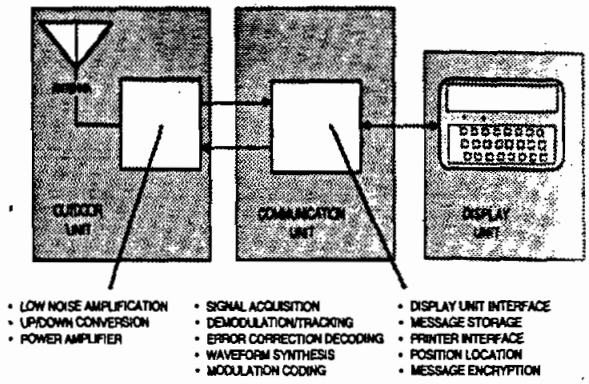
## Communication Unit

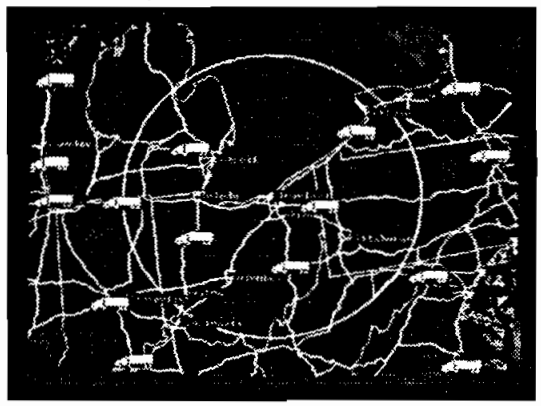
The Communication Unit contains an analog section, digital electronics, and the LORAN receiver, which are contained on four Circuit Card Assemblies (CCAs). The approximate dimensions of the Communication Unit are 12 3/4 x 9 1/4 x 4 1/2 inches and it weighs 16 pounds. It can be mounted anywhere in the vehicle because it does not require operator access.

# OmniTRACS Mobile Communications System (Concluded)

## Display Unit

The display unit consists of a 40-character by 4-line display and an ABCD or QWERTY keyboard, with several function keys available for preprogrammed user functions. The display contains indicators for message waiting and satellite signal. The display unit also provides a *maintenance mode* for in-field troubleshooting and mobile unit initialization. The display unit is 7 1/2 x 11 1/2 x 2 3/4 inches and can be located on the dashboard or any other convenient location.



The OmniTRACS on-screen mapping capability allows dispatchers to see vehicles plotted on detailed US maps.

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# Display Systems

List of Vendors ..... 161

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# Information Control and Display System

The primary purpose of the information control and display (ICD) system is to 1) collect information obtained from the other physical security subsystems such as sensors and local alarm inputs; and 2) display the alarm status in an easily interpretable manner that permits planning of unambiguous responses. ICD is an integrated system of people, procedures, and equipment. The equipment collects information from the physical security subsystems and presents the information in a manner that promotes rapid assessment by the people. People handle the information and respond according to procedures. An ICD system may be a technically simple panel display or a complex multicomputer control and communication system.

The type of performance that one can expect from ICD systems is as varied as there are numbers of suppliers. Almost all systems are now computer controlled and are very "user friendly." Many have redundant computers so that the likelihood of the system being "down" is minimized. Some systems have a simple light board annunciation system that the information passes through in reaching the computer-controlled console. Such systems can be operated from the light board in emergencies even though it will take more personnel and all recording must be done manually. Systems with enough redundancy that they virtually never fail are called "fail-safe" whereas systems that can be operated in the degraded mode are called "fail-soft."

The need to maintain compatibility with existing operating systems necessitates careful drafting of purchase orders and specifications for new equipment. In addition, the variety of performance features and system features that are available preclude making simple recommendations about equipment to be considered for upgrade until the time of purchase. These items require careful attention at the time new equipment is actually purchased.

Some manufacturers of information control and display equipment are listed below in alphabetical order:

ABM Data Systems, Inc.
9020 N. Capital of Texas Hwy, #540
Austin, TX 78759-7237
(512) 345-6900

Adcor Electronics
4130 Shirley Dr. SW
Atlanta GA 30336
(404) 691-8920

ADEMCO
180 Michael Dr.
Syosset, NY 11791
(516) 921-6704

ADT Security Systems
300 Interpace Pkwy
Parsippany, NJ 07054
(201) 316-1781

AES Corporation
285 Newbury St., P.O. Box 2093
Peabody, MA 01960
(508) 535-7310

AMCO Engineering Co.
3801 North Rose Street
Schiller Park, IL 60176-2190
(708) 671-6670

American Magnetics Corp.
740 Watsoncenter Rd.
Carson, CA 90745
(213) 775-8651

Alarm Data Corporation
7290 Engineer Road
San Diego, CA 92111
(619) 569-8000

Amtel Security Systems
1421 N.W. 165th Street
Miami, FL 33169
(305) 621-3100

Atommedia Computer Imaging Systems
7848 Silverton Ave, Suite F
San Diego, CA 92126-6308
(619) 689-2599

Arvin/Diamond
4465 Coonpath Road
Carroll, OH 43112
(614) 756-9222
Mail to: P.O. Box 200
Lancaster, OH 43130

Bradley Data Management Group, Ltd.
1100 Sheridan Road
Winthrop Harbor, IL 60096
(312) 746-1100

C&K Systems, Inc.
107 Woodmere Road
Folsom, CA 95630
(916) 351-1131

Cardkey Systems, Inc.
101 W Cochran St.
Simi Valley, CA 93065
(805) 522-5555

Carol Products Co., Inc.
3200 Sunset Avenue
Ocean, NJ 07712
(201) 776-7676

Central Station Security Systems
P.O. Box 4524
Anaheim, CA 92803
(714) 956-8551

Checkpoint Systems Inc.
190 Sobrante Way, Suite 102
Sunnyvale, CA 94086-4849
(408) 720-2150

CMC (Communication Mfg. Co.)
3300 E. Spring Street
Long Beach, CA 90801

Computer Security Network Systems, Inc.
838 N. Eglin Pkwy., Ste. 500
Ft. Walton Beach, FL 32548
(904) 863-5195

Digital Monitoring Products, Inc.
532 East Walnut
Springfield, MO 65806
(417) 831-9362

Electronics Technology Projects, Inc.
141 Ninth Street
San Francisco, CA 94103
(415) 621-7676

Fire Burglar Instruments, Inc.
50 Engineers Road
Hauppauge, NY 11788
(800) 645-5430

Hirsch Electronics Corp.
1751 Langley Avenue
Irvine, CA 92714-5261
(714) 250-8888

Honeywell, Inc.
10800 Lyndale Avenue
South Bloomington, MN 55420
(301) 887-4047

Hoppmann Corporation
14560 Lee Road, P.O. Box 601
Chantilly, VA 22021
(703) 631-2700

Industrial Computer Designs, Inc.
31121 Via Colinas, #1005
Westlake Village, CA 91362
(818) 889-3179

Information Security Associates
350 Fairfield Avenue
Stamford, CT 06902
(203) 357-8051

Linear Corporation
2055 Corte del Nogal, P.O. Box 9003
Carlsbad, CA 92008
(619) 438-7000; (800) 421-1587

Litton Security Products
1213 N. Main Street
Blacksburg, VA 24060
(703) 248-3833

Logiplex Corp.
2045 N.E. Union Avenue
Portland, OR 97212
(800) 821-2651

Martek
P.O. Box 2936
Salt Lake City, UT 84110-2936
(801) 534-1234

Maco Security Systems, Inc.
2618 Mañana Road
Dallas, TX 75220
(214) 352-0693

Monitor Dynamics, Inc.
1149 West 9th Street
Upland, CA 91786
(714) 985-7214

Morse Security Group
InertiaGuard Div, 12960 Bradley Avenue
Sylmar, CA 91342-0128
(818) 367-5951

Multiwatch Security Corp.
60 Braeswood Square
Houston, TX 77096
(713) 721-7522

National Control Systems Corp.
9880 S. Ridgeview Drive
Oak Creek, WI 53154
(414) 281-0503

Pyrotonics
8 Ridgedale Avenue
Cedar Knolls, NJ 07927
(201) 267-1300

RACAL-Guardall
7305 Executive Way
Fredrick, MD 21701
(800) 368-2574

Radionics, Inc.
1800 Abbott Street
Salinas, CA 93912
(408) 757-8877

Radix Applied Technology
3109 N Interstate Highway 35
Austin, TX 78722
(512) 478-7788

Receptors, Inc.
2570 West 237th Street
Torrance, CA 90505
(213) 534-1900

Research Incorporated
8500 Executive Park Avenue
Fairfax, VA 22031
(703) 876-6649

Seaboard Electronics
6986 El Camino Real, Suite B-205
Carlsbad, CA 92009
(800) 637-2346

Securitron
1815 W. 205th Street, Suite 105
Torrance, CA 90501
(213) 618-0204

Select Engineered Systems
7991 West 26th Avenue
Hialeah, FL 33016
(800) 342-5737

SESCOA
6535 East Osborn Road
Scottsdale, AZ 85281
(602) 994-9351

Shorrock, Inc.
Parkway Industrial Center, 7255 Standard Drive
Hanover, MD 21076
(301) 796-8520

Silent Knight Security Systems
1700 Freeway Boulevard
North Minneapolis, MN 55430
(612) 491-5200

Sonitrol Corporation
6161 Lake Ellenor Drive
Orlando, FL 32809
(305) 859-3350

Sparton Technology Inc.
9621 Coors Road
Albuquerque, NM 87114
(505) 892-5300

Sygnetron Protection Systems
2103 Greenspring Drive
Timonium, MD 21093
(301) 252-1454

Teltrol Systems
444 North Third Street
Philadelphia, PA 19123
(215) 627-113 0

Vikonics. Inc.
23-25 East 26th Street
New York, NY 10010
(212) 685-7660

Vindicator
1445 Oakland Road
San Jose, CA 95112
(408) 292-2223

VSK Electronics
5432 Industrial Drive
Huntington Beach, CA 92649
(714) 891-1922

Westinghouse Electric Corporation
Waltz Mill Site
Madison, PA 15663-0158
(412) 722-5481

Wireless Technology Inc.
3021 S. Valley View Boulevard, Suite 104
Las Vegas, NV 89102
(702) 362-8686

This list may not be exhaustive; however, no known US supplier was intentionally excluded. Material from most of these companies was also reviewed in order to prepare this section. More than one company may market the same product.

# Barrier Systems

Multiple Fence Barrier System ..... 169

[redacted] ..... 171

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# Multiple Fence Barrier System

The concept of the multiple fence barrier system is based on forcing walk-around traffic away from populated areas and Ports of Entry (POEs) or channeling those who do penetrate into highly confined areas so that the Border Patrol can claim major advantage. Multiple barriers increase the time required for penetration, force the aliens to employ several types of counter-measures, and tire them out with these delays so that response can be made before intruders can escape inland. We recommend that the multiple fence barrier system be installed in areas that are populated on both sides of the border and be extended past the populated areas to allow apprehension before alien traffic can blend with the US population. We also recommend that the multiple fence barrier system be installed [redacted]

The multiple fence barrier system should include [redacted] with [redacted] The recommended [redacted] on the border is the [redacted], which is currently being installed in the San Diego sector. This fence should be [redacted]

The [redacted] should be far enough inland to allow construction of a safe [redacted] The recommended fabric on the [redacted] is [redacted] This fabric can provide up to a [redacted] This fence can either be [redacted]

[redacted]

Each of the fences [redacted] The [redacted] may also require [redacted] as in El Paso for example, to [redacted]

We recommend lighting be installed either [redacted]

OUO-7

## Multiple Fence Barrier System (Concluded)

[redacted]

[redacted].

All fences must be maintained in good condition to prevent holes from becoming permanently established. Holes that are discovered during routine patrol should be closely monitored until the hole is repaired.

# Fencing Systems

[redacted]

[redacted] brings together the unique combination of the newest fence design in the world with a proven fence material that has met the demands for maximum security around the world.

The [redacted]

Other sizes are available upon request.

[redacted]

[redacted]

[redacted].

[redacted] that satisfies fencing requirements for critical security areas.

## Fencing Systems (Concluded)

[redacted] has been highly successful throughout the United Kingdom for over 20 years, providing security to their prison system as perimeter fencing, tier fronts, and cell fronts. [redacted] is also used as fencing material around military bases, power generating stations, foreign embassies, and many other areas needing high levels of perimeter security.

The [redacted]s. This design allows observation even at very oblique angles.

The [redacted]

[redacted]