



# Enhancing Situational Awareness for Risk-Informed, Intelligence-Driven Operations



U.S. Customs and  
Border Protection

Esri National Security Summit - July 2015

# U.S. Customs and Border Protection (CBP)



U.S. Customs and  
Border Protection

## Who We Are

# MISSION STATEMENT

We are the guardians of our nation's borders.

We are America's frontline.

We safeguard the American homeland at and beyond our borders.

We protect the American public against terrorists and the instruments of terror.

We steadfastly enforce the laws of the United States while fostering our nation's economic security through lawful international trade and travel.

We serve the American public with vigilance, integrity and professionalism.



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## Who We Are



### CBP Nationwide Operations

- Location and Border Protection (LBP) Headquarters
- United States Border Patrol (USBP)
  - Mobile Headquarters
  - Border Patrol Station
- Water Boundary
  - Office of Field Operations (OFO)
  - Field Office
  - Port of Entry
  - Non-Port Support
- Land Office Boundary
  - Office of Air and Marine Operations (OAM)
  - Regional Headquarters
  - Field Facility
- Other
  - National Law Enforcement Training Center (NLETC)
  - National Historical Center
  - Ship Station
  - State Boundary

REV: 2/2016    Current: 10/20/2014

This map was derived from various digital cartographic sources. USCBP does not warrant the accuracy of the information contained on this map, and we assume no responsibility for its use.



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# National Operations





**CBP International Presence**

- CBP Personnel in Country
- CBP Airbase
- CBP Immigration Station
- Other CBP Activity or Office
- CBP Preclearance Airport
- CBP Container Security or Intra-Freight Initiative Port

510-37746    Created: 01/15/2014  
 This map was derived from various digital databases. While every effort is made to ensure the accuracy of the information presented, the Office of Border Patrol assumes no responsibility or liability for any errors or omissions.



# International Operations

# Three Pronged Mission



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**CBP Mission**

# Three Pronged Mission



## Securing and Expediting the Movement of Goods

On Average Each Day in FY 2013:

- CBP facilitated approximately **\$6.5 Billion** in trade. (Over \$2.38 trillion annually)
- Processed over **67 thousand** truck, rail, and sea containers. (over 24 million annually)
- Seized over **\$291 thousand** in undeclared currency. (over \$100 million annually)

# Three Pronged Mission



## Securing and Expediting the Movement of Goods

On Average Each Day in FY 2013:

- CBP seized \$4.7 million worth of products with Intellectual Property Rights violations.
- Discovered 440 pests at U.S. ports of entry and 4,379 materials for quarantine.



# Three Pronged Mission



## Securing and Expediting the Movement of People

On Average Each Day in FY 2013:

- CBP processed over 900 thousand arriving passengers and pedestrians.
- Refused the entry of 366 inadmissible persons at ports of entry.
- Intercepted 48 fraudulent documents.

# Three Pronged Mission



## Securing America's Borders

On Average Each Day in FY 2013:

- Arrested **22** wanted criminals at ports of entry.
- Apprehended over **1100** people between ports of entry.
- Identified **137** individuals with suspected national security concerns.
- Seized over **11 thousand** pounds of drugs.
- Flew **169** hours enforcement missions over the United States.

# Uniformed Components



United States  
Border Patrol



Office of  
Field Operations



Office of  
Air and Marine



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Who We Are



# United States Border Patrol



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## Who We Are



# History of the Border Patrol



- On May 28, 1924, Congress passed the Labor Appropriation Act, officially **establishing the U.S. Border Patrol** for the purpose of securing the borders between inspection stations.
- On **March 1, 2003, U.S. Customs and Border Protection (CBP) was created** as part of the Department of Homeland Security.



# The Border Patrol Today



The Border Patrol is the primary federal law enforcement agency between the ports-of-entry.

- We enforce the laws that protect America's homeland by the detection, interdiction, and apprehension of those who attempt to illegally enter or smuggle any person or contraband across our Nation's sovereign borders.
- Our priority mission is preventing terrorists and terrorists weapons, including weapons of mass destruction, from entering the United States.



# Border Patrol Strategic Plan



- The 2012-2016 Border Patrol Strategic Plan commenced May 2012.
- The principal theme of the strategy is to use Information, Integration, and Rapid Response to manage risk.
- The strategy puts the Border Patrol's greatest capabilities in place to combat the greatest risk.

## PILLARS OF THE STRATEGY

**INFORMATION** - Gather and analyze all available information to provide situational awareness and intelligence development.

**INTEGRATION** - Operational planning and execution with our international, Federal, state, local and tribal law enforcement.

**RAPID RESPONSE** - As threats evolve and risks fluctuate, the Border Patrol will adapt and respond quickly.



# Area of Operations



The Border Patrol is Specifically Responsible for:

- Nearly **6,000 miles** on the Mexican and Canadian land borders
- Over **2,000 miles** of coastal waters surrounding Florida and Puerto Rico.

Agents work around the clock on assignments, in all types of terrain and weather conditions.





# Area of Operations



## Border Patrol Sectors

20 Sectors (approx. 21,000 agents nationwide)

- 8 Northern Border Sectors
- 9 Southern Border Sectors
- 3 Coastal Sectors

## 136 Stations and Sub-Stations

- 49 Northern Border Stations
- 71 Southern Border Stations
- 12 Coastal Border Stations
- 1 Northern Border Sub-Station
- 3 Southern Border Sub-Stations



# Apprehensions



## 486,651 Illegal Alien Apprehensions FY 2014

- Northern Border Sectors: **3,338**
- Southern Border Sectors: **479,371**
- Coastal Sectors: **3,942**



# Seizures



1,922,545 Pounds Marijuana Seized in FY 2014



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# Securing the Border

Managing Risk and Responding to Threats



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## Who We Are



# Border Patrol Agents



- The Border Patrol is required by Congress to maintain **21,370 agents** and **1,874 support** personnel nationwide.
- **2,212** agents for the Northern Border.
- **18,351** agents for the Southwest Border.
- **138** agents for the Coastal Border.
- All newly hired Border Patrol Agent Trainees are required to complete a vigorous academy; instruction includes Law/Operations, Driver Training, Physical Techniques, and Firearms.



# Specialized Response Capability



## BORTAC

The Border Patrol Tactical Unit is specially trained and equipped for threats to national and border security requiring specialized tactics and techniques.

## BORSTAR

The Border Patrol Search, Trauma, and Rescue Team is capable of emergency search and rescue situations anywhere in the United States.



## Mobile Response Team

A group of organized, trained, and equipped agents who provide rapid response capability for fluctuating risk along the border.







# Enhancing Situational Awareness

Supporting Risk-Informed, Intelligence-Driven Operations

## The Role of GIS in Border Security



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## Role of GIS



# Enhancing Situational Awareness

Supporting Risk-Informed, Intelligence-Driven Operations

- ❖ Establish a foundation of geographic information.
- ❖ Plan, coordinate, and implement GIS services, standards and programs.



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## Role of GIS

# Enhancing Situational Awareness

Supporting Risk-Informed, Intelligence-Driven Operations

- ❖ Increase Operational Effectiveness
- ❖ Enhance Officer Safety
- ❖ Facilitate Change Detection
- ❖ Promote Efficient and Cost Effective Resource Deployment



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## Role of GIS

# Enhancing Situational Awareness

Cultivate Five Core Objectives

- ❖ Collection
- ❖ Cartography
- ❖ Analysis
- ❖ Tracking
- ❖ Visualization



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## Role of GIS

# Enhancing Situational Awareness



## Collection:

Collect, Process, Manage and Distribute Spatial Data



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## Core Objectives



# Operation Waypoint



- Nationwide GPS data collection effort
- The operation has been ongoing since 2003
- Each Border Patrol Station has at least one collection kit
- Border Patrol agents are trained to use Trimble GPS units
- Agents gather precise coordinates of Border Patrol specific features, such as:
  - ✓ Facilities
  - ✓ Landmarks
  - ✓ Detection Towers
  - ✓ Pedestrian Fencing
  - ✓ Layup Locations
  - ✓ Rescue Beacons



# Enhancing Situational Awareness



## Cartography:

Create Accurate Cartographic Products



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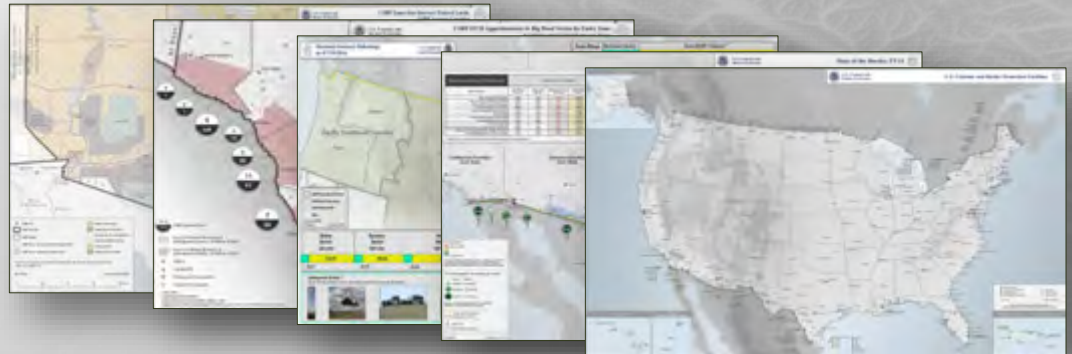
## Core Objectives

# Map Production

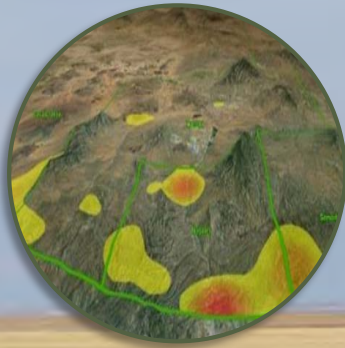


Over 3,000 map products since FY10

- Support for OBP, CBP, DHS, POTUS, etc.
- Assistance to USBP field
- Can be made available/shared through eGIS, SharePoint, eGIS Portal, Print



# Enhancing Situational Awareness



## Analysis:

Perform Spatial Analysis and Modeling



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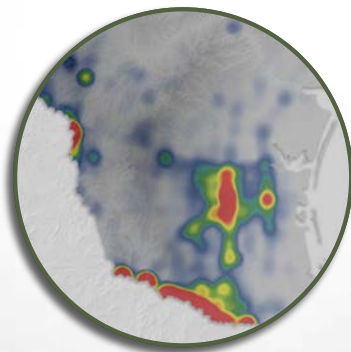
## Core Objectives



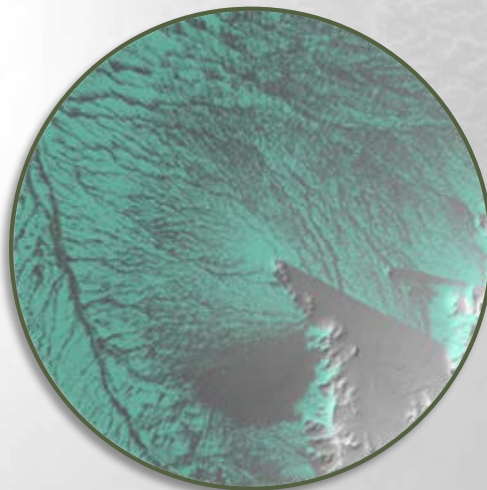
# Spatial Analysis and Modeling



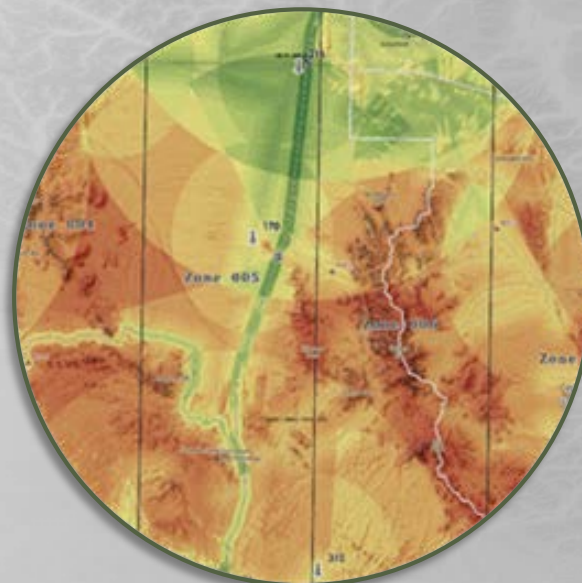
Analysis of resources, activity patterns, trends, etc.



Density/Hotspot



Viewshed



Gap Analysis



# Enhancing Situational Awareness



## Tracking:

Implement Location-Based Detection, Alerting, Dispatch and Asset Tracking



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## Core Objectives

# Tracking, Signcutting & Modeling



Tracking Signcutting & Modeling (TSM) provides a real-time record of signcutting & tracking operations. Foot sign, agent observations, suspect location, event status are updated and displayed on the map.









# Visualization



Enterprise Geospatial Information Services (eGIS) provides a wide array of visualization capabilities.

- eGIS Map Viewer provides a common operating picture.
- eGIS Portal, our on premises implementation of Portal for ArcGIS, provides users of all skills levels ad-hoc visualization and information sharing capability.
- Intelligent Computer Assisted Detection version 4 (ICAD4 / I4) provides a real time interface for dispatch including location and status of agents, citizen tips and sensor alarms nationwide.
- ICAD4 Command and Control (i4c2) combines eGIS and ICAD4 to provide a robust situational awareness viewer common across the agency.

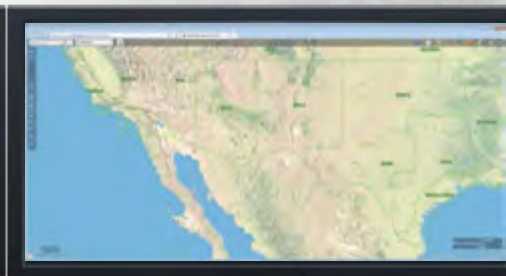


# i4c2 featuring eGIS and I4 Live

ICAD – I4 Live  
Sensors & Agent Dispatch



eGIS Map Viewer

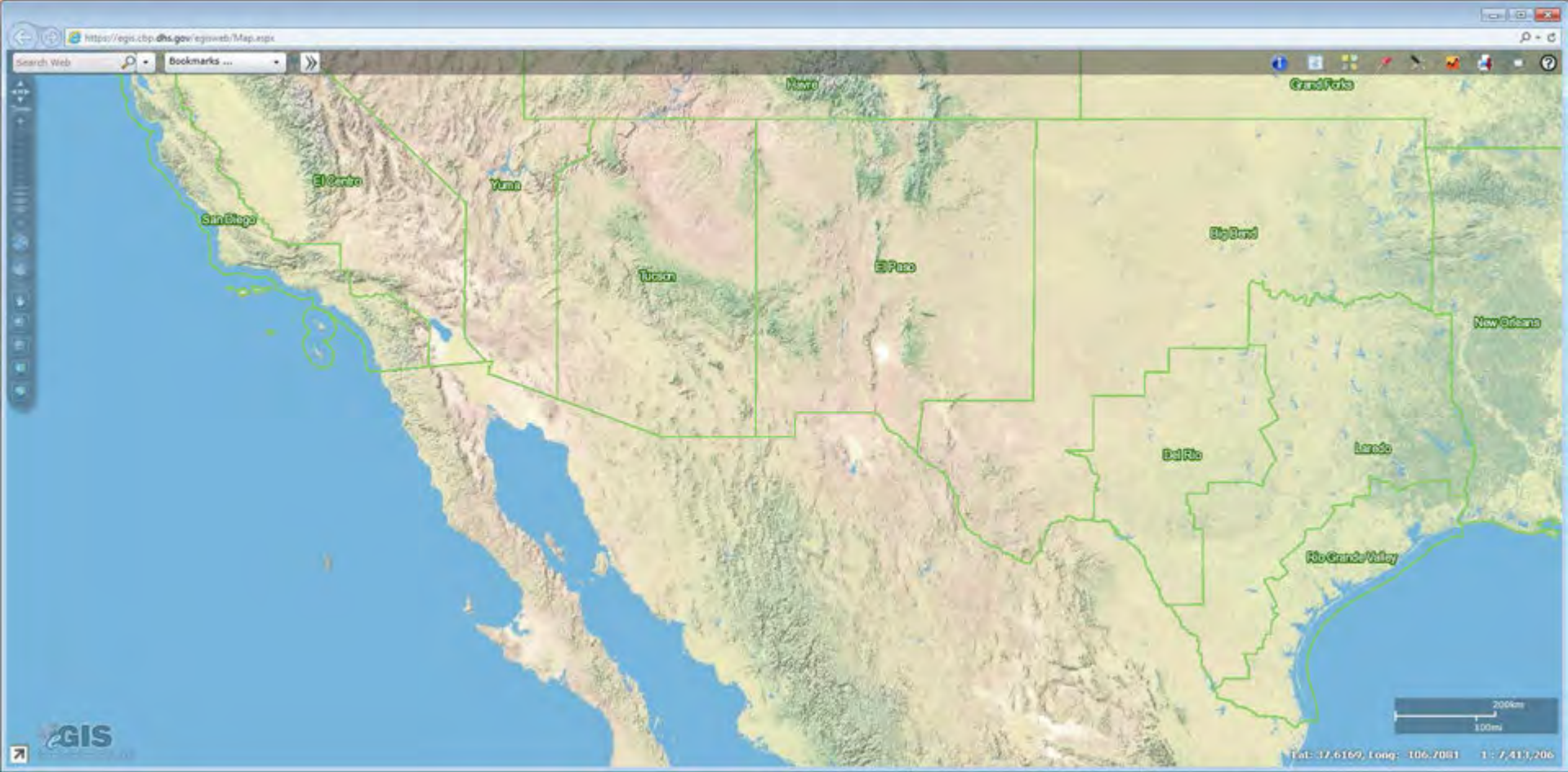


ICAD – I4 Live  
Multi-Image Viewer



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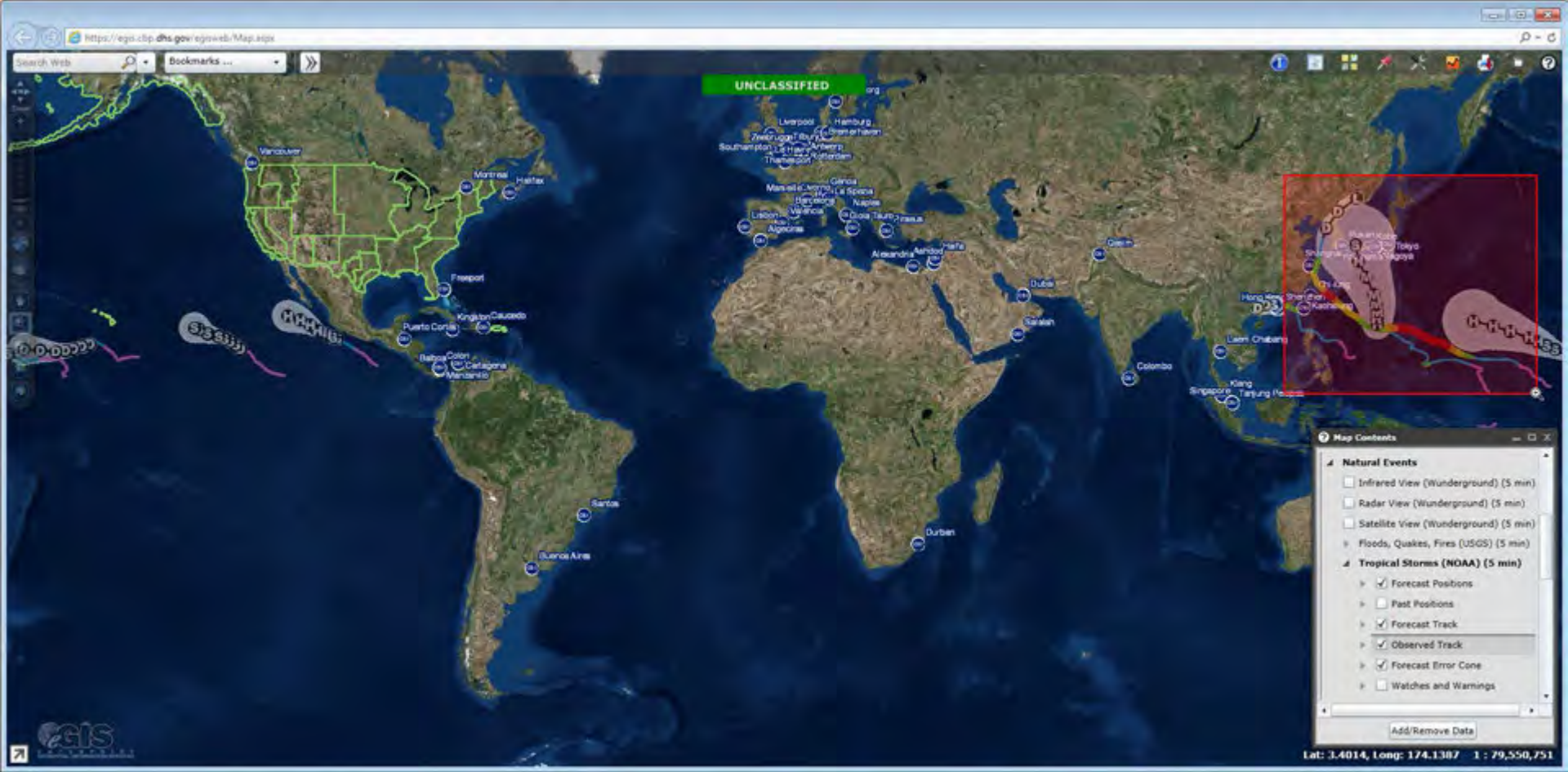
i4c2 – eGIS (center monitor)



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i4c2 – eGIS (center monitor)





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eGIS





UNCLASSIFIED

Identify Results

Select a Feature

Selected Feature Details	
<b>USBP Stations</b>	OBJECTID 7
Douglas	STA_NAME Douglas
<b>USBP Stations</b>	STA_CODE DGL
Brian A. Terry	STA_TYPE BPS
<b>USBP Sector ADR</b>	Tucson



- Map Contents
- Facilities
- IBET Stations
  - DAN Facilities
  - USBP Camp
  - USBP Fwd Op Base (FOB)
  - USBP Headquarters
  - USBP Stations
  - USBP Checkpoints
  - OFO CSI Ports
  - OFO Facilities
  - OFO Field Offices
  - OFO Preclearance Operations
  - OFO IAP Operations
- Add/Remove Data





UNCLASSIFIED

Query

Query by Database Query by Attribute Query by...

Select Layer:

- Houses
- Landmarks
- Layers
- Lighting (Non-TI)
- Line Watches
- Marine Feature

Fields: PHOTO\_NAME

Operator: Equal to

Select Sample Value: None

Enter Value:

Where: PHOTO\_NAME <= 'None'

TCA\_UUP\_1\_20070430\_1.JPG

Map Contents

- USBP Reference
  - Border Monuments
  - Bridges
  - Cameras (Non-RVSS)
  - Crossings
  - Firearms Ranges - BP Use

Query Results

Layers X

OBJECTID	Comment	GPS_Date	Datfile	Latitude	Longitude	COLL_SEC	COORD_SRC	PHOTO_NAME	GlobalID	Location	ACT_STATUS	ACT_LEVEL
13	CUT NORTH	7/10/2007 12:00:00 AM	TCA-10-071005A.SSF	30.000000000	-111.000000000	TCA	GPS - Trimble GeoXT	TCA_UUP_10_20070710_1	{A91058E8-97A8-425A-8A7A-752365D48E48}		ACTIVE	2
14	RANCH	7/10/2007 12:00:00 AM	TCA-10-071005A.SSF	30.000000000	-111.000000000	TCA	GPS - Trimble GeoXT	TCA_UUP_10_20070710_2	{26D23D82-D7AD-4499-94D8-0D2D63964848}		ACTIVE	2
17	CUT NORTH	7/13/2007 12:00:00 AM	TCA-10-071307A.SSF	30.000000000	-111.000000000	TCA	GPS - Trimble GeoXT	TCA_UUP_10_20070713_1	{EC054E1C-89EA-4F6A-8A05-FF36EE13D820}		ACTIVE	2
18	RANCH	7/13/2007 12:00:00 AM	TCA-10-071307A.SSF	30.000000000	-111.000000000	TCA	GPS - Trimble GeoXT	TCA_UUP_10_20070713_2	{D566466C-EDBF-421A-8A09-D7FA2C940AF8}		ACTIVE	2
19	CUT NORTH	7/13/2007 12:00:00 AM	TCA-10-071307A.SSF	30.000000000	-111.000000000	TCA	GPS - Trimble GeoXT	TCA_UUP_10_20070713_3	{7CF6C76-D21E-492F-9293-68A657C86F1F}		ACTIVE	2
23	RANCH	6/27/2007 12:00:00 AM	TCA-1-062708A.SSF	30.000000000	-111.000000000	TCA	GPS - Trimble GeoXT	TCA_UUP_1_20070627_1	{8A98A0C1-2C8E-4C94-8BAF-D1709358B0FB}		ACTIVE	2
27	CUT NORTH	7/6/2007 12:00:00 AM	TCA-1-070607A.SSF	30.000000000	-111.000000000	TCA	GPS - Trimble GeoXT	TCA_UUP_1_20070706_1	{818A6878-8A0E-4D04-8C22-35D57927DE18}		ACTIVE	2

Record: 0 out of 309 Selected



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eGIS

(\*some data points are offset or notional for operational security)



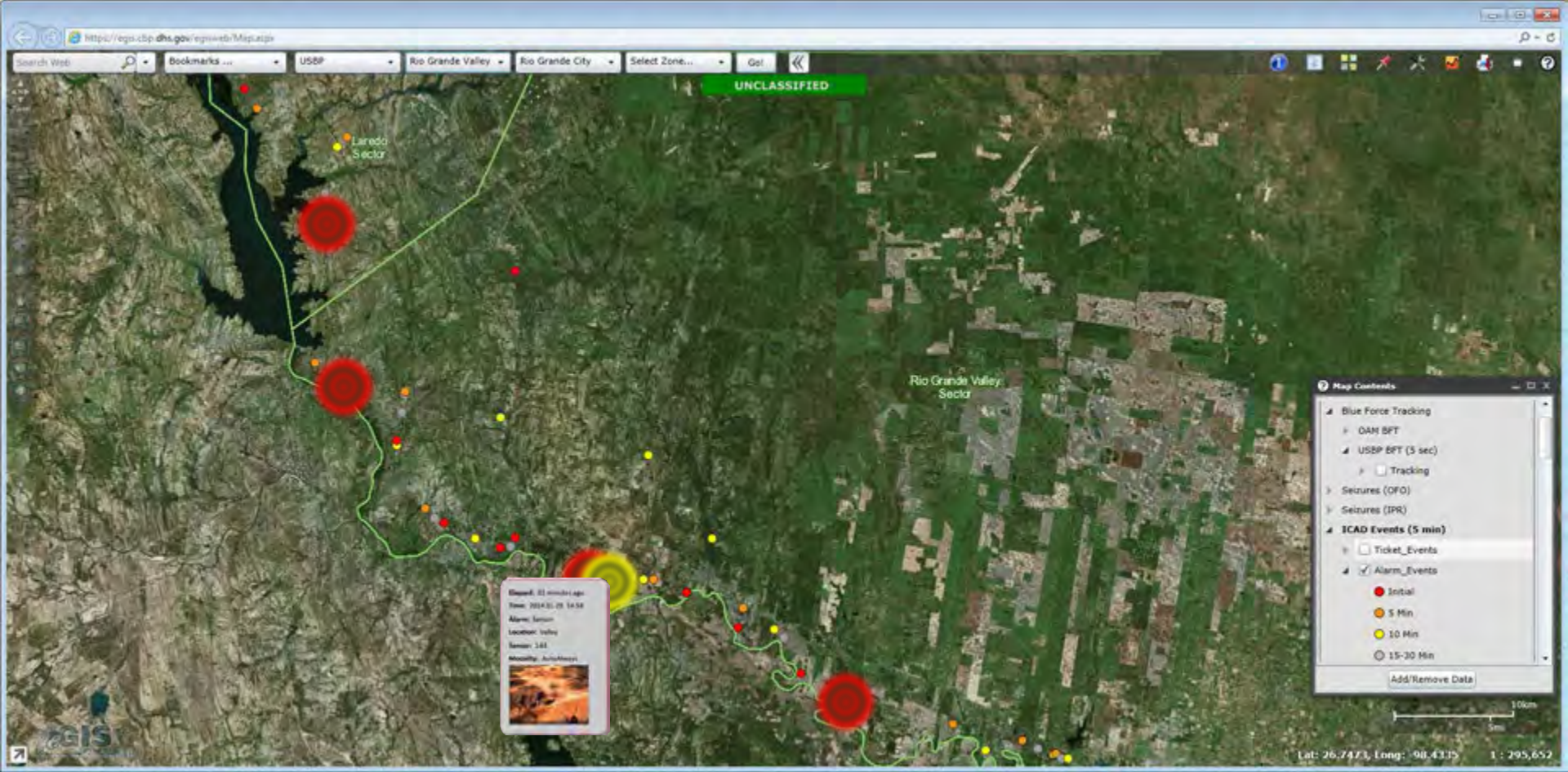


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eGIS

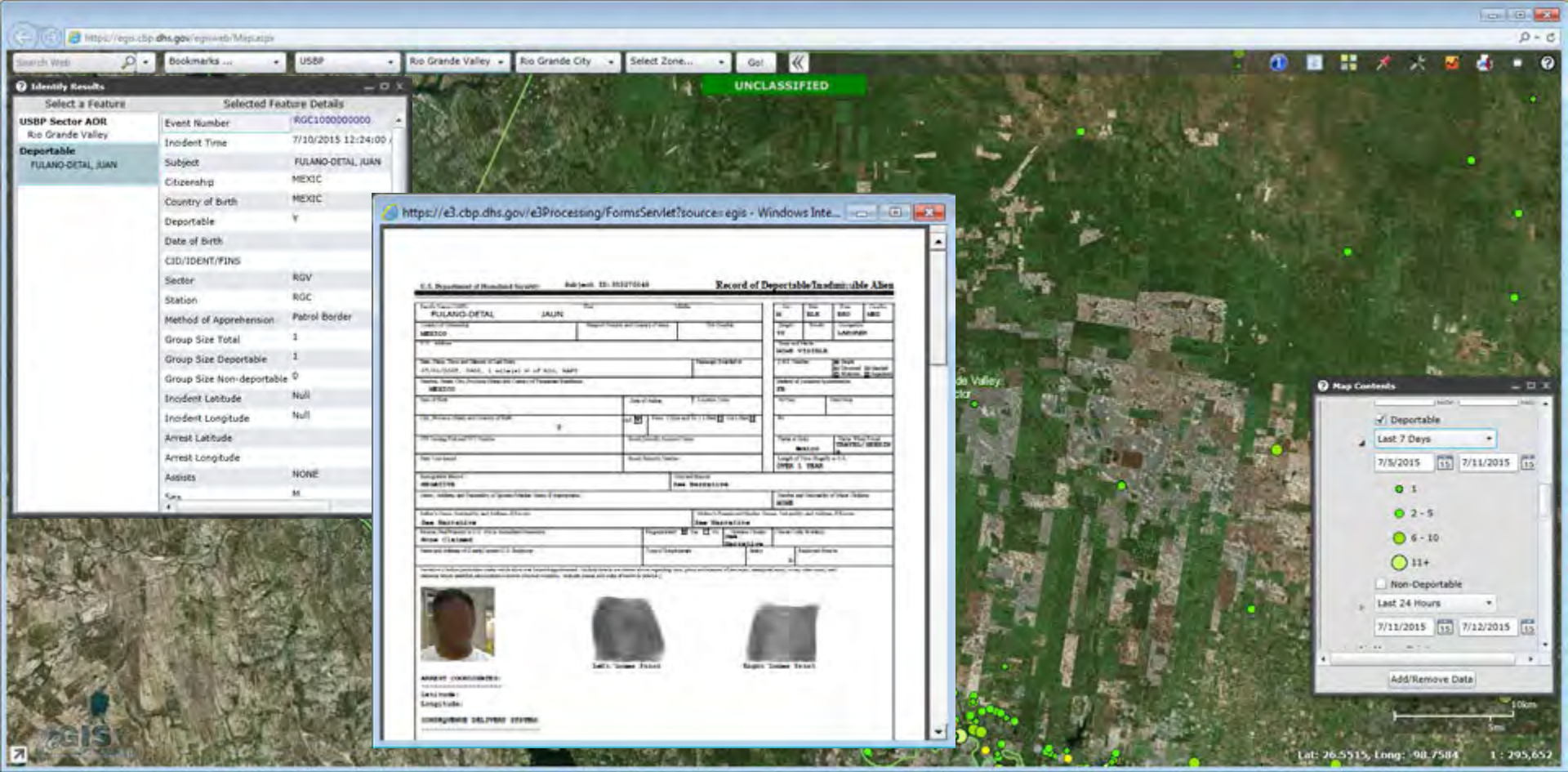
(\*some data points are offset or notional for operational security)





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eGIS (\*some data points are offset or notional for operational security)

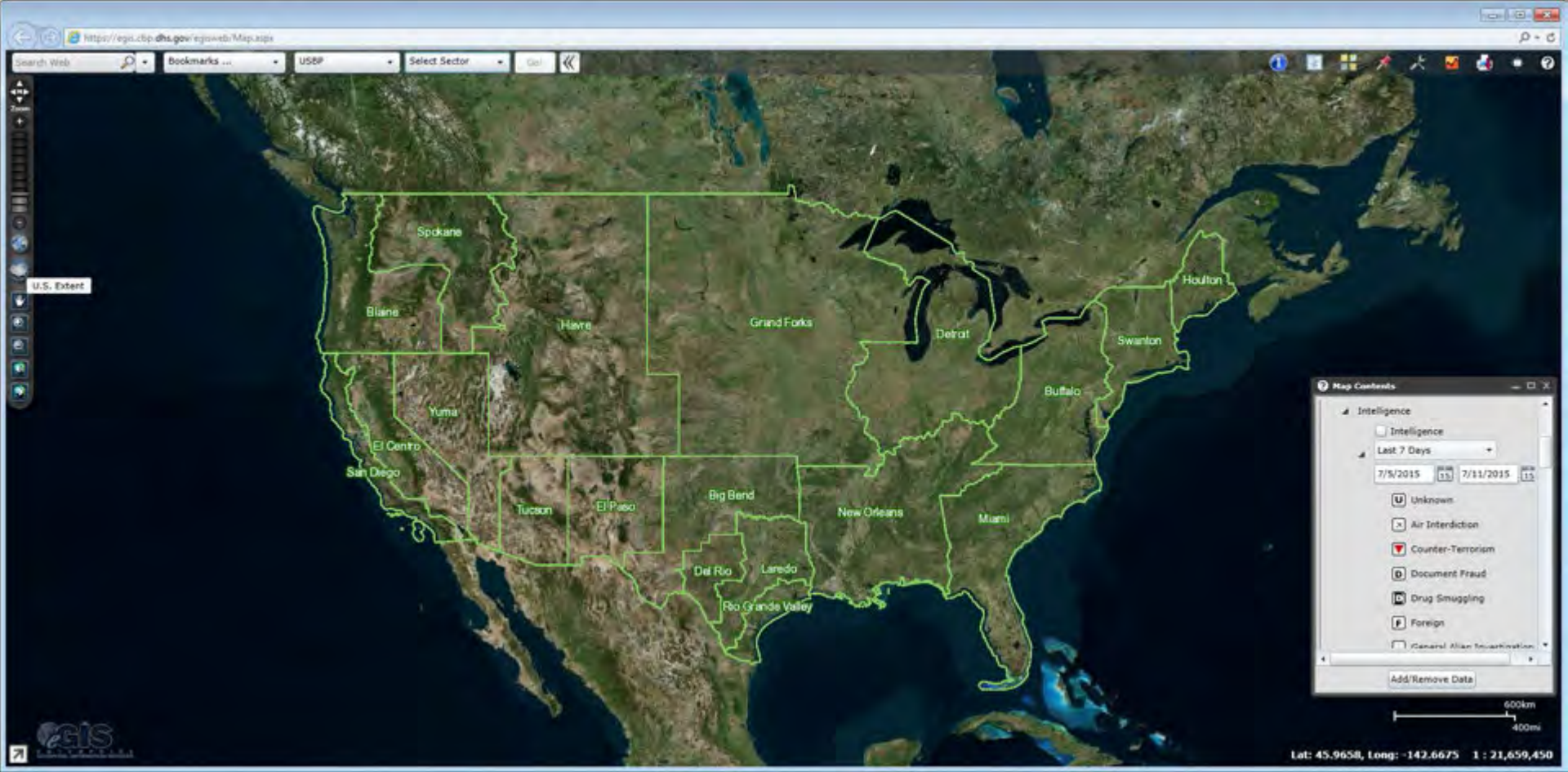


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eGIS (some data points are offset or notional for operational security)

Lat: 26.5515, Long: -98.7508 1 : 295,652





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i4c2 – eGIS (center monitor)

# i4c2 featuring eGIS and I4 Live

ICAD – I4 Live  
Sensors & Agent Dispatch



eGIS Map Viewer



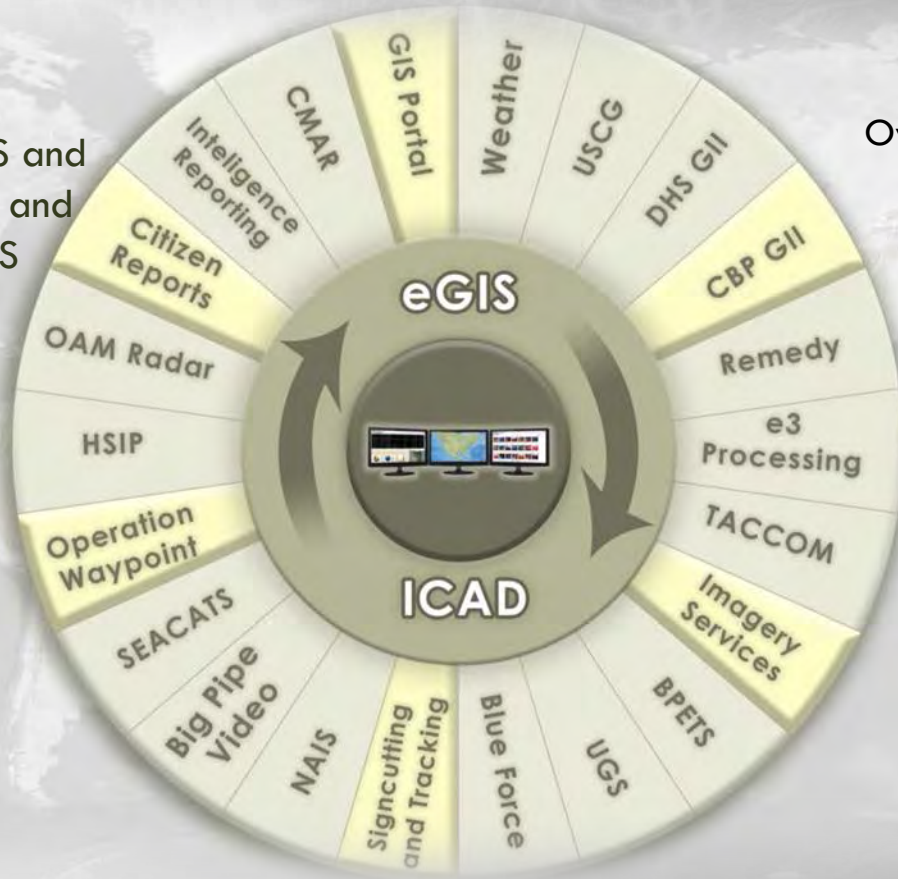
ICAD – I4 Live  
Multi-Image Viewer



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i4c2 – eGIS (center monitor)

More than **10** distinct GIS and related systems created and managed by CBP-GIS



Over **500** layers of information supporting Situational Awareness



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I4c2 - Technological Convergence



## Coming soon for Agents: AVP

- Agent-only support and visualization tools allow agents to receive alerts, tips and sensor alarms as text based messages or on the map for quick reference.
- Using eGIS services, AVP will be able to provide basic routing for many urban areas.
- As a part of ICAD, AVP will easily integrate with ICAD Tracking and Signcutting Modeling (TSM).
  - Agents can share their Blue Force and signcutting information for more efficient and safer operations.
  - Using I4C2 (eGIS and ICAD), ongoing signcutting operations can be briefed at muster and activity can easily be passed down to oncoming units.



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# Agent Visualization Platform (AVP)

## Contact:

### Patrick Stewart

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Enforcement Systems Division/ GIS  
1300 Pennsylvania Ave. NW  
Room 6.5E  
Washington, DC 20229

[OBP-GIS@cbp.dhs.gov](mailto:OBP-GIS@cbp.dhs.gov)

Please visit us  
at the National Security Showcase

# Thank You!



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# U.S. Border Patrol – Honor First



UNITED STATES BORDER PATROL

Enhancing Situational Awareness for  
Risk-Informed, Intelligence-Driven Operations



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