



# Western Air Defense Sector



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# Overview

- Mission Overview
- The “New” Steady-state
- WADS 4 Main Pieces
- EX Program = Mission Readiness
- Conclusion



# *The Mission*



# NORAD Mission Mandate

"... the primary missions of NORAD ... aerospace warning for North America; and aerospace control for North America... [to] include the capability to detect, identify, monitor, and if necessary, take appropriate actions (ranging from Visual identification to destruction) against manned or unmanned air-breathing vehicles approaching North America."

*US Department of State – Canada /NORAD  
Agreement, Mar 96*



# NORAD Mission

NORAD will **continuously provide warning** of an aerospace attack on North America and maintain continental aerospace control to include **peacetime air sovereignty** and appropriate **aerospace defense** measures in response to hostile actions against North America.





# Peacetime Mission

## Air Sovereignty Alert (ASA)

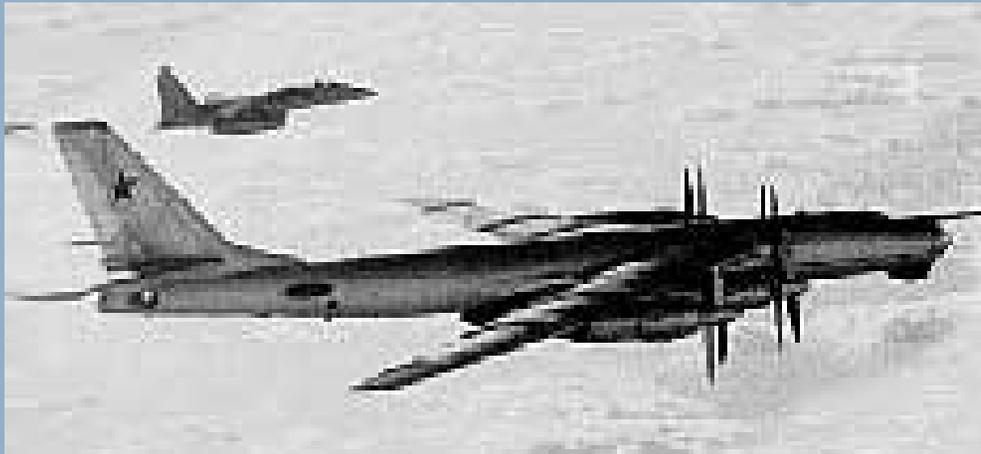
- Fighters on Immediate Alert
- External & Internal Look, Identification of
  - Whale Watchers / Cable Checkers
  - Navy Helicopters & Patrol Aircraft
  - Average American Private Pilot
- Drug Interdiction





# War-Time Mission

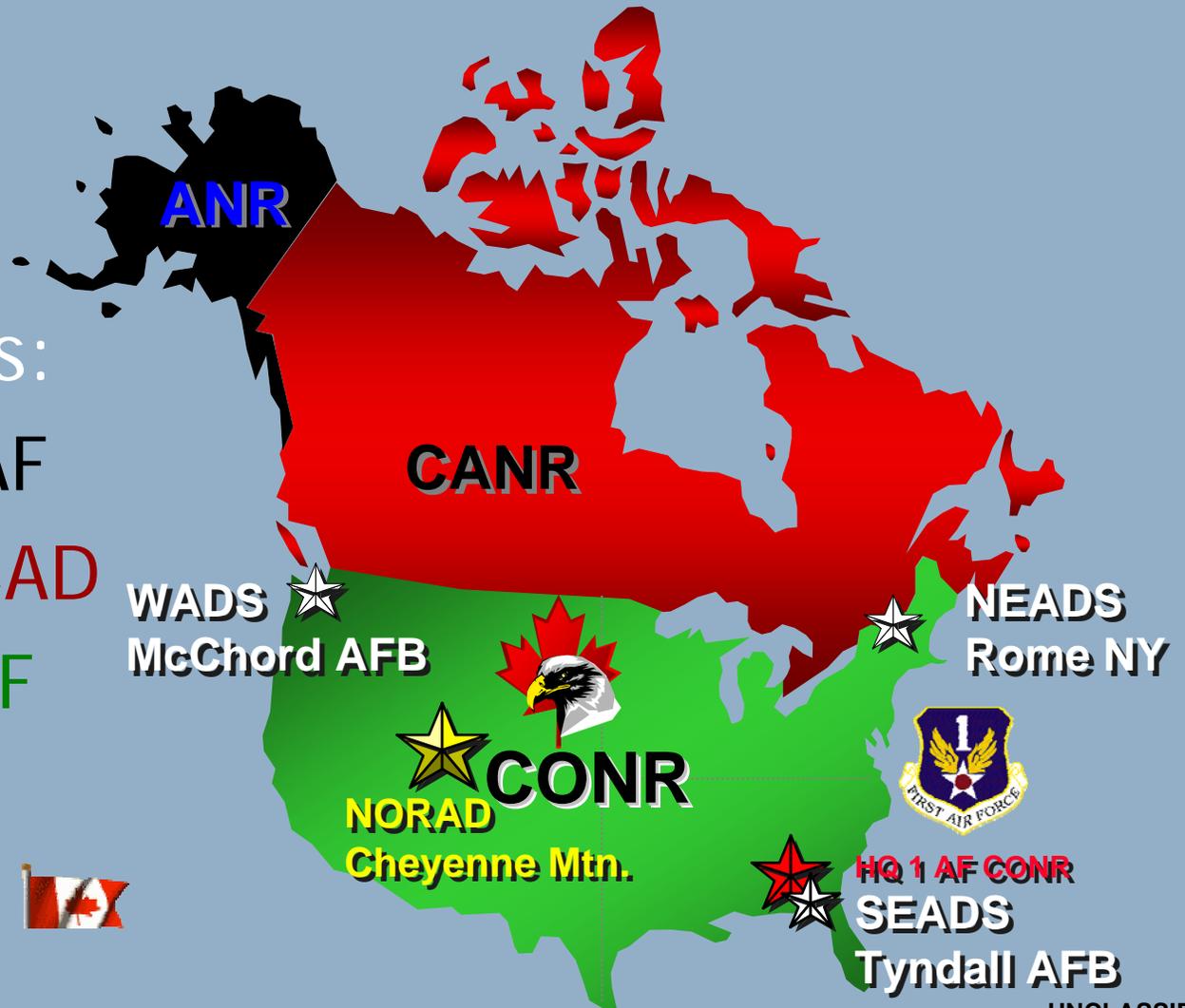
- Intelligence Build up
- Battle Staff Formation
- Long Range Detection Teams
- Flush
- Reconstitution





# NORAD 101

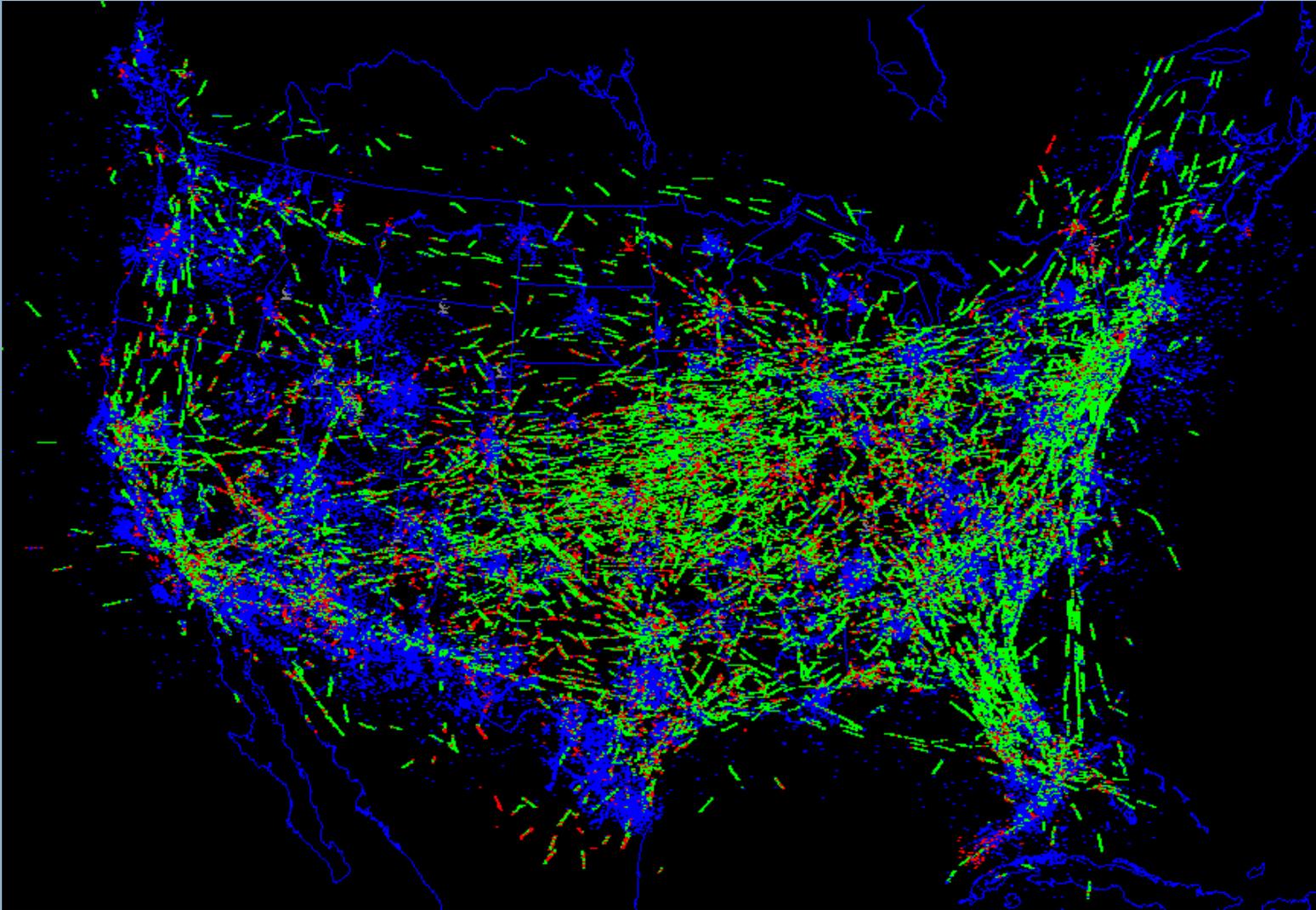
- Nation-Nation Agreement
- Three Regions:
  - Alaska - 11AF
  - Canada - 1CAD
  - CONUS - 1AF



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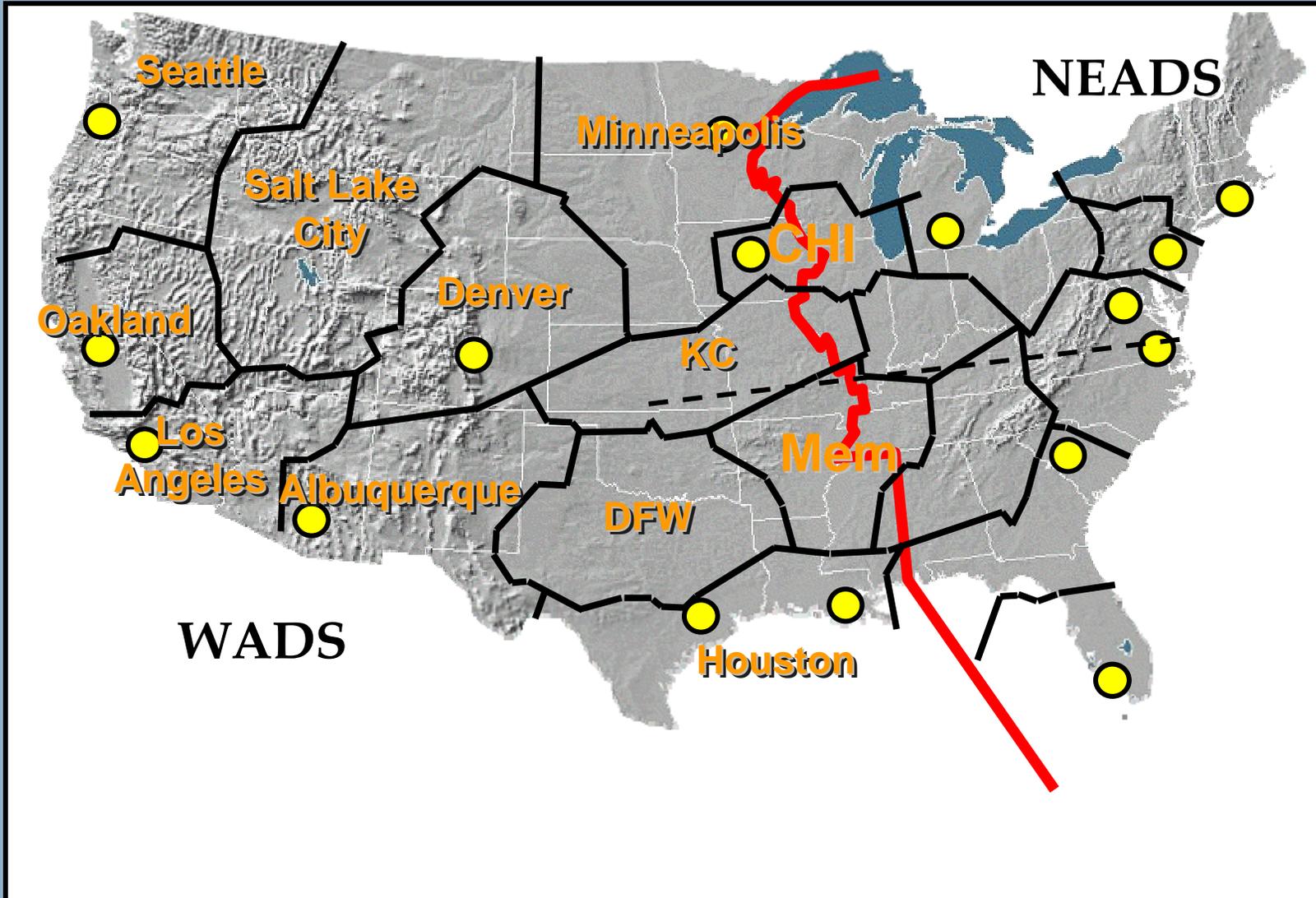


# Typical 5 Minutes





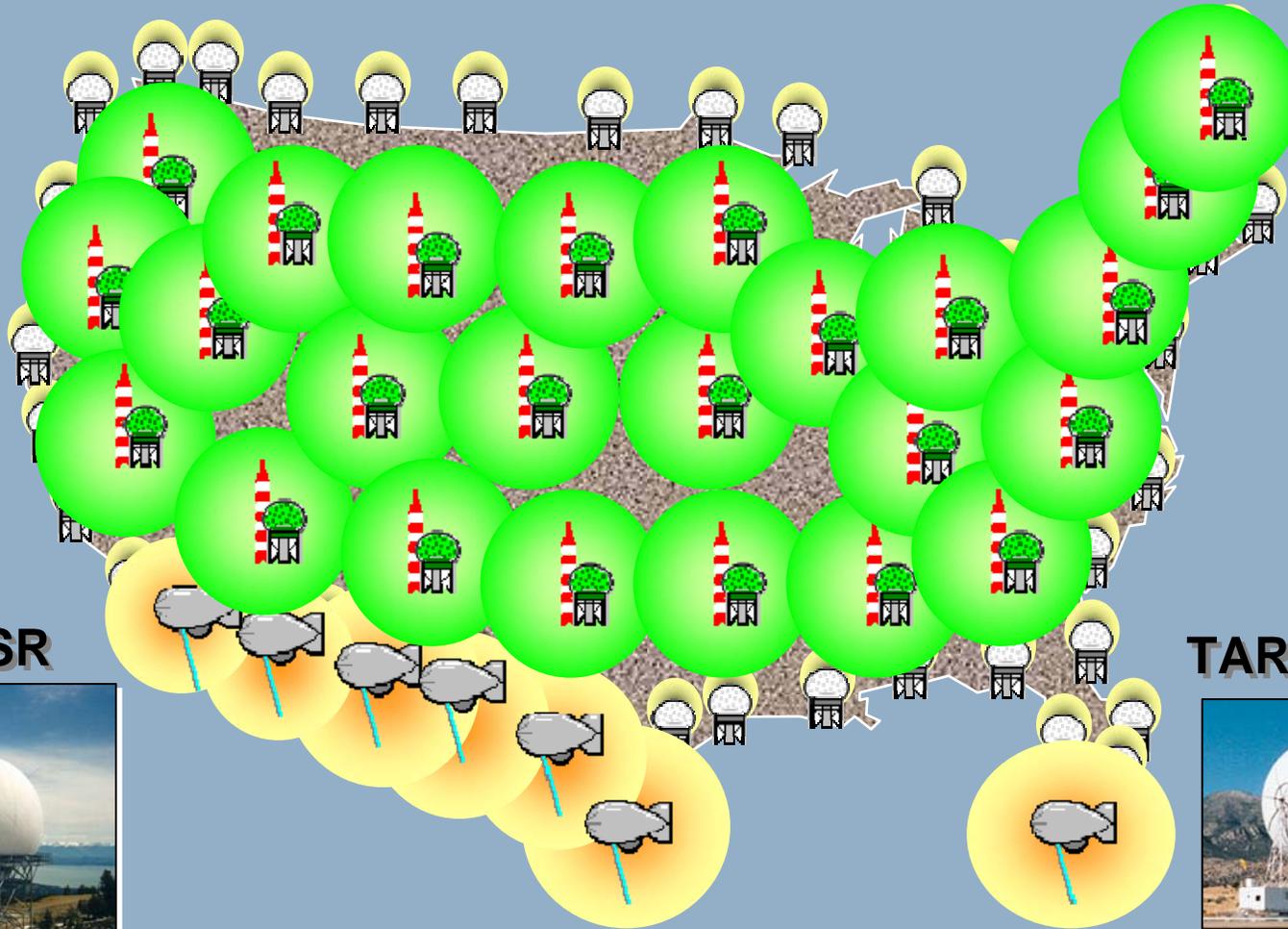
# FAA ARTCCs





# RADAR/Radio Coverage

 ARSR Installations  TARS - Aerostats  Additional Radar/Radio Installations



**ARSR**

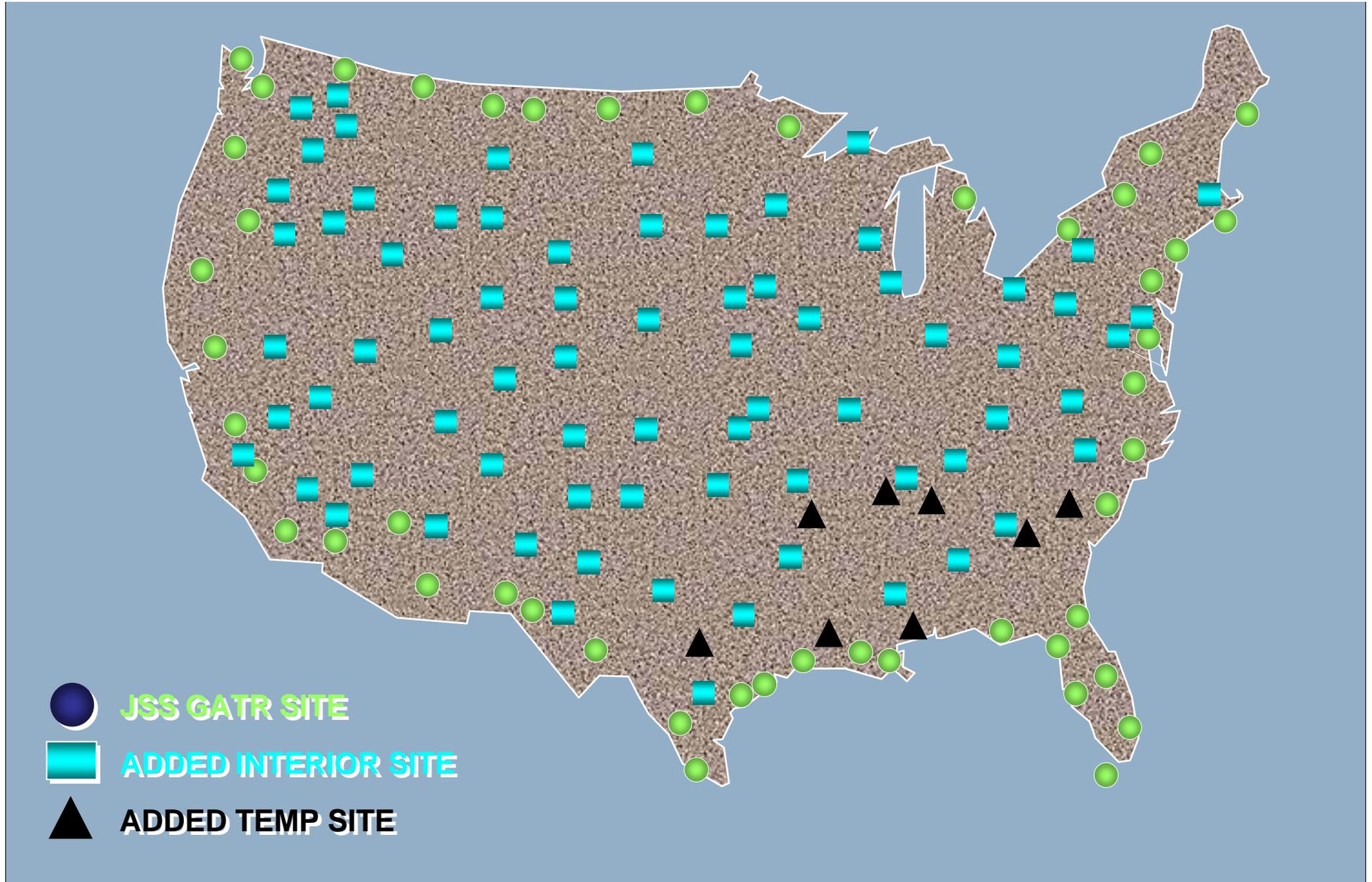


**TARS - Aerostat**





# Radio Coverage



JSS GATR SITE



ADDED INTERIOR SITE



ADDED TEMP SITE

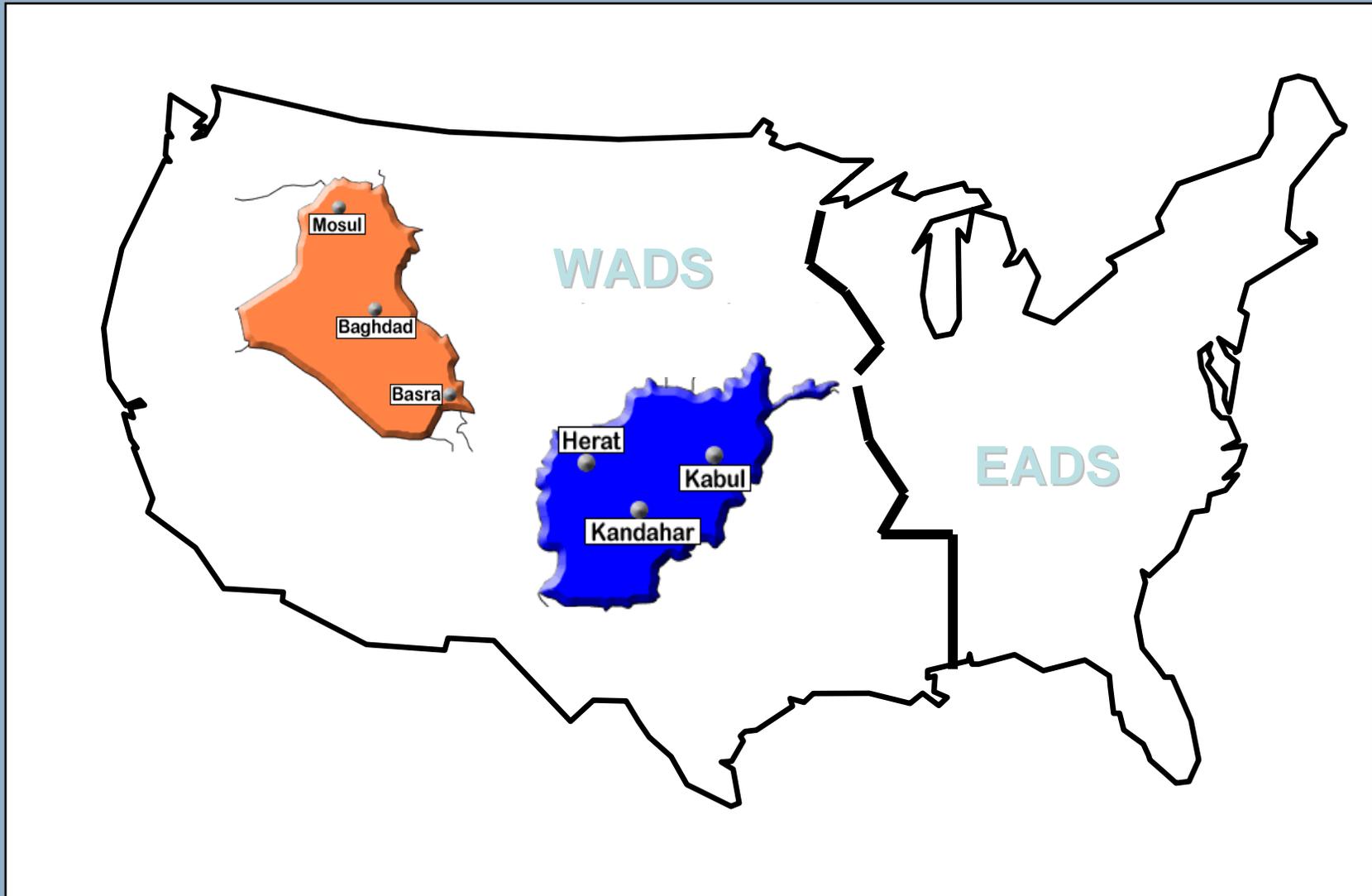


# WADS AOR

- Area: 2,209,231 mil sq. miles
- Population: 119,861,658 million Citizens
- Assets:
  - **Fighters**
  - **Radars**
  - **Radios**
  - **AWACS (as needed)**
- Personnel: 350+/-



# WADS AOR Comparison





# Typical Fighters

**142 FW (PDX)**  
**159 FW (NBG)**



**138 FW (EFD)**  
**140 FW (BKF)**  
**144 FW (FAT)**  
**DET 1 144FW (RIV)**  
**148 FW (DLH)**  
**162 FW (DMA)**



# Operation Noble Eagle

*The New*



*Steady State*



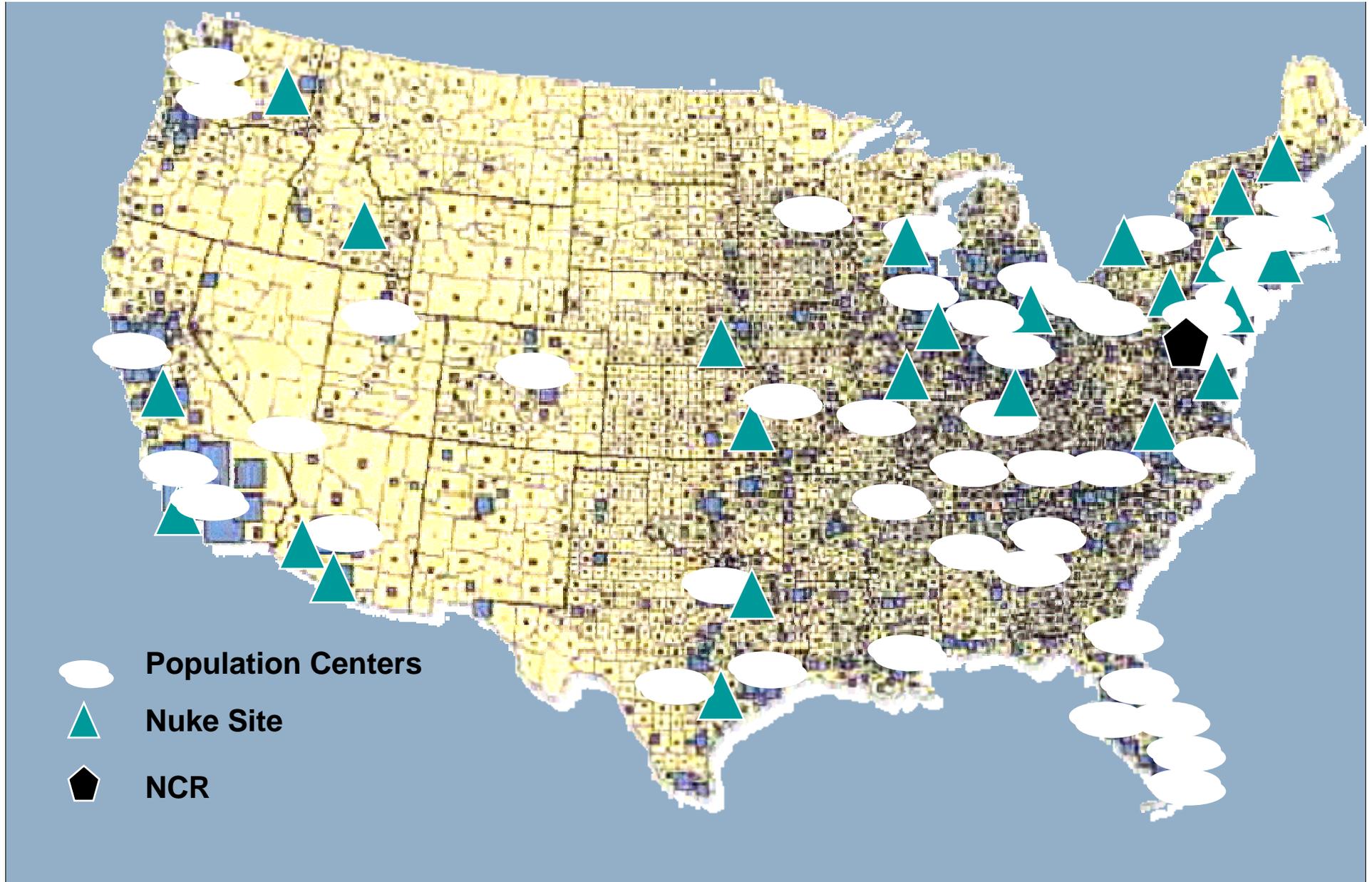
# Operation NOBLE EAGLE

- NORAD-wide Contingency
- Point Defense
  - Key US Cities to include NCR Backup
  - Critical Infrastructure
  - Temporary Flight Restrictions (TFRs)
    - POTUS, VPOTUS, NSSE
- Scramble or Divert Fighters in Response to:
  - FAA Request for Assistance
  - Threat Assessments



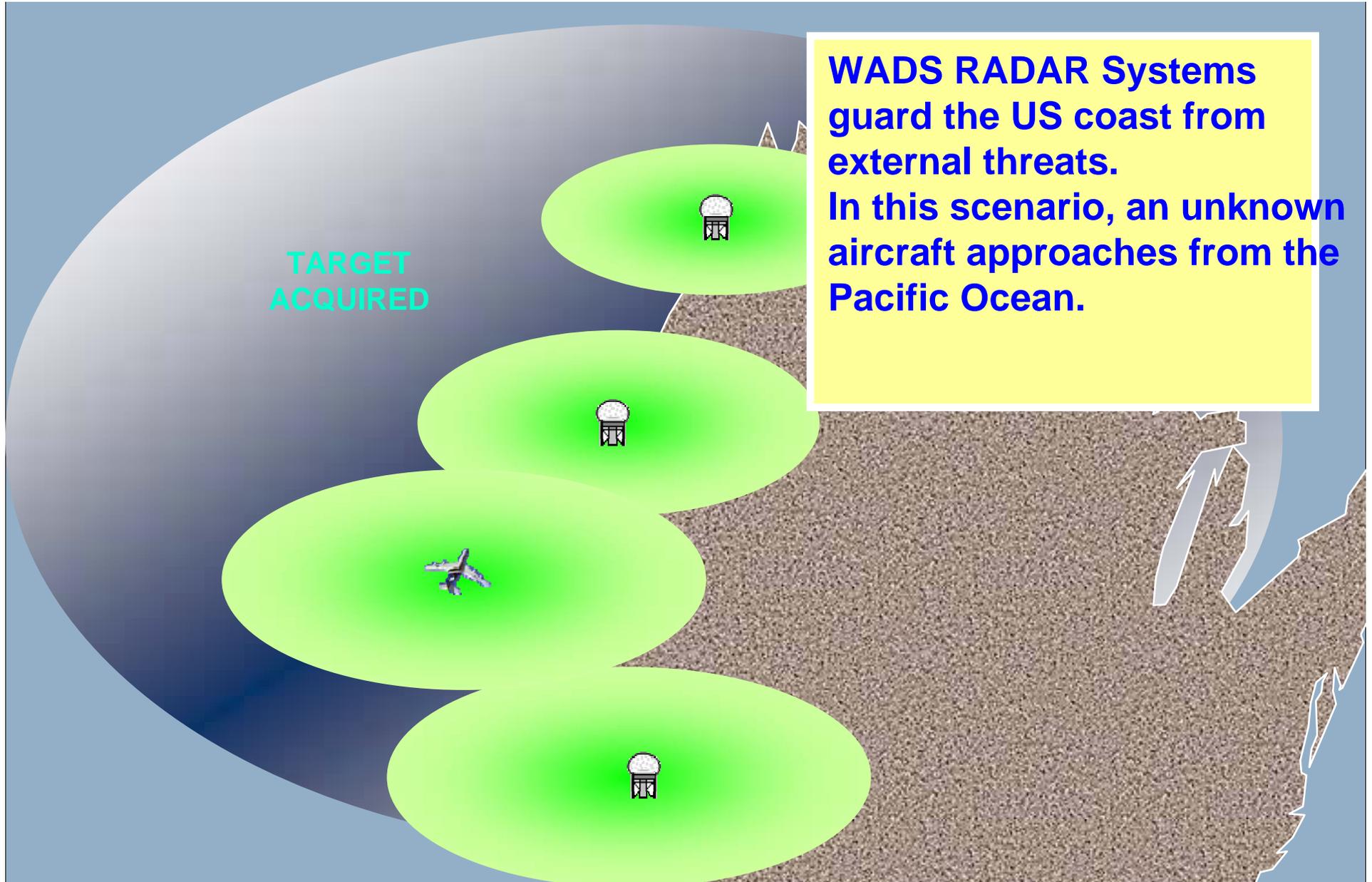


# High Value Assets





# Operations Scenario: External

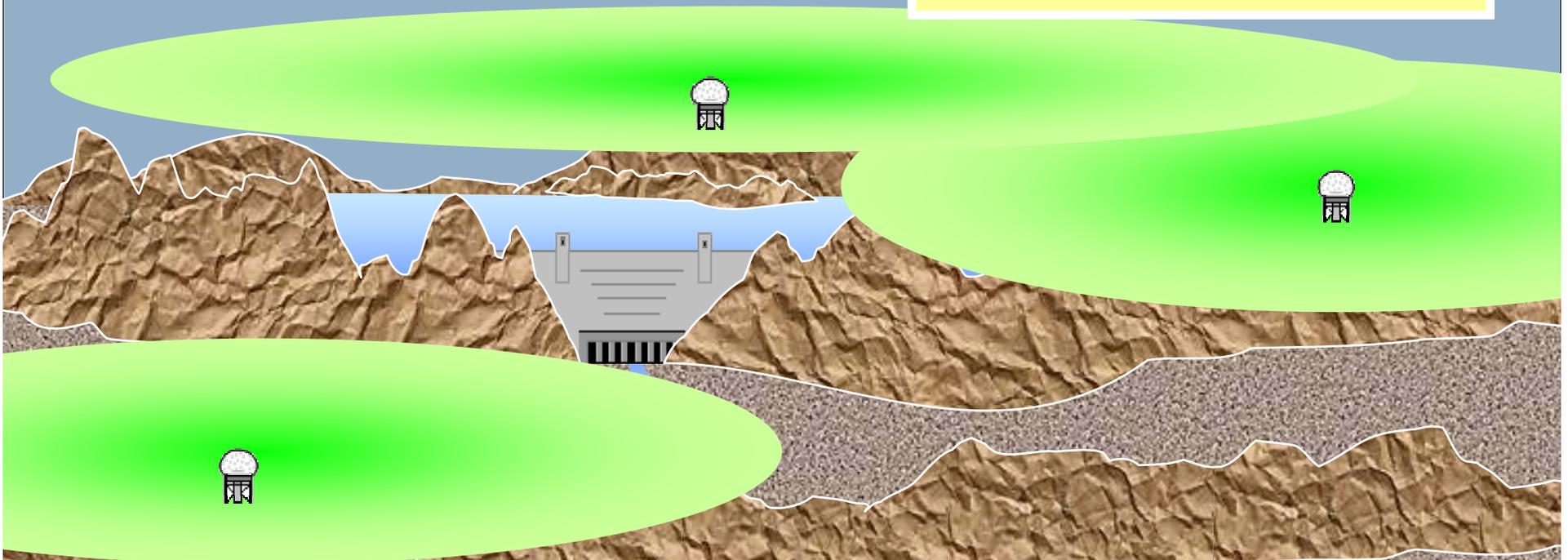




# Operations Scenario: Internal

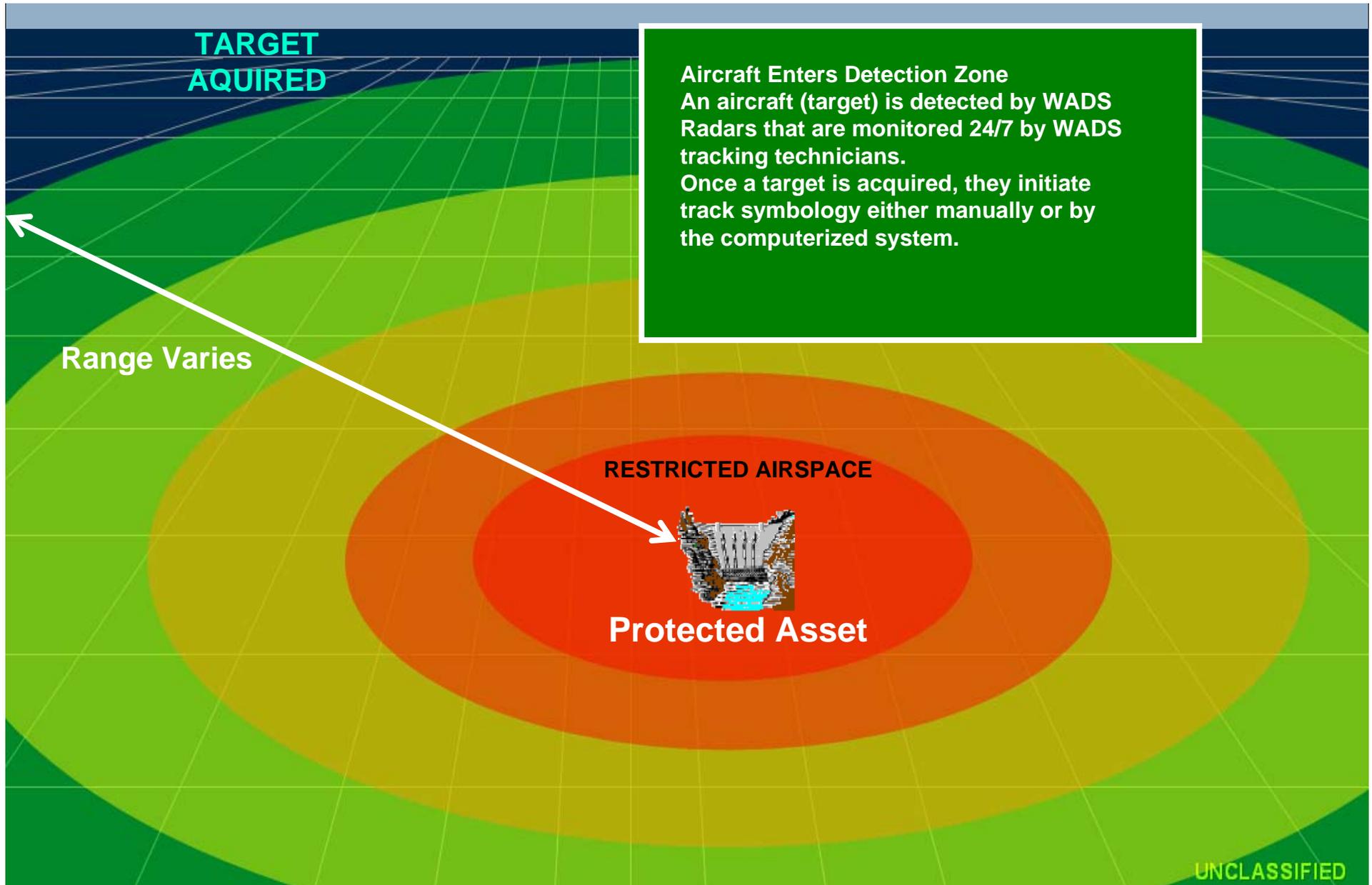
**WADS RADAR Systems also guard specific protected resources from internal threats. In this scenario, a perpetrator in a stolen cargo plane is threatening Hoover Dam.**

**TARGET  
ACQUIRED**





# TFR Scenario: Inbound Track





# TFR Scenario: Inbound Track

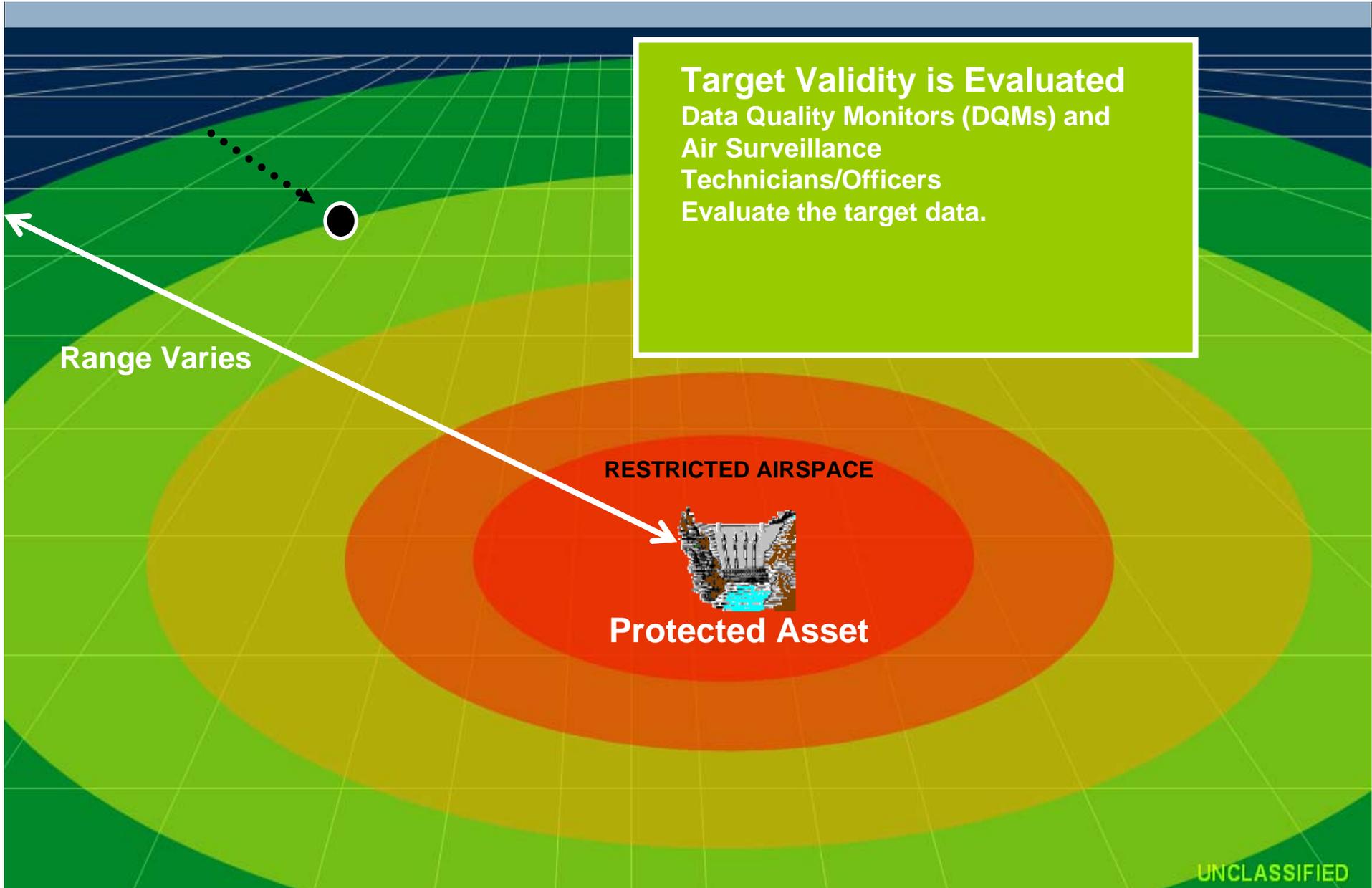
Target Validity is Evaluated  
Data Quality Monitors (DQMs) and  
Air Surveillance  
Technicians/Officers  
Evaluate the target data.

Range Varies

RESTRICTED AIRSPACE

Protected Asset

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# TFR Scenario: Inbound Track

## Identification Phase/Zone

ID Technicians contact various resources for specific information on the target. The FAA, DEA, Coast Guard, Army, Navy, local airports and local law enforcement are contacted.

This occurs within the first 2 to 5 minutes of target contact.

Range Varies

RESTRICTED AIRSPACE

Protected Asset

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# TFR Scenario: Inbound Track

## Tactical Action Zone

As the target nears restricted airspace, the decision to intercept is made.

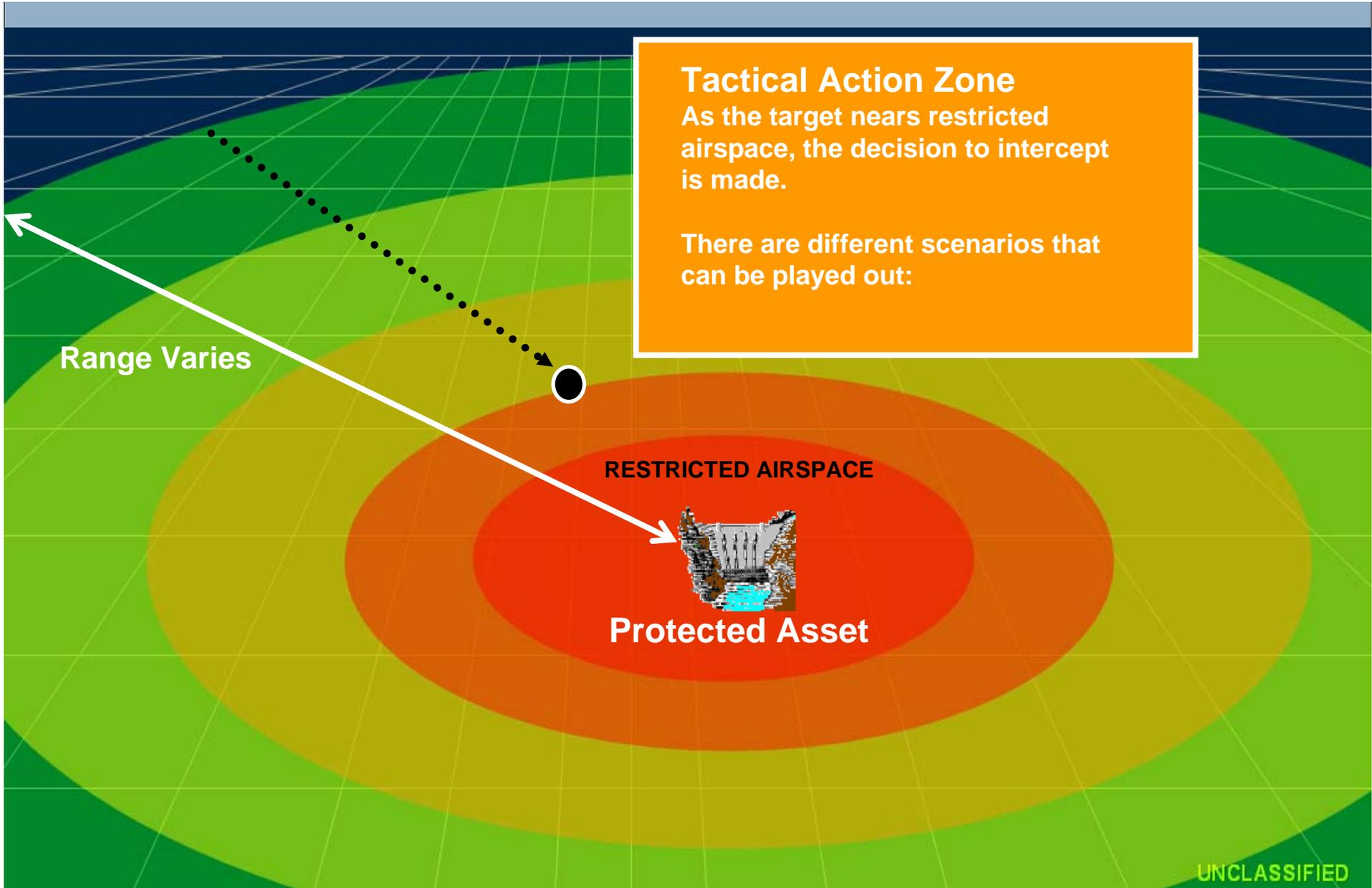
There are different scenarios that can be played out:

Range Varies

RESTRICTED AIRSPACE

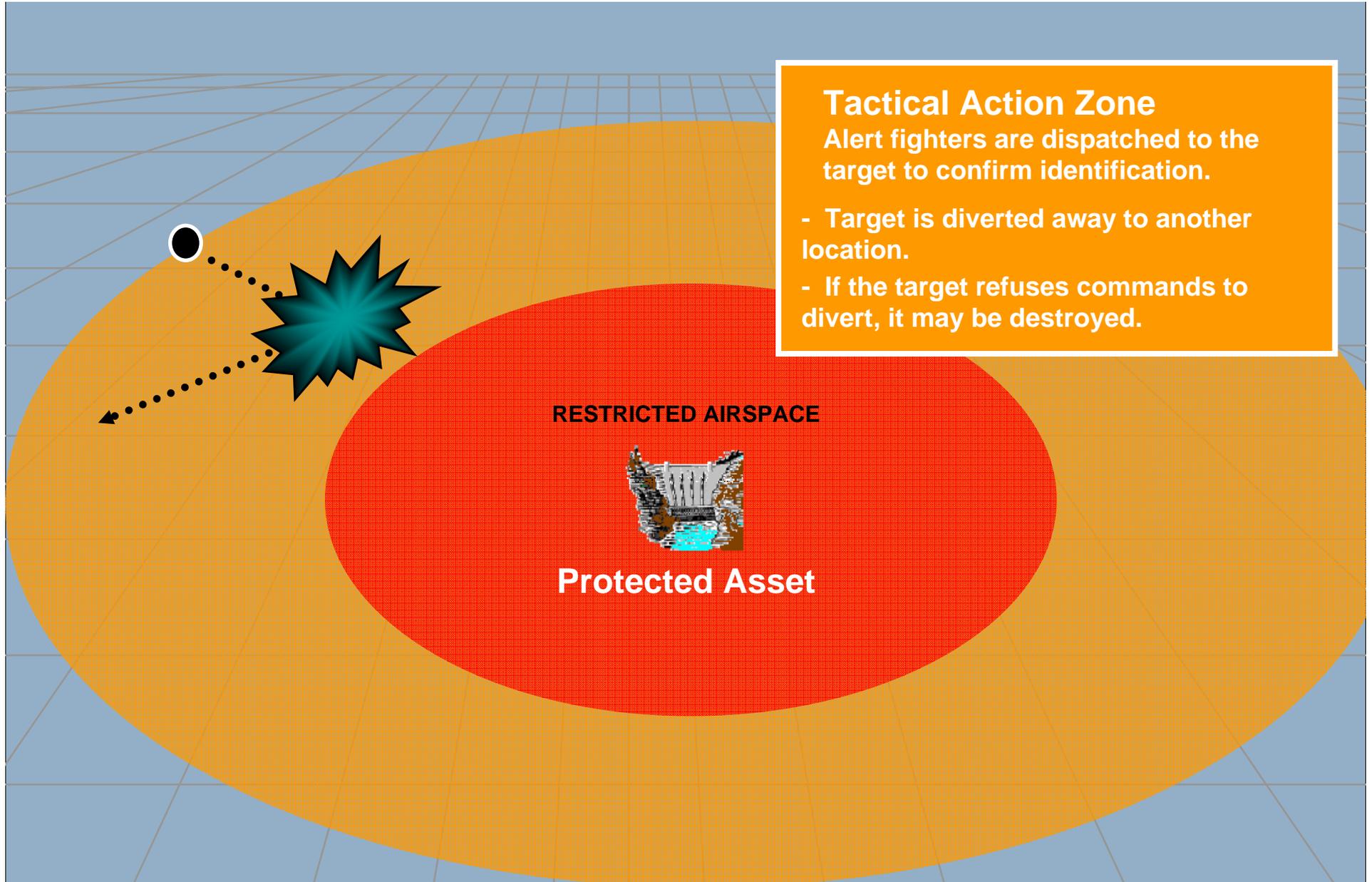
Protected Asset

UNCLASSIFIED



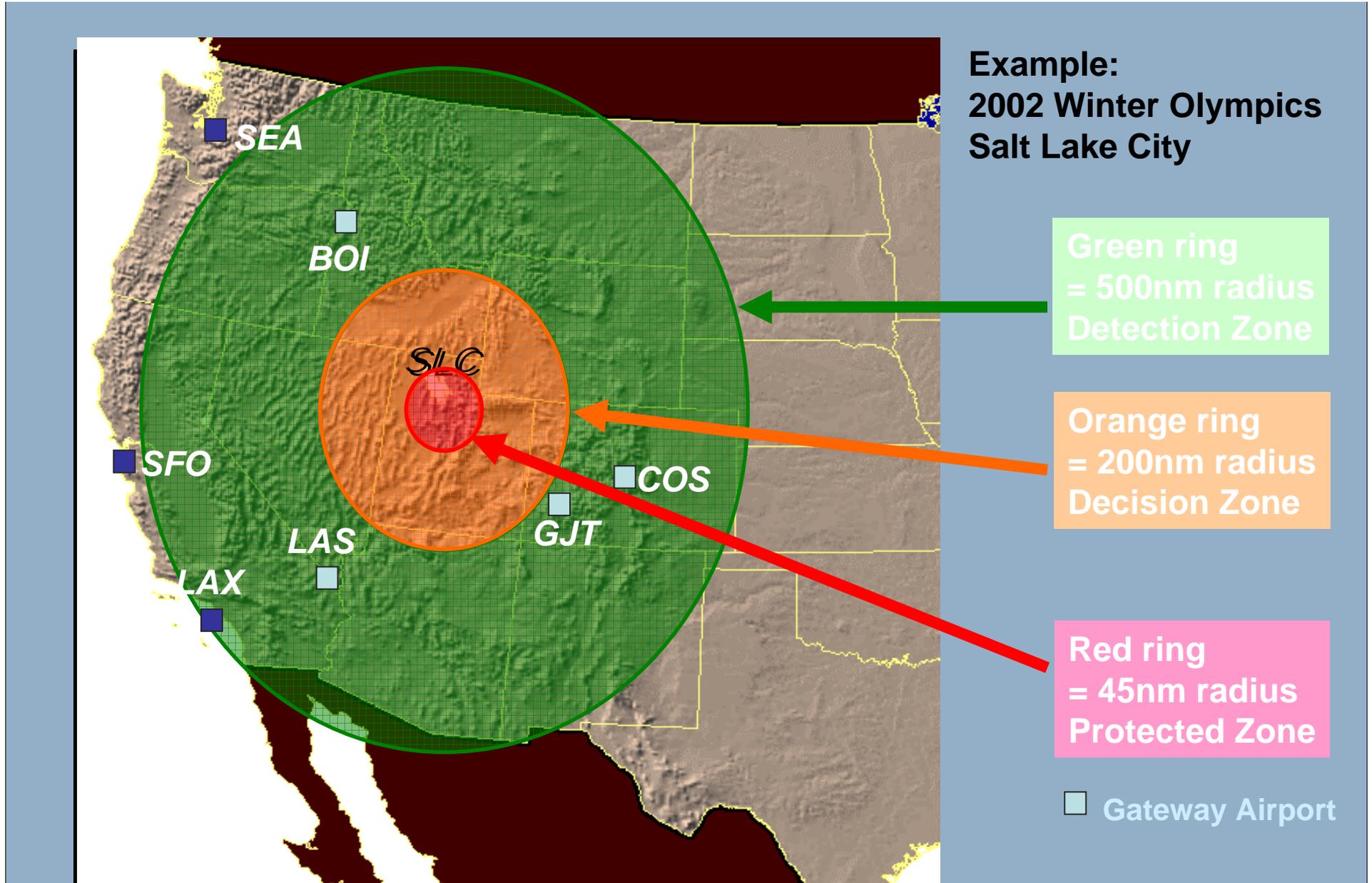


# TFR Scenario: Inbound Track



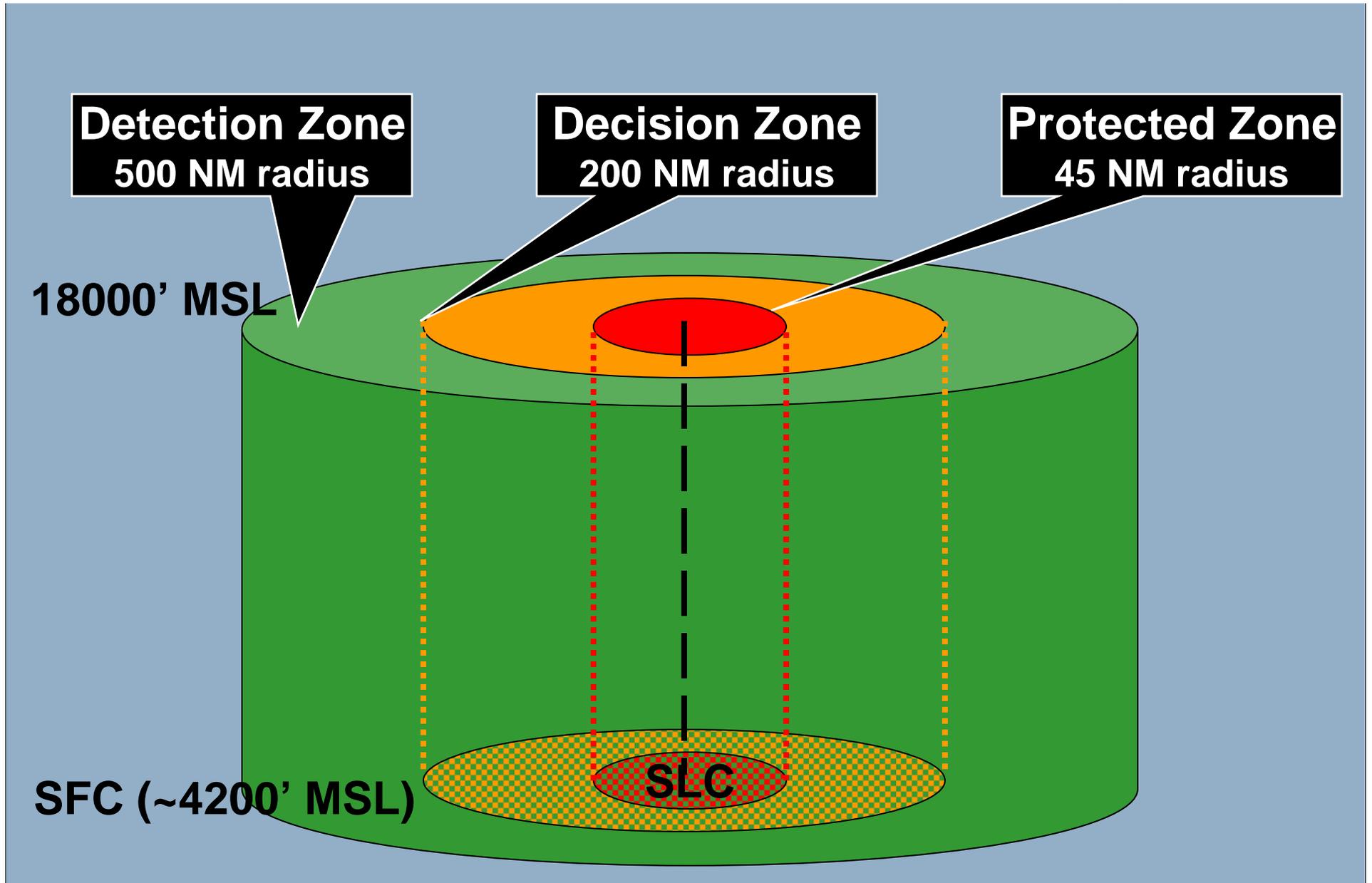


# USCS Air Security "Zones"



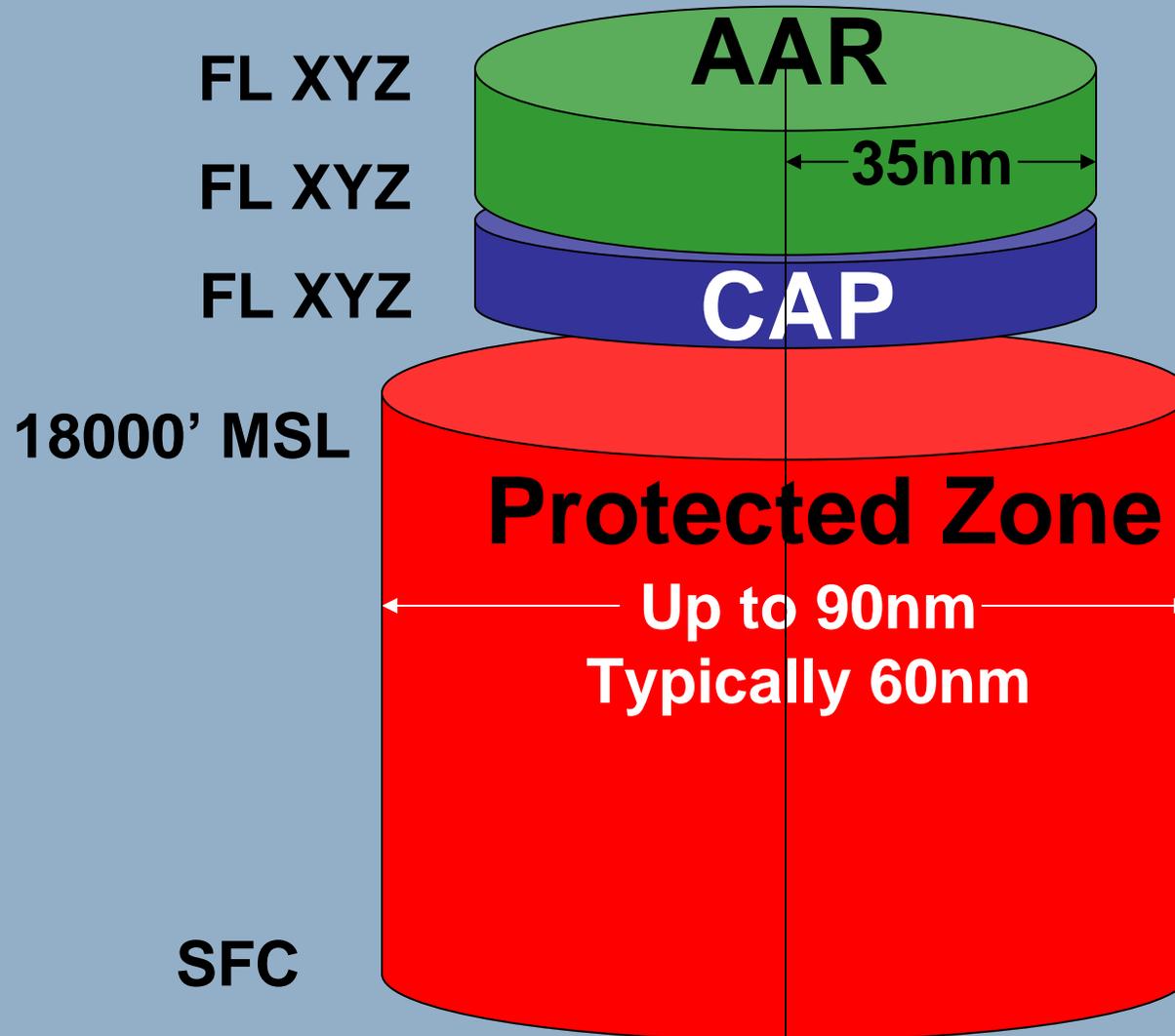


# Example: 2002 Olympics



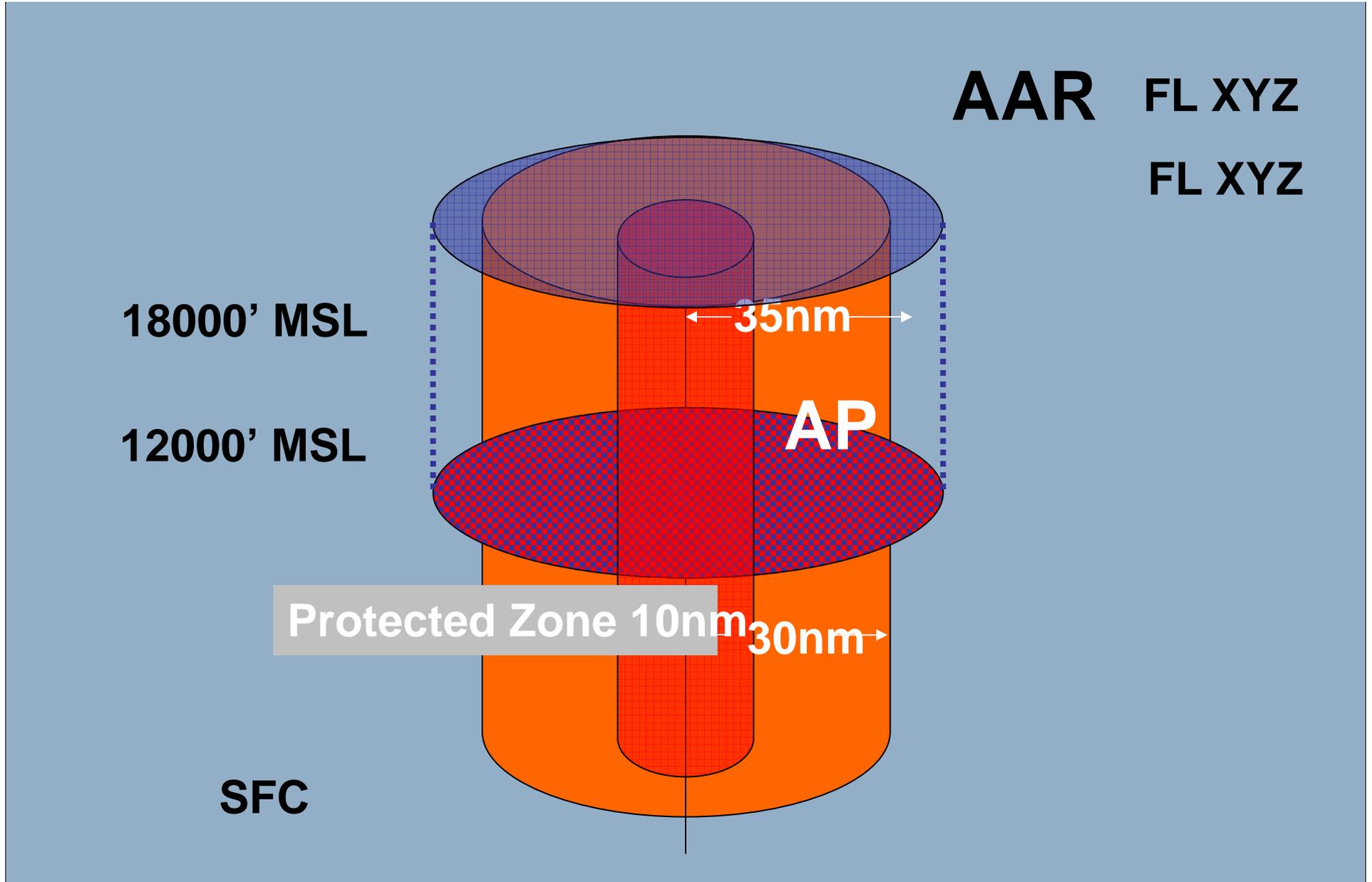


# O.N.E. City APs





# POTUS APs





# Western Air Defense Sector



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# Four Main Pieces

- Create/Maintain An Accurate Air Picture
- Develop/Execute The Initial Plan
- Place The Event In Context
- Execute and Update
- Develop/Execute The Initial Plan
- Place The Event In Context
- Execute and Update



**Desired Effect: Correct Force In Place and Time**



# Accurate Picture

Who, What, Where, Vector

BCS-F, Raw Radar, CBP, Navy,  
ARTCC/TRACON, DEN

Fragmented, Conflicting  
Information

Internal and External Comm  
Flow Critical

Must Be Right...and NOW!

Manually Build The Picture  
We...Then You, See  
Multiple TOIs Throughout  
A00: Like an 8 v X

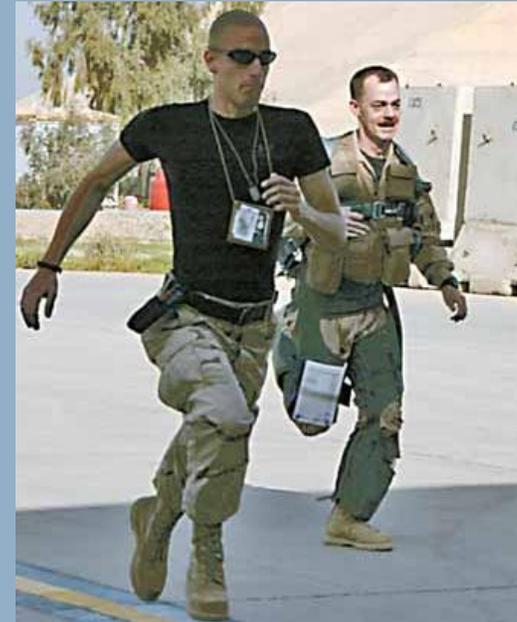


## Art and Science...Under Pressure



# Initial Plan

- Defer...Suit Up...Battle Stations...Runway Alert...Scramble...Flush...Preserve Options
- Always Incomplete/Conflicting Information
- Triggers
  - External: NI 10-15 "Unknown" Guidance
  - Internal: SPINS, AOD, TFR
  - Always: Common Sense Blending Of Both
- Primarily Sector Job with CCO Oversight



**Preserve Options...Now and Later**



# Place In Context

- Potential Consequences Drive Actions
  - Population Centers, Critical Infrastructure
  - First of Many Threats? Decoy? Cross Region/Sector?
  - Postulated Capability of TOI
- Joint Process With CCO



**Scalable Threat...Scalable Response**



# Execute and Update The Plan

- Time Available vs. Time Required
  - Fighters and Support Assets
  - Recovery/Reconstitution Effects On Capability vs. Next Threat
- Additional SA From External Sources
- Upgrade, Downgrade or Expand Actions
- Joint Iterative Process With CCO



**Time and Information Constrained, Iterative**



# Maintaining Readiness

NORAD-NORTHCOM Exercise Program  
NNCOI 10-XXX dtd Final Draft NOV 07

Overview of the exercise program, describes the principle NORAD and USNORTHCOM-sponsored exercises, and outline the process for scheduling, planning, execution and after action review of exercises. Also outlines specific tasking and responsibilities of NORAD and USNORTHCOM staff and supporting elements.



# Maintaining Readiness

## NORAD INSTRUCTION 90-3 EVALUATION OF AIR DEFENSE FORCES

“provides guidance for the evaluation of air defense forces gained by, or assigned to the Commander NORAD (CDRNORAD) “



# Maintaining Readiness

## WESTERN AIR DEFENSE SECTOR WADS INSTRUCTION 90-1 EXERCISE (SPADE) PROGRAM

COMMANDERS & SENIOR LEADERSHIP PROGRAM TO  
ASCERTAIN READINESS.

"NO-NOTICE"

3 TYPES (A, B, & C)

A- SENIOR STAFF REQUESTED-SPECIFIC  
OBJECTIVE (S)

B- INTERNAL WADS (DOV) INSPECTION OF OPS

C- FLIGHT TRAINING



# Maintaining Readiness

- CIVIL AIR PATROL CONTRIBUTION  
FELIX KEYNOTE  
FELIX SPADE  
FALCON VIRGO (NCR, SUPER BOWL, DNC,  
RNC, ETC)  
AMALGAM ARROW  
MISSION READINESS  
EXERCISE/CULMINATING TRAINING  
EVENT (MRE/CTE)  
AMALGAM MUTE



## CODE WORDS, NICKNAMES & EXERCISE TERMS

- FELIX IS WADS!
- FALCON IS OUR HIGHER HQ—AFNORTH
- AMALGAM IS NORAD-NORTHCOM
  
- KEYNOTES ARE UNIT O.N.E. FTX
- SPADES ARE WADS CC READINESS TEST
- MUTES ARE NORAD EVALUATIONS
  
- IAW NORAD & USNORTHCOM INST 33-147  
*CODE WORDS, NICKNAMES, AND EX TERMS*



# Maintaining Readiness

## FELIX SPADE TIMELINE

- MUD ON THE WALL (YEAR PLANNER-LDR GUIDANCE REQ-REVIEWED MONTHLY)
- MONTHLY SCHEDULE (INITIATED 2MONTHS OUT, FINALIZED MONTH PRIOR TO MONTH OF EXECUTION).
- TARGET INSTRUCTIONS (DRAFT 30 DAYS TO 14 DAYS PRIOR, FINALIZED 7 DAYS PRIOR)
- CONFERENCE CALL (MIN DAY PRIOR)
- DAY OF (MISSION CHECK– TGT, CUFF, FAA...)
- AFTER ACTION REVIEW



# Maintaining Readiness

## FELIX KEYNOTE (UNIT LIVE FLY EXERCISE)

FIGHTER UNIT INITIATES

WADS DO APPROVES (FELIX—PRIORITIZES  
RESOURCES)

WADS CVX ASSIGNS KEYNOTE NUMBER AND ADVISES  
UNIT POC

INITIATED 3-4 WEEKS PRIOR

DRAFT INSTRUCTION USED AS REQUEST  
CONFERENCE CALL (MIN DAY PRIOR)



# Maintaining Readiness

## AMALGAM MUTE—NORAD/NORTHCOM IG INSPECTION OF AIR DEFENSE UNITS

NOTIFICATION IS USUAL 90 TO 45 DAYS PRIOR

SCENARIOS DEVELOPED BY SECTOR, APPROVED BY  
NORAD/NORTHCOM IG

MULTIPLE AIRCRAFT—INSURANCE

UNIT LIVES WITH THE RATING TILL NEXT EVALUATION



# Conclusion

EXERCISE PROGRAM IS GROWING AND CHANGING TO MEET THE CHALLENGES OF TODAY'S WORLD.

CIVIL AIR PATROL IS A VITAL AND ACTIVE PART OF THE WESTERN AIR DEFENSE SECTOR'S READINESS PROGRAM.



# MUD ON THE WALL

		1st Qtr FY 08			2nd Qtr FY 08	
1	Det 1 144 (KRIY) AFE 14 May 08 HIJACK & CD Mission Ready		FS 08-4 & 5 Type C (DOCT) 1 & 2 Nov Crew 4 Multiple CD /AWACS will play; CHX VOC due to fires.		FS 08-11 Type B (DOV) 9 Jan Crew 2	
2	140 (KBKF) AFE Sept 07 (Sat) Multi tgt Hijack & IFE			Type B (DOV) Super SPADE FS 08-9 12 Dec Crew 3//CNX by VOC Unit pilots are deployed stand ins are pulling duty. VOC cvx move SPADE to Jan 08		
3	142 (KPDJ) AFE March 07 (Outstanding) UNK with AWACS spt	Type C (DOCT) Super SPADE FS 08-1 Crew 1 11 Oct 07 Scenario UNK & TFR violator				FS 08-14 Type B (DOV)
4	144 (KFAT) AFE March 07 (Excellent) TEBBOB	FS 08-3 & 3b Type A (TAN-R & DOCT) Crew 2 29 & 30 Oct 07 Multiple TFR Violators			Type C (DOCT) Super SPADE FS 08- 12 22 Jan Crew 2	
5	138FW (KEFD) Det 1 138FW AFE FEB 08 (Not Graded) Multiple	Type C (DOCT) Super SPADE FS 08-2 Crew 1 11 Oct 07 Scenario CD & IFE			Type A (IAF SAY changed will inspect new unit later in the year) Super SPADE FS 08-13 22 Jan Crew 2 X-Flight	Type A (IAF SAY) 23 Feb SPADE to be conducted 1 & 10W 23 Nov Home.
6	148 (KDLH) AFE Jan 07 (Excellent) Hijack & Stolen A/c		FS 08-7 Type C (DOCT) 21 NOV Crew 2 Threatening A/c & Hijack		12 Month AFE	FS 08-15 Coordinate with their MSN mission and can be executed simulta Minneapolis as the targ of the
7	159 (KMBG) AFE April 08 (Mission Ready) Hijack & IFE	12 Month AFE	14 NOV 07 FS 08-6 Type C Crew 4 UNK & Multiple TFR violators	11 Dec FS 08-8 Type A		FS 08-124 Jan 08 Speci Memo moved to 1 Feb
8	162 (KDMA) AFE Aug 07 (Excellent) UNK & Derlicit			Type B (DOV) Super SPADE FS 08-10 12 Dec Crew 3		
9	WADS AFE 14 May 08 Multi tgt/ Hijack-Narco terrorist Mission Ready				12 Month AFE	
10		Amalgam Arrow 08-1 (CPX) Vigilant	AA (FTX) 16 Nov Super Bowl Prep	AA (CPX) 13 DEC	AA 08-4 (CPX) 18 Jan 07	AA Canada vic Vancou



# SPADE SCHEDULE

DATE:	8 JULY 08	15 JULY 08	15 JULY 08	24 July 08
NUMBER:	FS 08-27	*FS 08-28	*FS 08-29	FS 08-30
IP:	TBD (AM)	TBD	TBD	TBD
AIRSPACE	W237 (A,B,C,D,E,F, & H) OLYMPIC (A,B)	DOMESTIC	DOMESTIC	DOMESTIC
AREA ALT	FL 250 TO FL 310	N/A	N/A	N/A
AREA TIME	AM (TBD)	N/A	N/A	N/A
FTRBASE:	142FW (KPDXX)	138FW (KEFD)	148FW (KDLH)	140FW (KBKY)
TGT ALT:	IFR	IFR	VFR	VFR
TGT ACFT:	C-17 (?)	C21	MN CAP	CO CAP
DEP BASE:	KTCM	TBD	TBD	TBD
SCENARIO	DANGEROUS MILITARY AIRCRAFT (DMA)	HJACK	RNC Prep (TFR Violators)	DNC Prep (TFR Violators)
CONTROL/ATC	ZSE	ZHU	ZMP-TRACON	ZDV-TRACON
PTC CODE:	TBP	TBP	TBP	TBP
WADS OPS CREW	X(2)	E(4)	E(4)	G(1)
Site	J-80	J-14	J-60	GJT
TYPE SPADE	A SUPPORT TO 1AFSAV	A	A PREP RNC	A PREP DNC
TGTPOC	62 <sup>ND</sup> AW GUS BUSH	200AS Major Campbell DSN 834-8538	CAP NOC Sandi Gaines 1-888-211-1812 x312	CAP NOC Sandi Gaines 1-888-211-1812 x312
PRE-SPADE CONF CALL INFO	7 JULY 08 1700Z	14 JULY 08 1700Z	14 JULY 08 1800Z	23 JULY 08 1700Z
EX DIRECTOR	LtCol Carpenter	LtCol Carpenter	LtCol Carpenter	LtCol Carpenter
AWACS/NAVY Link	TBD	TBD	TBD	TBD
ABM	Capt Hale	TBD	TBD	Capt Hale



# SPADE TARGET INSTRUCTION



**FINAL  
TARGET INSTRUCTION  
"TRUSTED AGENT EYES ONLY"**  
FELIX SPADE 08-20  
(148FW)



## MISSION DETAILS:

1. **EXECUTION DATE:** 1 April 2008.
2. **IP Time:** Target 1 & 2 1645Z (0945P CAP A/C) / Target 3—1700Z (1000P( C-130) // Target 4—1830Z (1330P (C-21)).
3. **SCENARIO:** Multiple targets separated by time and location.

Target 1 & 2: MN CAP simulates TFR violators. An immediate and short term TFR is established at Duluth International (KDLH) due to emergency landing of AF A. An unknown medical emergency occurred. The on board medical expert recommended immediate landing. KDLH is selected and aircraft lands; prior to landing the FAA establishes a TFR (10 mile radius around KDLH). CAP aircraft enroute fly thru the TFR. They are intercepted by alert fighters and escorted out of the TFR.

Target 3: USAF C-130 (GOFER\_\_) simulates a L-100 (Felix Load 235) transporting cargo from Iqaluit to Winnipeg Canada. Cargo is believed to be "tons" of paper flyers and streamers. Canadian authorities provided information the plane was going to Winnipeg to protest Canadian government initiatives to tax resources found in the new Nunavut Territory. After AF A lands at Duluth communications with Felix Load 235 indicate intent to "Greet" this aircraft on the ground at Duluth. Nav Canada is no longer communicating with the aircraft and a deviation is noted (WADS divert alert fighters already airborne to intercept and identify). Once an intercept is completed, pilot says he is private cargo carrier, Felix Load 235, a Lockheed Martin L-100 enroute from Iqaluit to Winnipeg. He explains his cargo broke loose and damaged navigation, communications and electrical systems. His deviation was a result of the cargo shift. He was unable to communicate until fighters intercepted and were visible. His desires are to turn and continue his flight to Winnipeg. Nav Canada requests the



# FELIX KEYNOTE CHECKLIST

*Felix Keynote:* Western Air Defense (WADS) sponsored Unit Field Training Exercise (FTX (live-fly)) Reference NNCI 33-147, dtd June 2007.

This attachment is to be used to facilitate coordination between Felix Keynote participants.

Felix Keynotes are unit exercises. The unit initiates, coordinates, and executes the exercise. WADS sponsors the exercise and may provide support in the prioritization of WADS resources, planning, coordination, and execution of the exercise.

- Unit determines training objective, dates, location, and participants.
- No earlier than four and no later than three weeks prior to the exercise Unit Point of Contact (POC) contacts WADS DOSA and requests WADS sponsorship/support.
- Units provide draft exercise instructions to WADS DOSA for coordination inside WADS and to CAP National Operations Center for mission approval, funding, and comment 3-4 weeks prior to the exercise date.
- WADS DOSA requests approval to support exercise request. Upon approval a Felix Keynote (FK) number (08-xx) is assigned by DOAS. The mission is then added to the WADS flying schedule.
- Felix Keynote numbers will be used in the header of all exercise information e.g. Special instructions (Spins)/Target instructions. This informs personnel reading the instruction that this live-fly mission is being sponsored by WADS.
- Upon request WADS CVXL will assist the unit in the design and coordination of the exercise, time permitting.



# FELIX KEYNOTE CHECKLIST (CONT.)

- No earlier than four and no later than three weeks prior to the exercise Unit Point of Contact (POC) contacts WADS DOSA and requests WADS sponsorship/support.
- Units provide draft exercise instructions to WADS DOSA for coordination inside WADS and to CAP National Operations Center for mission approval, funding, and comment 3-4 weeks prior to the exercise date.
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- Upon request WADS CVXL will assist the unit in the design and coordination of the exercise, time permitting.
- DOSA provides the draft unit instruction to WADS Operations leadership for review.
- CAP NOC will approve/disapprove the mission. If approved CAP NOC will provide State CAP POC for the mission.
- 1AF CAP LNO reviews the draft/request for support and provides comments as required.
- State POC provides aircraft information via CAP system to supported unit, 1AF, and CAP NOC.
- 1AF CAP LNO ensures CAP aircraft are listed on the appropriate ATO at CONR.
- No later than seven days prior to the exercise the Unit POC distributes final exercise instructions.
- No later than the day prior to the exercise the Unit POC will host a teleconference with all participants to review the exercise instruction. Minimum participants at the tel con should be Unit POC, WADS SD, and Tgt POC (State CAP Mission Coordinator or representative). Request POC call WADS (DSN 382-4313/Comm 253-982-4311 and provide telcon number to WADS; on duty WADS SD will insure a representative joins the tel con.
- Unit POC contact WADS Ops (DSN 382-4313) 30 min prior to execution for final coordination (weather & maintenance check). If cnx or postponement is required Unit POCs contacts CAP and all other participants. If CNX notify WADS DOSA.
- At the conclusion of the exercise, participants will provide After Action Review comments to be used by Unit POC for debriefing and "lessons learned" recording.