



# The Washington Guard Response Plan for the CSZ Rupture

Brief to HLS 2

14 May 2015

Port Angeles, WA

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# Purpose

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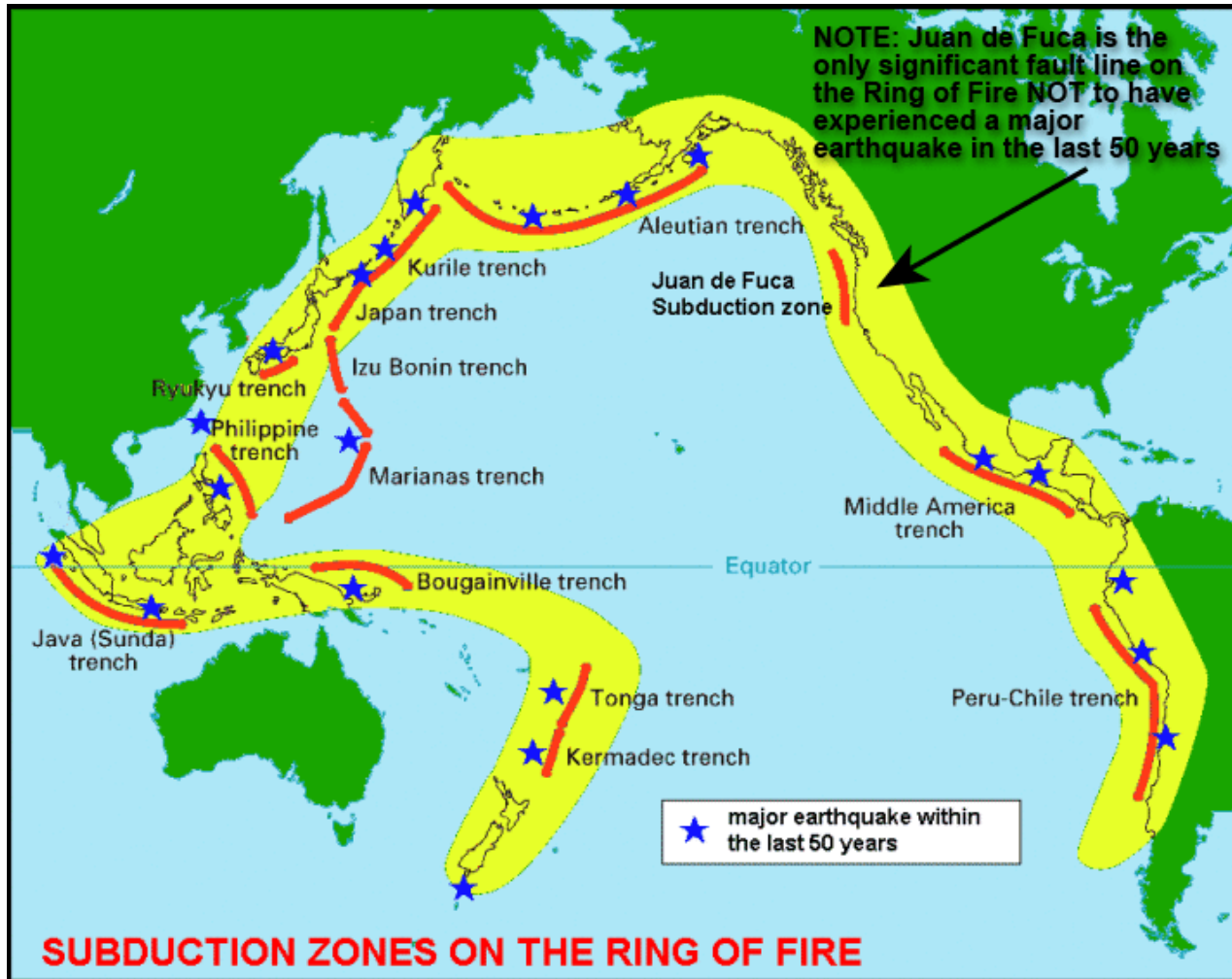
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- To provide an overview of ongoing planning and exercise efforts of the Washington National Guard to the Homeland Security Regions.
- To gain support for increased planning effort in Washington, IOT increase coordination effort for a realistic response.



# The Threat

# Ring of Fire



The Ring of Fire accounts for 90% of all earthquakes, and 81% of the world's largest earthquakes

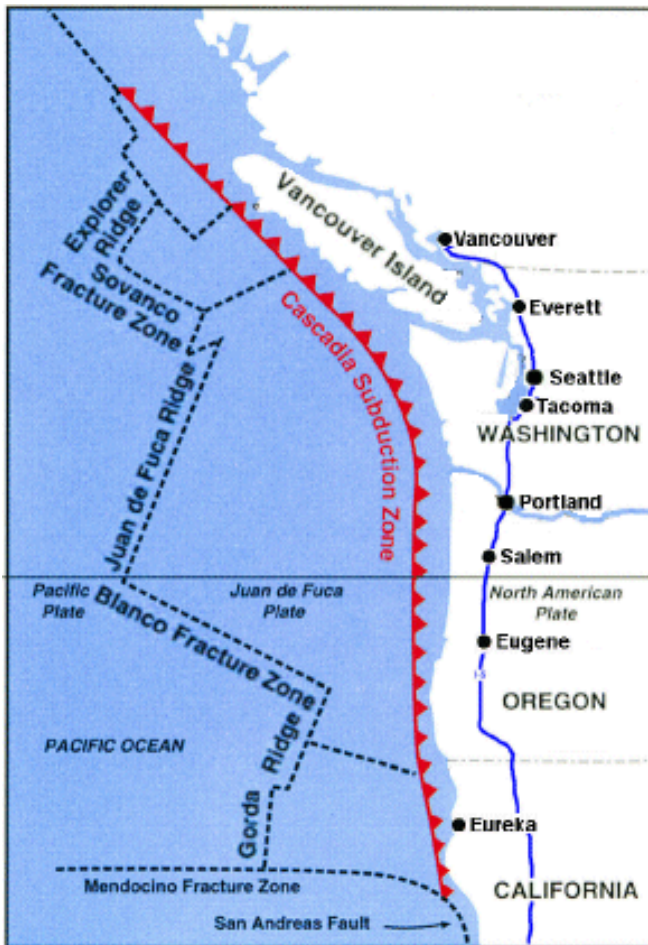
Subduction zones are shown in red

The CSZ fault line is part of the Ring of Fire

The CSZ is the only significant fault line on the Ring of Fire without a major quake in the last 50 years (see blue stars)



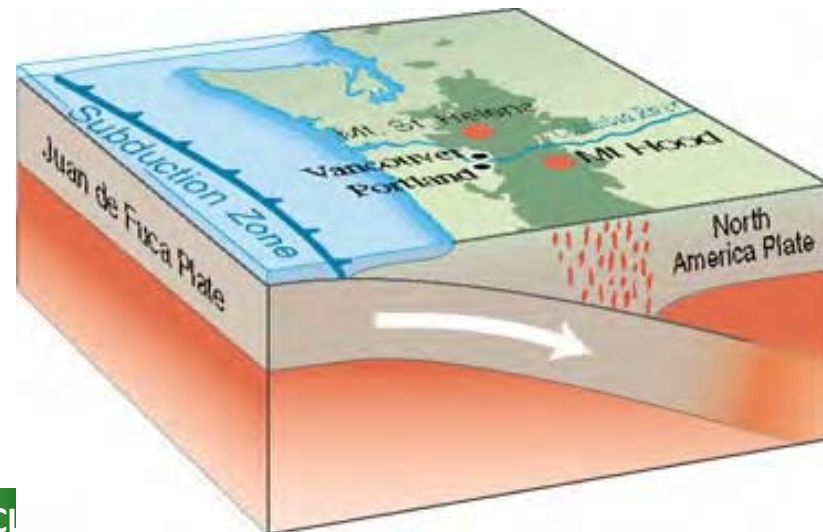
# Cascadia Subduction Zone



The CSZ runs 800 miles from Southern British Columbia to Northern California, and lies 50 to 80 miles off the Pacific Coast

The heavy Juan de Fuca plate is sliding under the lighter North American plate

A magnitude 9.0 CSZ earthquake has occurred every 300 to 500 years (USGS – 400-600 years). The last CSZ earthquake occurred in the year 1700 (January 26).





# FEMA & HITRAC Modeling

- FEMA commissioned a multi year \*HITRAC study and produced the Region X Response Plan (Published December 2013)

- Modeling Factors

- February 6, 9:41am PST, weekday
- Complete rupture of the CSZ fault line
- Epicenter 60 miles off Oregon coast, 120 miles West of Eugene
- M9.0 earthquake, with ground shaking up to 5 minutes
- Tsunami wave heights 20 to 80 feet
- Aftershocks of M7.0 or greater
- Additional tsunamis caused by aftershocks

The HITRAC study modeling stops at the Cascade Crest. There are no modeled effects for East of the Cascades.

Note: Damage caused by aftershocks, follow on tsunamis, and secondary effects is not included in damage estimates. Model ran a data set that was the best available in Oct 2012

\***HITRAC** – Homeland Infrastructure Threat and Risk Analysis Center, the Department of Homeland Security (DHS) Infrastructure-intelligence fusion center.



# Secondary Effects

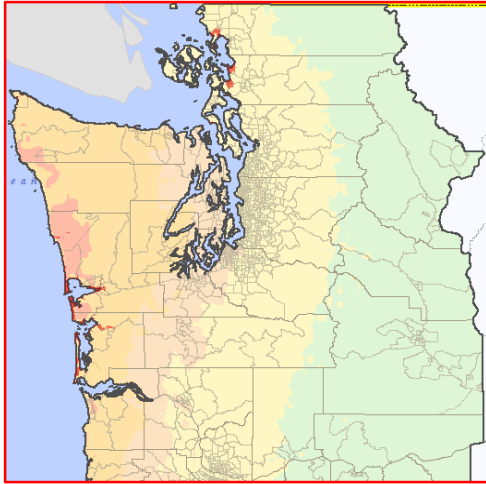
- Landslides & Avalanches
- Gas leaks
- Fires
- Flooding
- Hazardous materials releases
- Low level contamination in inundation area
- Lack of food, water, etc.
- Disease

Note: FEMA modeling data (HITRAC study) does not include deaths or injuries from secondary effects

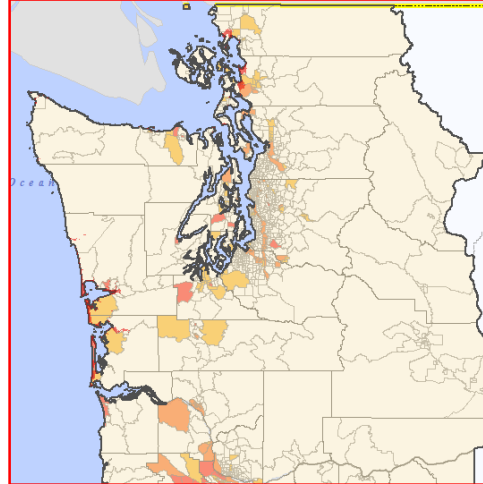


# Ground Shaking Effects

## Mercalli Index



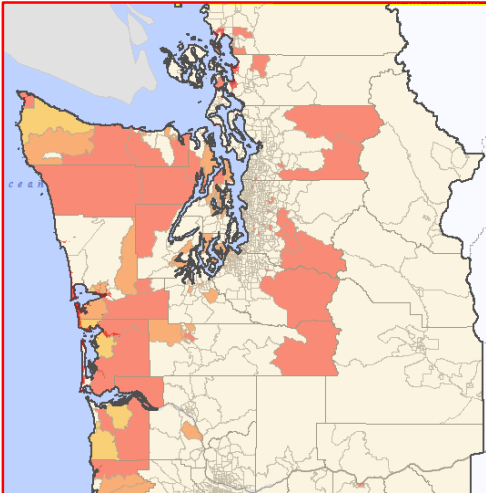
## Liquefaction



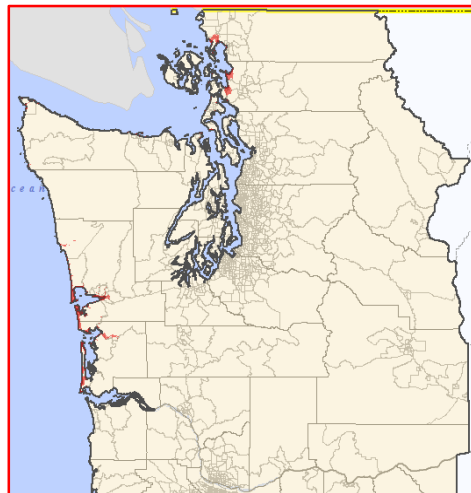
**Mercalli Index:** Ground shaking will depend on the actual fault rupture method and can not be accurately forecast. It is anticipated that the fault will rupture along its entire 700 mile length resulting in a magnitude 9.0 earthquake that will last 3-5 minutes. The intensity of the shaking will decrease with distance from the fault. Even so, Seattle is expected to experience a 7.0 magnitude or higher earthquake with 5 minutes of shaking.

**Liquefaction:** The cause of some of the most dramatic damage resulting from an earthquake, liquefaction areas can be accurately forecast based on soil types and water content. Some of the most susceptible areas are areas that have a high commercial potentiality, i.e. ports, bridges, commercial areas.

## Landslides



## Tsunami



**Landslides:** Landslides will occur up to hundreds of miles from the fault due to the intensity of the shaking. Landslide potential significantly increases with water content. If the CSZ rupture occurs during the rainy season, landslides will be most prolific.

**Tsunami Inundation:** Tsunami's are historically the biggest killer associated with earthquakes. The residents most affected are along Pacific Coastal areas. The numbers in jeopardy will increase sharply in summer months. Current estimates place as many as 50,000 residents in the hazard zone in February.

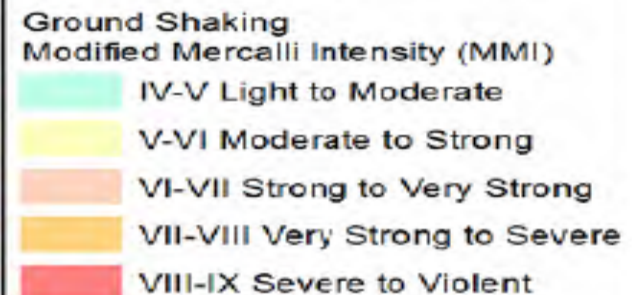


# Ground Shaking (MMI)

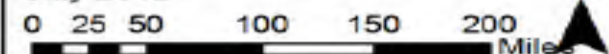
Ground shaking is most extreme on the coast (very strong to violent).

Ground shaking in the I-5 corridor is moderate to very strong.

Ground shaking in the Cascade foothills is light to moderate.



Created by FEMA Region X  
July 2012





# 1<sup>st</sup> Order Effects - Shaking



- Landslides, bridge damage, buildings unsafe



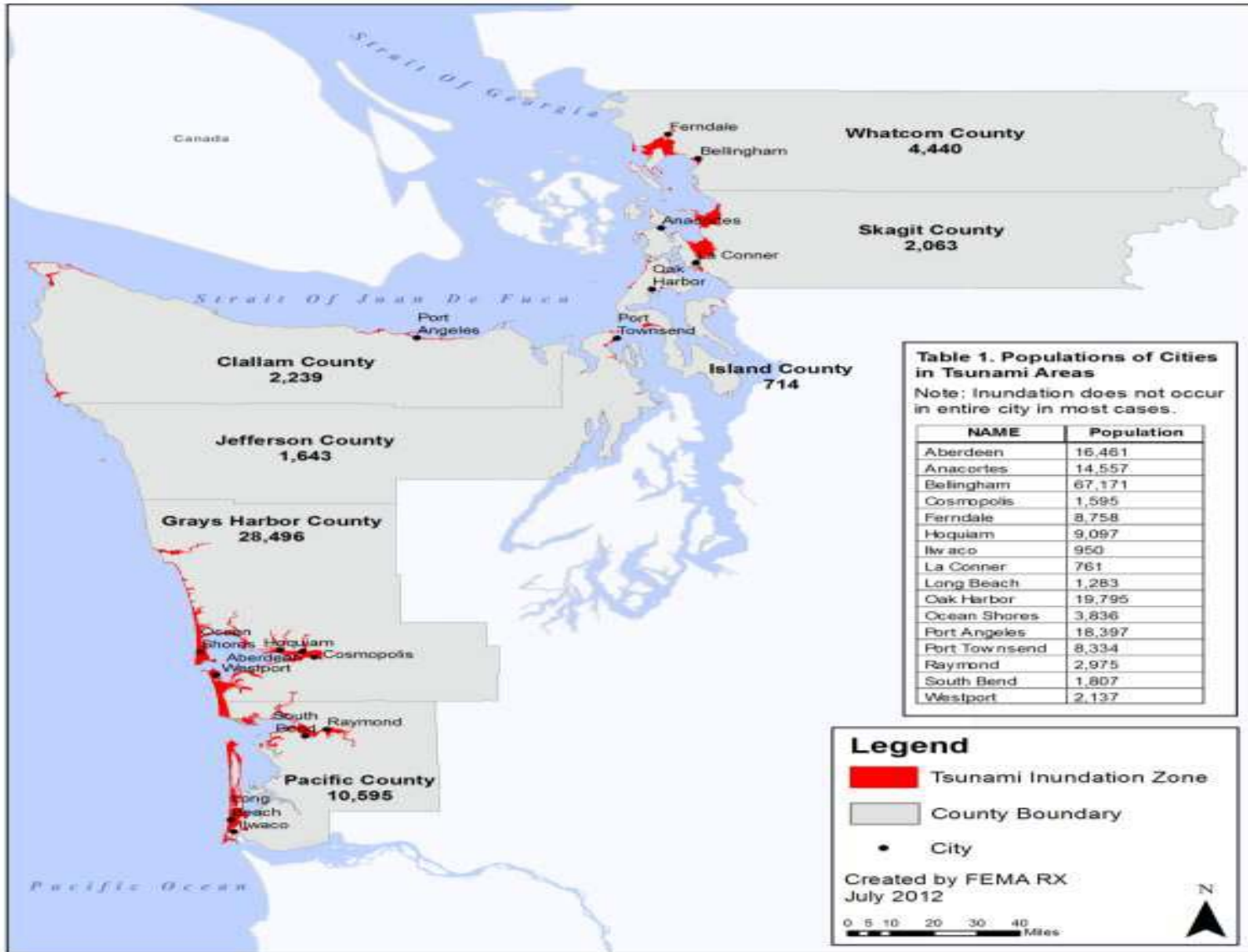
# 1<sup>st</sup> Order Effects - Liquefaction



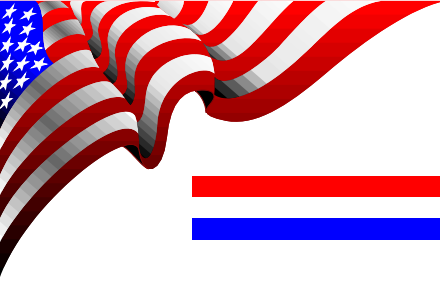
Structure collapse, damage to utilities, silting



# Tsunami Inundation Areas



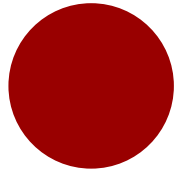
# 1<sup>st</sup> Order Effects - Tsunami



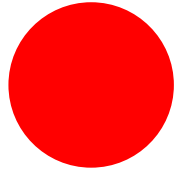
- High mortality rates, communities devastated



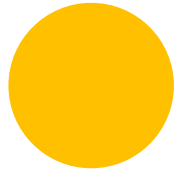
# Legend



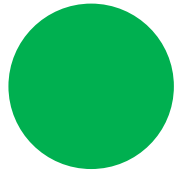
- Complete = Totally Destroyed.



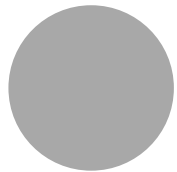
- Severe = Severely Damaged – Not Useable



- Moderate = Moderately Damaged – 50% Capacity



- Slight = Slightly Damaged – Useable



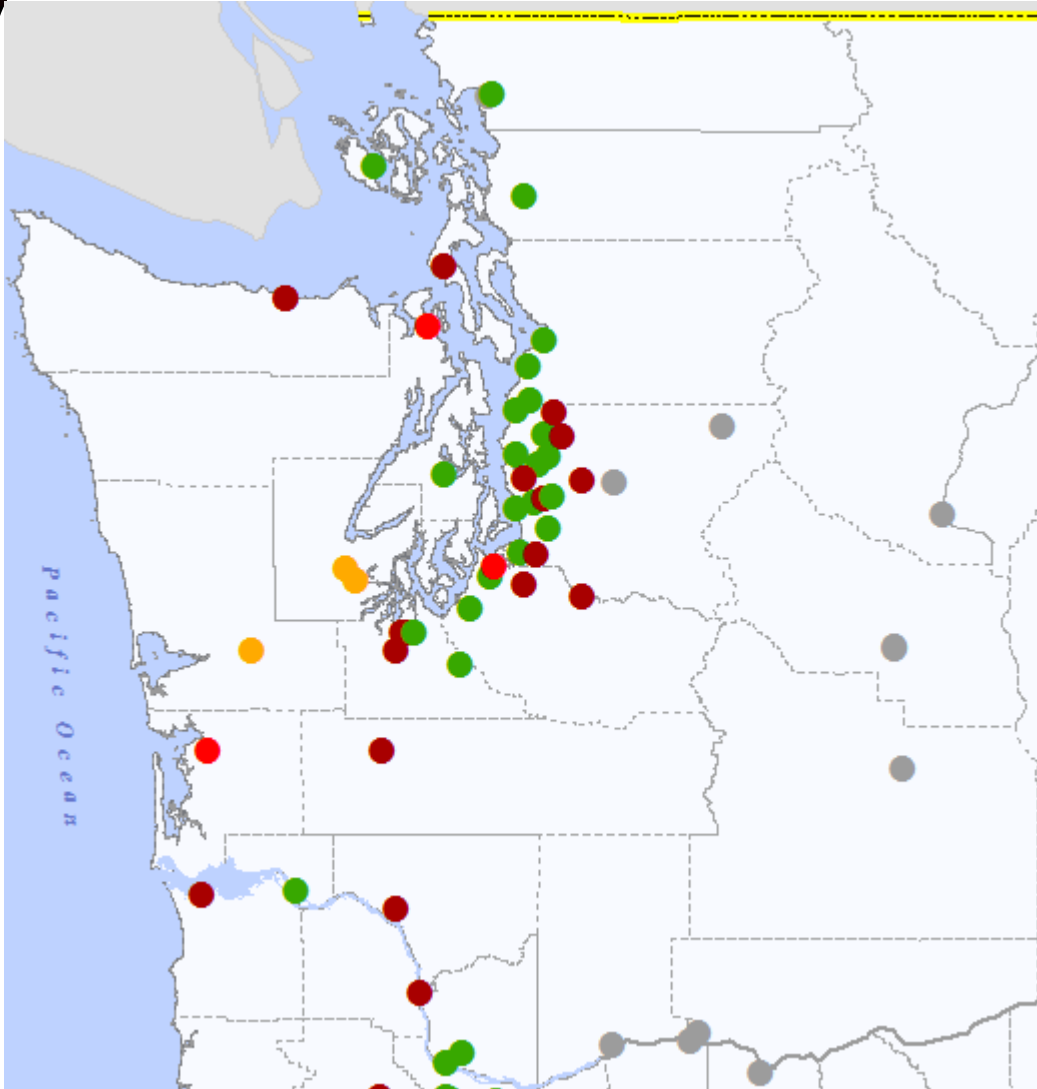
- None = Not Damaged

The HITRAC study is designed and intended to be **REPRESENTATIVE** not **PREDICTIVE**.

Interpretation of HITRAC symbols associated with CSZ effects to Critical Infrastructure and Key Resources (CIKR), as interpreted by WA NG Joint Planning Team.



# Emergency Ops Centers



These are general locations and forecast status of the known City, County and State EOCs.

There are 48 EOCs.

30% are completely destroyed, and 7% suffer severe damage and are unusable.

Result is 37% must devolve.

7% suffer moderate damage and may be partially usable, may devolve.

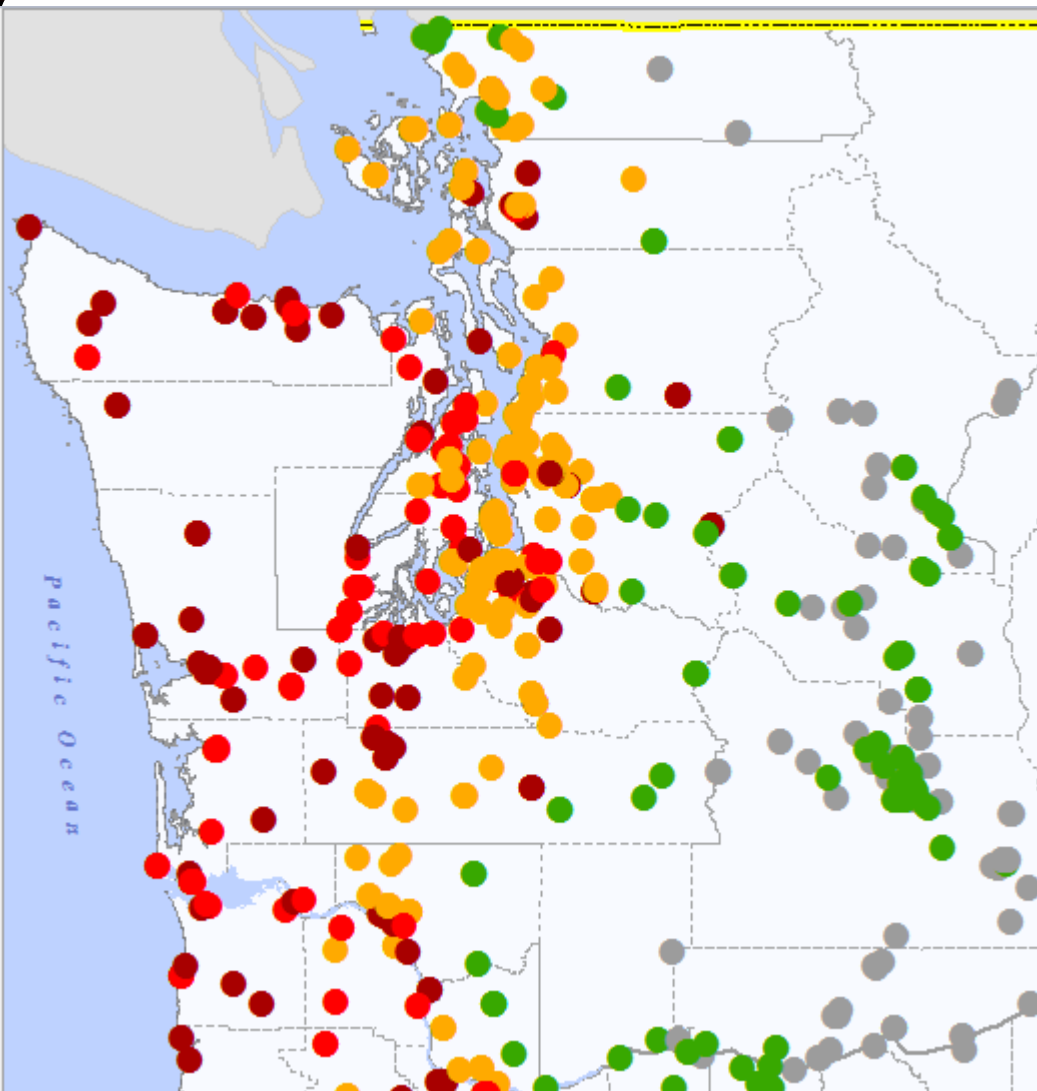
50% suffer slight damage, 6% suffer no damage.

56% are able to continue operations with minimal interruption.

State EOC sustains slight damage.



# Communication Facilities



This slide represents the number of communications facilities in the affected area as of the time of the creation of the FEMA analysis.

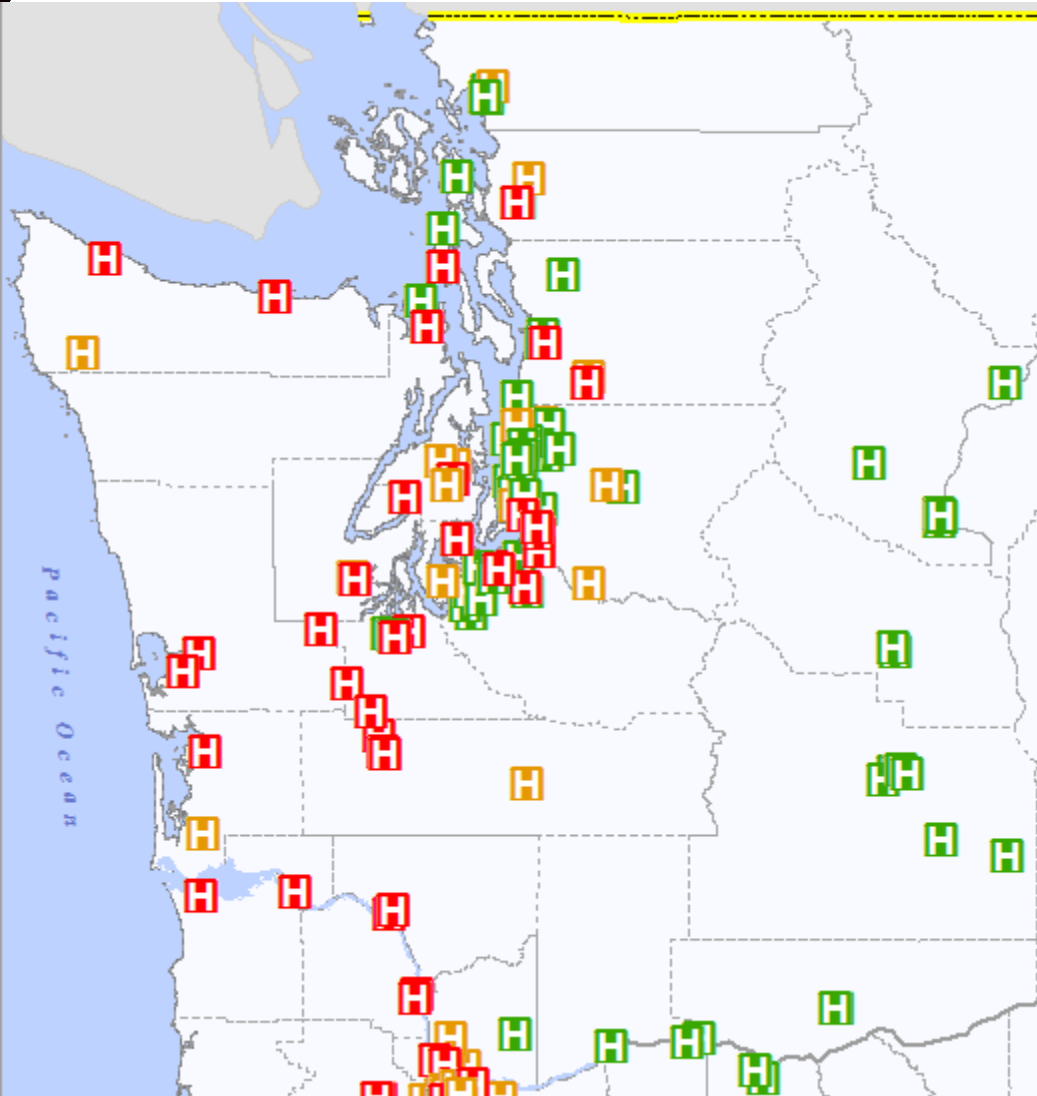
There are approximately 53 AM Broadcast Stations, 42 FM Broadcast Stations, 15 TV Broadcast Stations, 1 Internet Exchange Point, and 171 Cellular Towers.

In general terms the communications infrastructure suffers damage commensurate with the significance of the MMI index. Although the communication infrastructure is ultimately dependant upon electrical power and may be unavailable after the CSZ for an extended period in the entire region, and for even longer periods in the areas of greatest damage, due to the inability to repair and sustain these facilities.

These factors will greatly affect mass communications ability. Additionally, this slide shows cell towers, but does not account for the cellular control facilities and/or switchboards. Those facilities are presumably much more difficult to repair or replace than a cellular tower.



# Hospitals



These are general locations and forecast status of the known Hospitals.

There are 112 Hospitals in the affected area.

36% suffer severe damage, are unusable, and will likely be completely offline.

17% suffer moderate damage and are only assumed capable of 50% normal capacity.

**Total reduction is assumed to be 45% of total hospital capacity.**

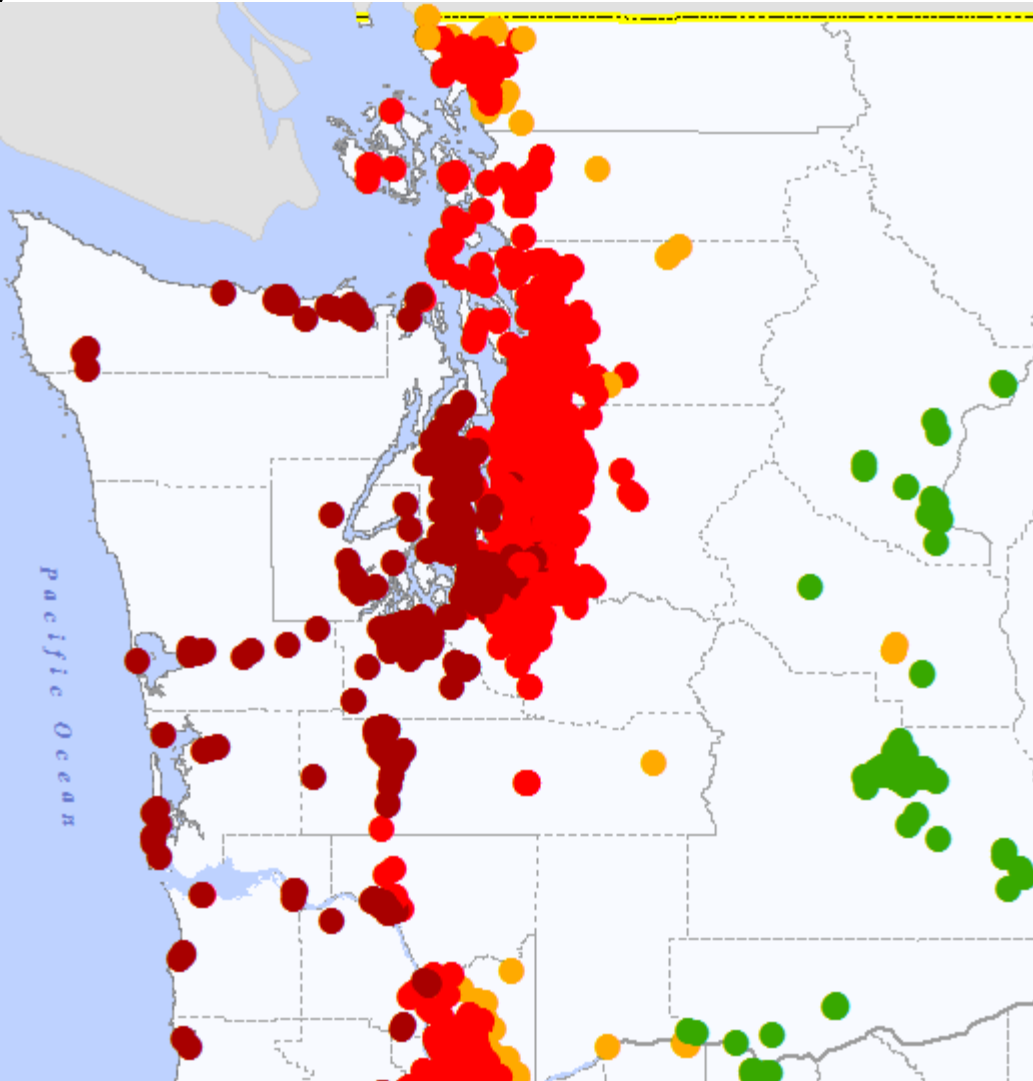
47% suffer slight damage and are able to continue to operate at capacity.

The facilities nearer to the epicenter suffer most significant damage resulting in **virtually no Hospital capacity west of the I5 corridor.**

These numbers discuss **STRUCTURAL** capacity, not patient capacity, which is further reduced due to lack of electricity, potable water, sanitation, etc.



# Senior Living Facilities



There are approximately 2,156 senior living facilities in the affected area.

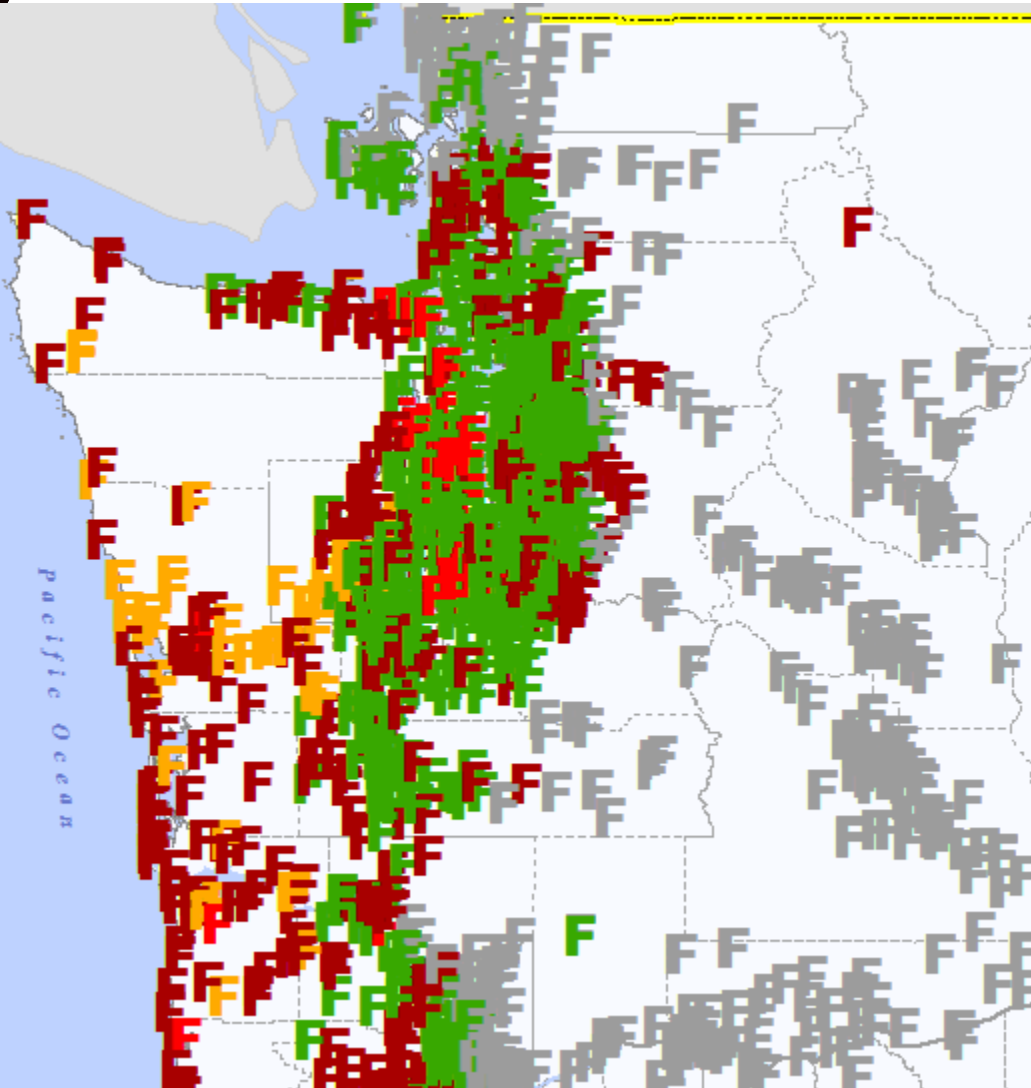
Significant numbers (approaching 100%) of facilities West of the I-5 corridor suffer extensive damage, and are likely unusable.

The vast majority of facilities along the I-5 corridor suffer complete to severe damage and are likely unusable, or are significantly degraded.

The facilities nearest the epicenter suffer most significant damage resulting in **virtually no senior living facility capacity West of the I-5 corridor.**



# Fire Stations



These are general locations and forecast status of the known Fire Stations.

There are 971 Fire Stations in the affected area.

30% suffer severe damage, are unusable, and are planned to be completely offline.

6% suffer moderate damage and are only assumed capable of 50% normal capacity.

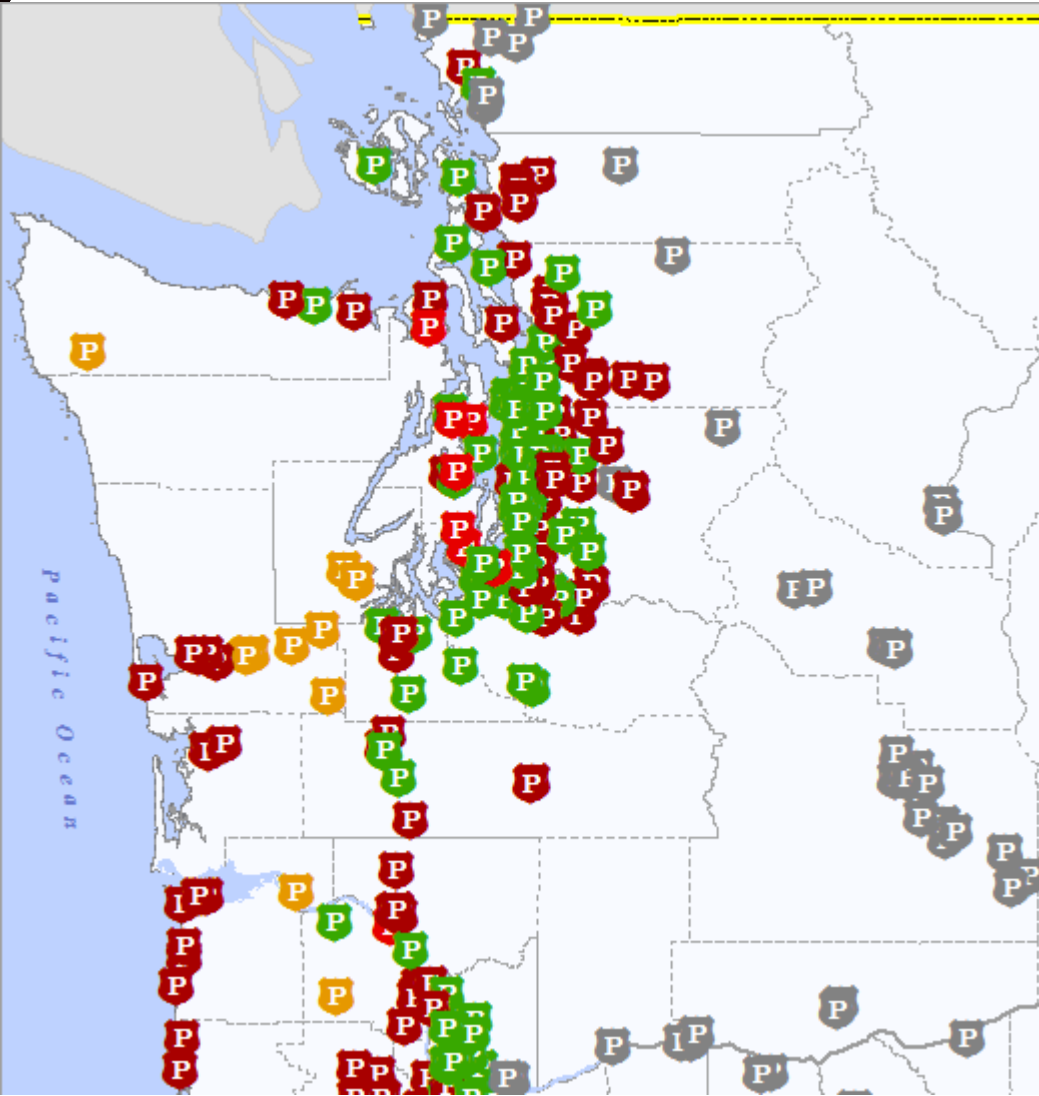
**Total reduction is assumed to be 33% of Fire Response capability.**

64% suffer slight or no damage and are able to continue to operate at capacity.

The facilities nearer to the epicenter suffer most significant damage resulting in **significantly reduced capability west of Shelton.**



# Police Stations



These are general locations and forecast status of the known Police Stations.

There are 178 Police Stations in the affected area.

41% are completely destroyed, 7% suffer severe damage, are unusable, and are planned to be completely offline.

5% suffer moderate damage and are only assumed capable of 50% normal capacity.

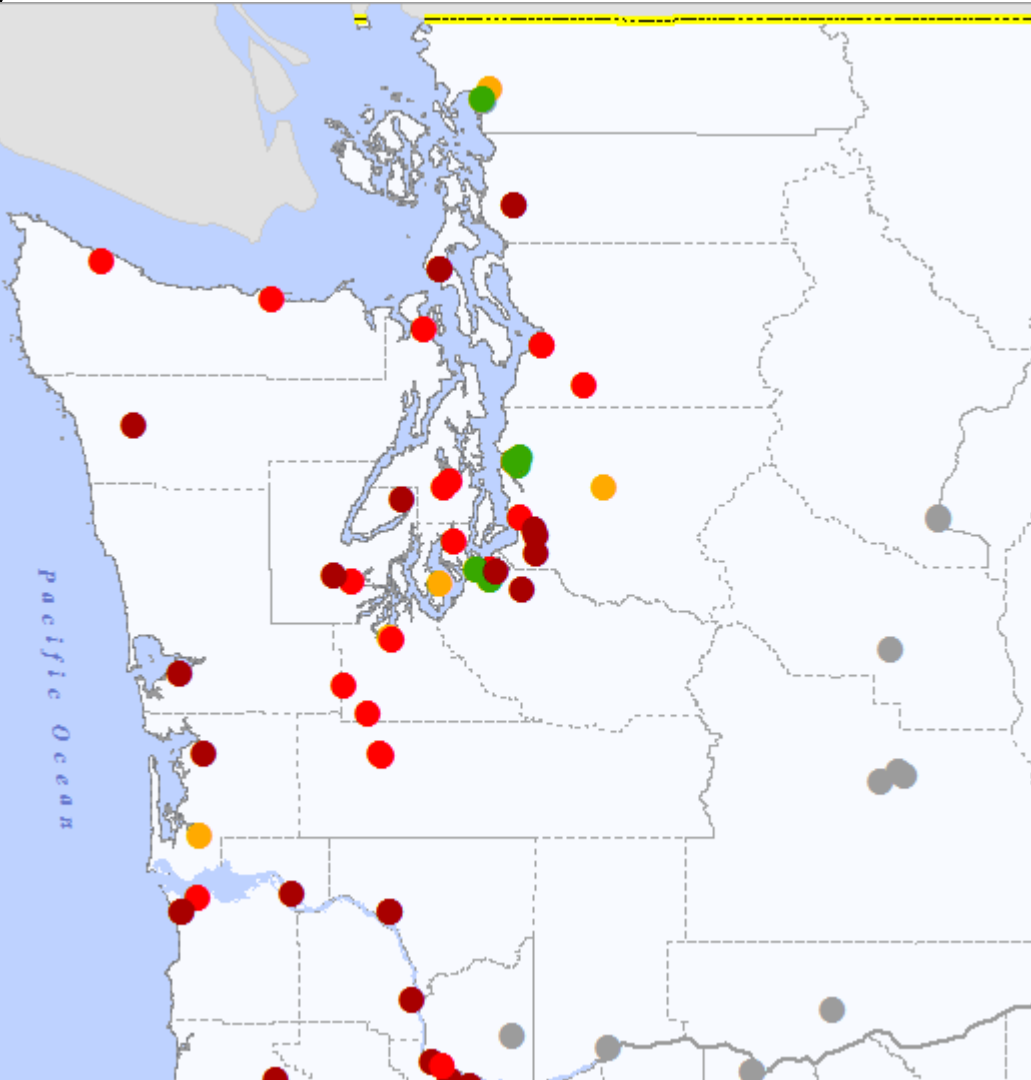
**Total reduction is assumed to be 51% of Police Response capability.**

48% suffer slight or no damage and are able to continue to operate at capacity.

The facilities nearer to the epicenter suffer most significant damage resulting in **significant degradation of Law Enforcement capability west of Shelton.**



# Correctional Facilities



There are approximately 48 facilities in the affected area.

71% of correctional facilities suffer complete or severe damage, and are likely unusable.

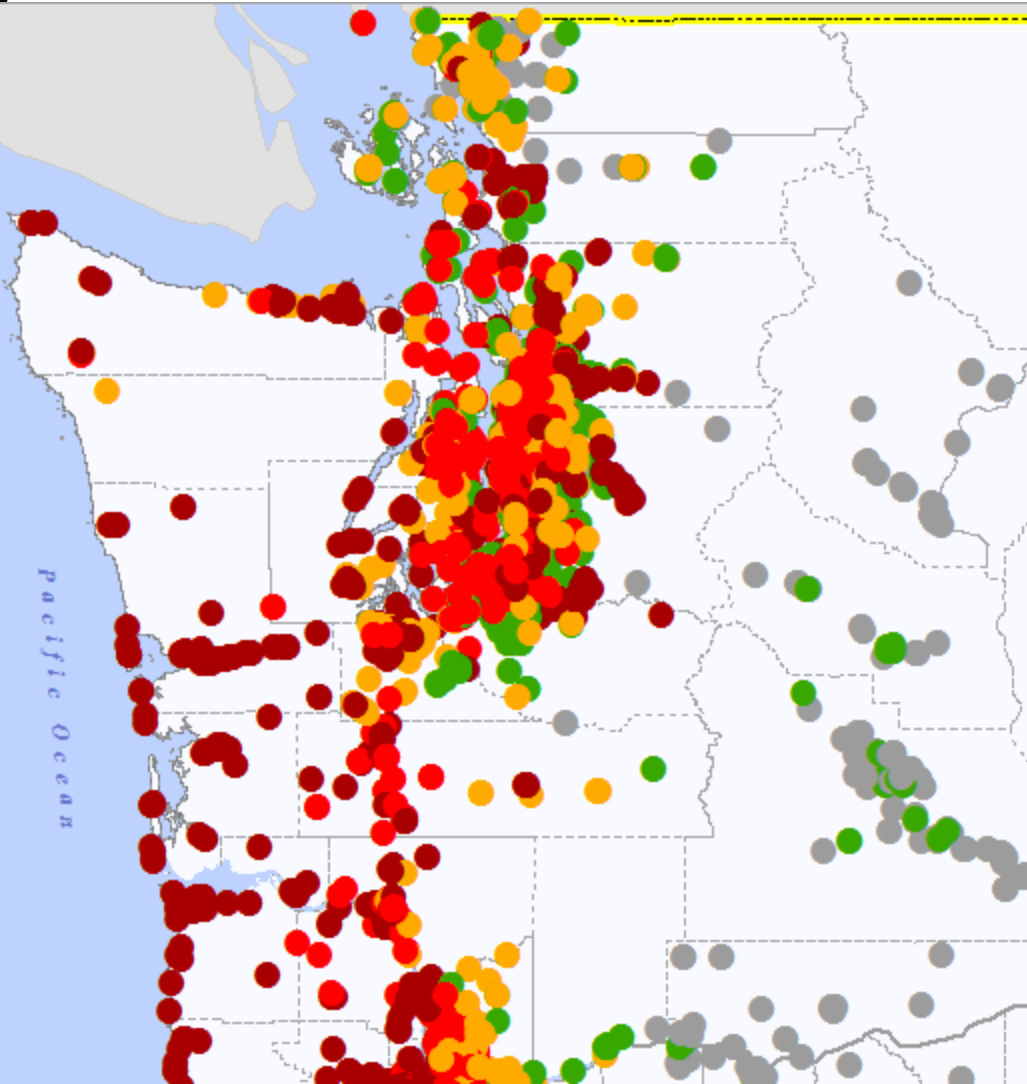
8% suffer moderate damage and will likely be partially functional.

21% suffer slight or no damage, and will likely be functional.

The facilities nearest to the epicenter suffer most significant damage resulting in limited correctional facility capacity west of the I-5 corridor.



# Schools



There are approximately 2,286 schools in the affected area.

Nearly 100% of schools West of the I-5 corridor suffer complete or severe damage, and are likely unusable.

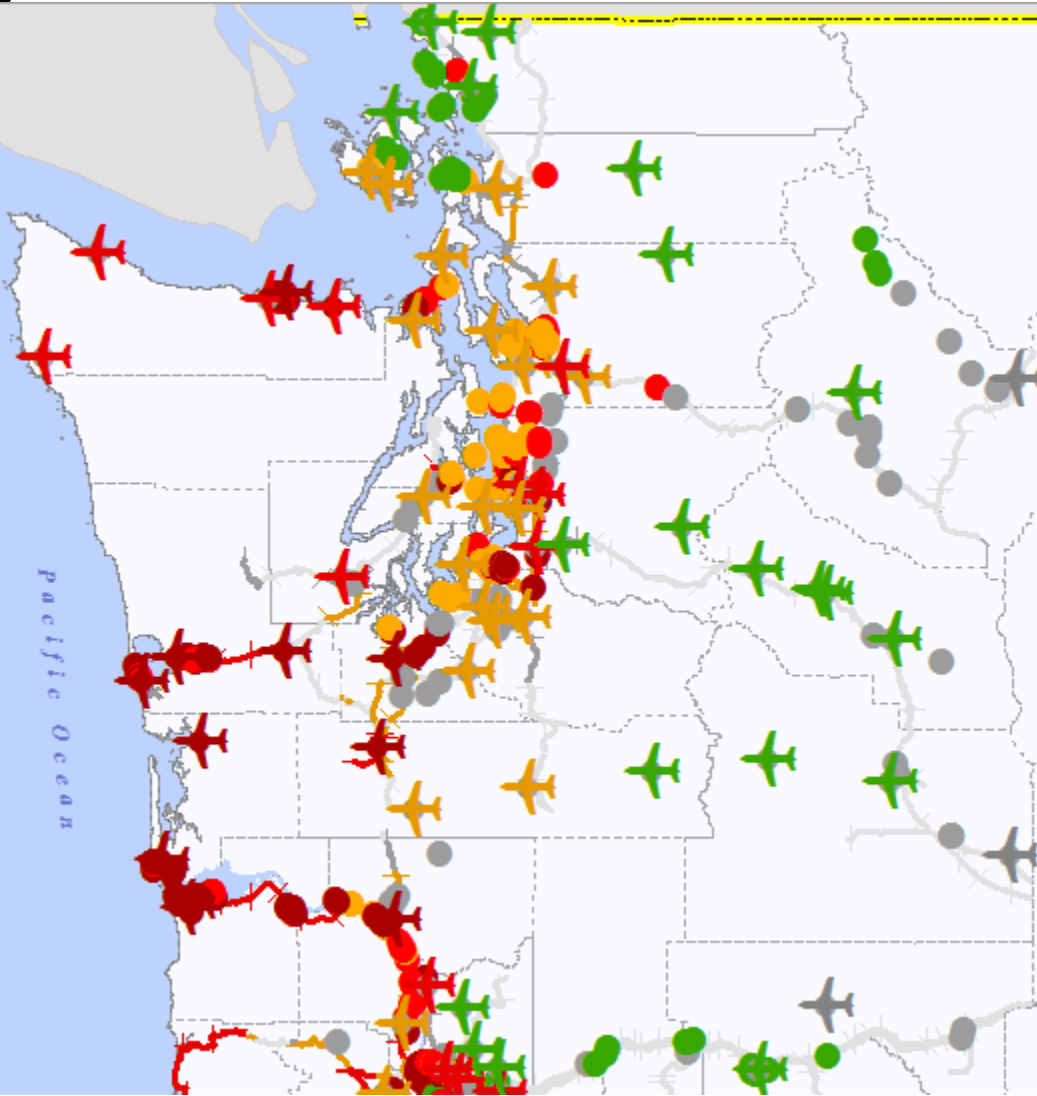
Schools along the I-5 corridor suffer a wide range of damage from complete to slight.

Schools nearest the epicenter generally suffer the most significant damage resulting in limited capacity West of the I-5 corridor.

Notable data: All of these schools are part of the National Sheltering System. Their loss indicates a corresponding reduction in sheltering capacity.



# Transportation - Sea, Air, Rail



Most facilities west of the I-5 corridor suffer complete to severe damage

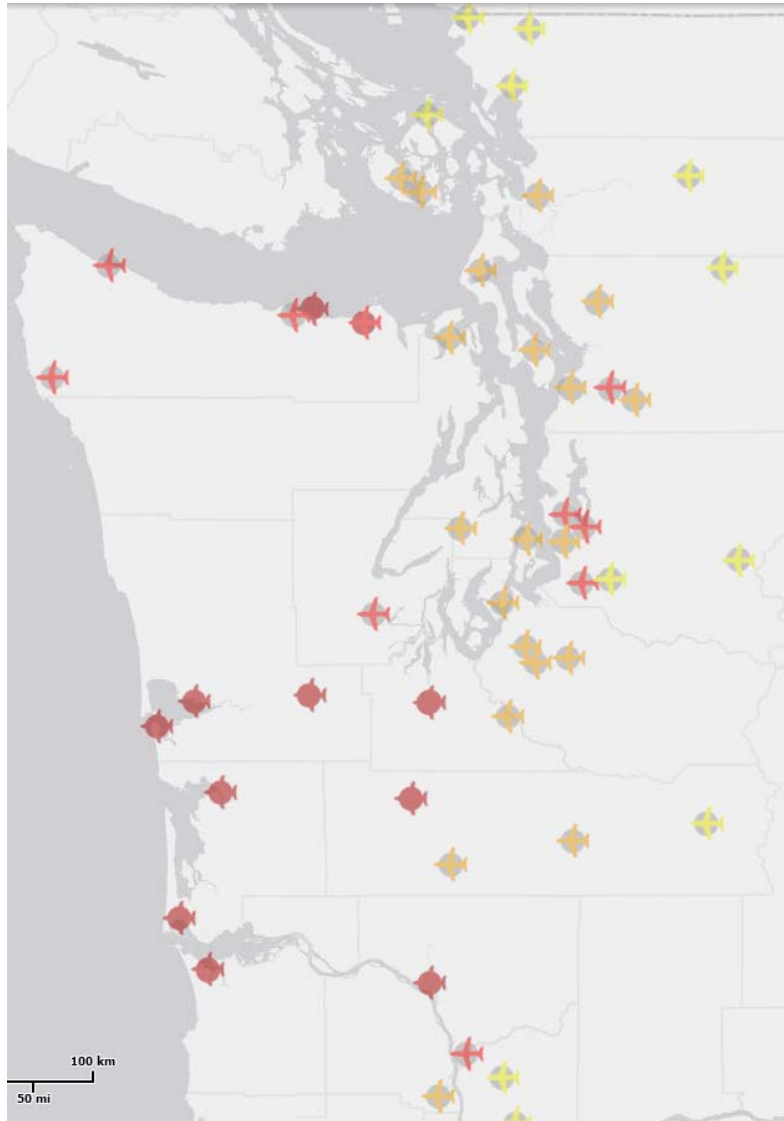
Most facilities along the I-5 corridor suffer severe to moderate damage

Most facilities east of the I-5 corridor suffer slight to no damage

Many of these facilities are located in liquefaction zones



# Airport & Runways



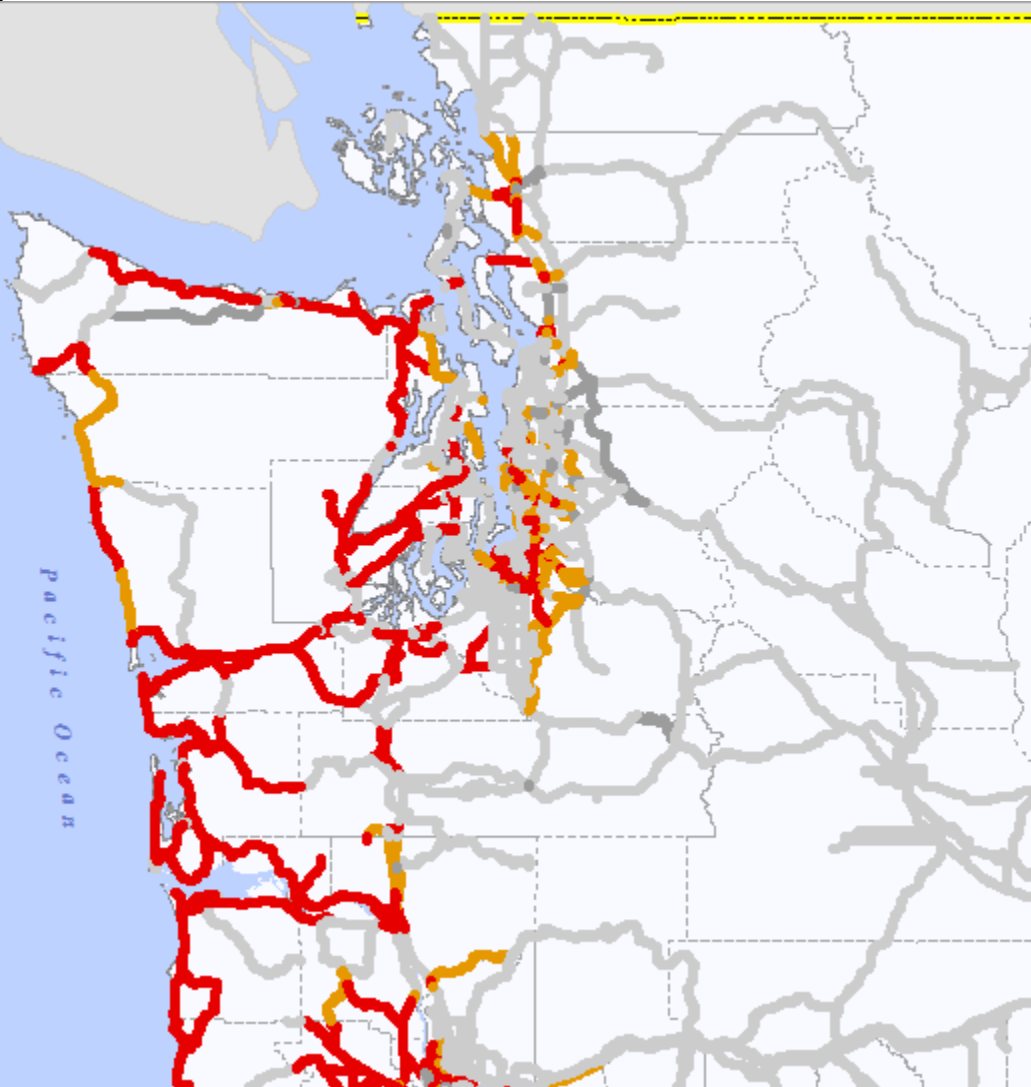
Damage projections indicate that many airports may suffer significant infrastructure damage, but the runways may suffer less significant damage.

Nearly all infrastructure West of I5 corridor is destroyed or un-useable.

Several runways are still useable, but will not have instrument landing or night landing capability and will require runway assessments prior to use.



# Transportation- Highways



There is a vast network of County, State, and Federally maintained highways in the affected area. Ground transportation is the primary method of movement for most commodities.

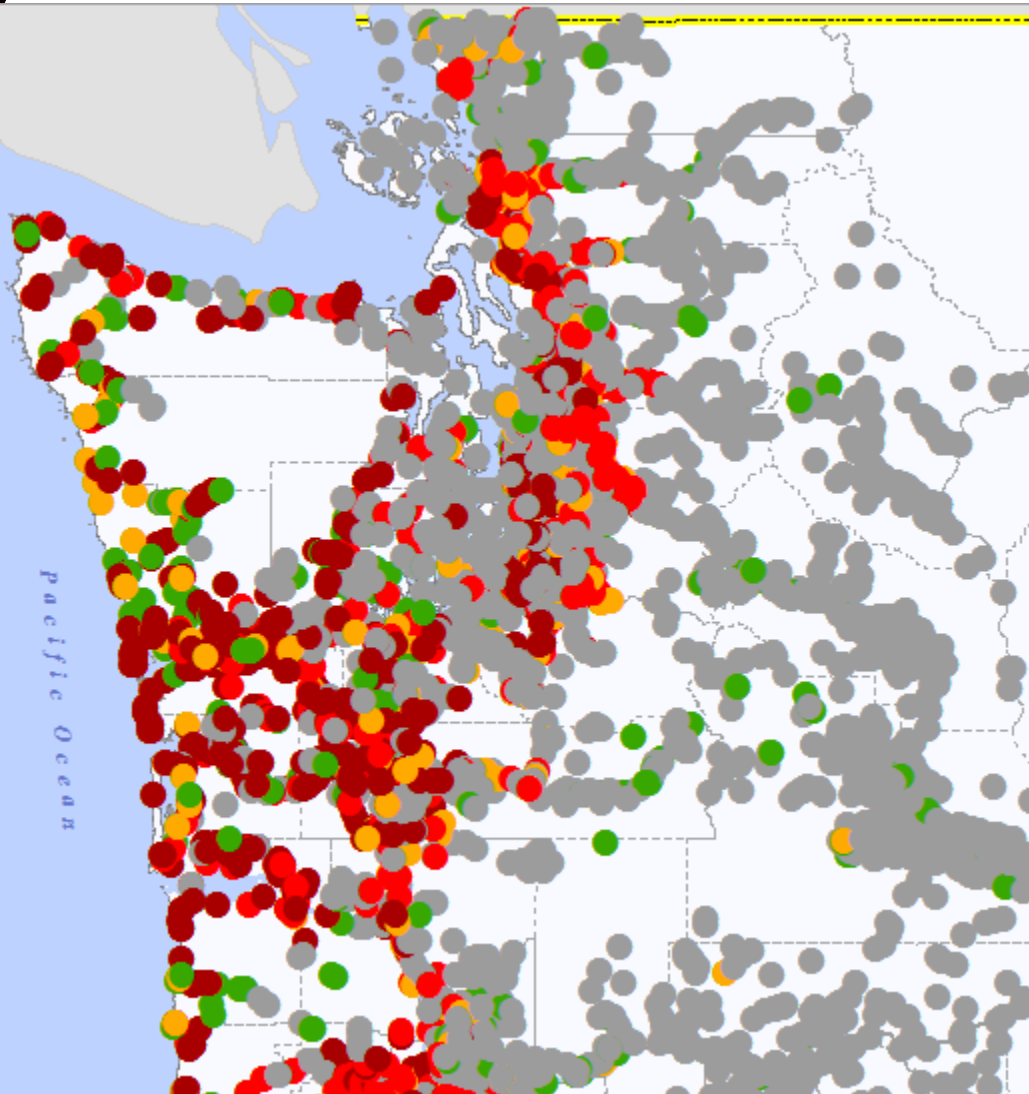
The highway system will suffer the most damage in the vicinity of the coast with both earthquake and tsunami damage. This will significantly impact any lifesaving or recovery operations, and will drive route clearance and roadway repair to a very high priority across the region.

In the I-5 corridor roads in areas of high liquefaction susceptibility are likely to prove impassable.

In the initial stages of the CSZ response the only method of reaching coastal communities will be by air. There are no surviving ground routes to the coastal region.



# Transportation- Hwy Bridges



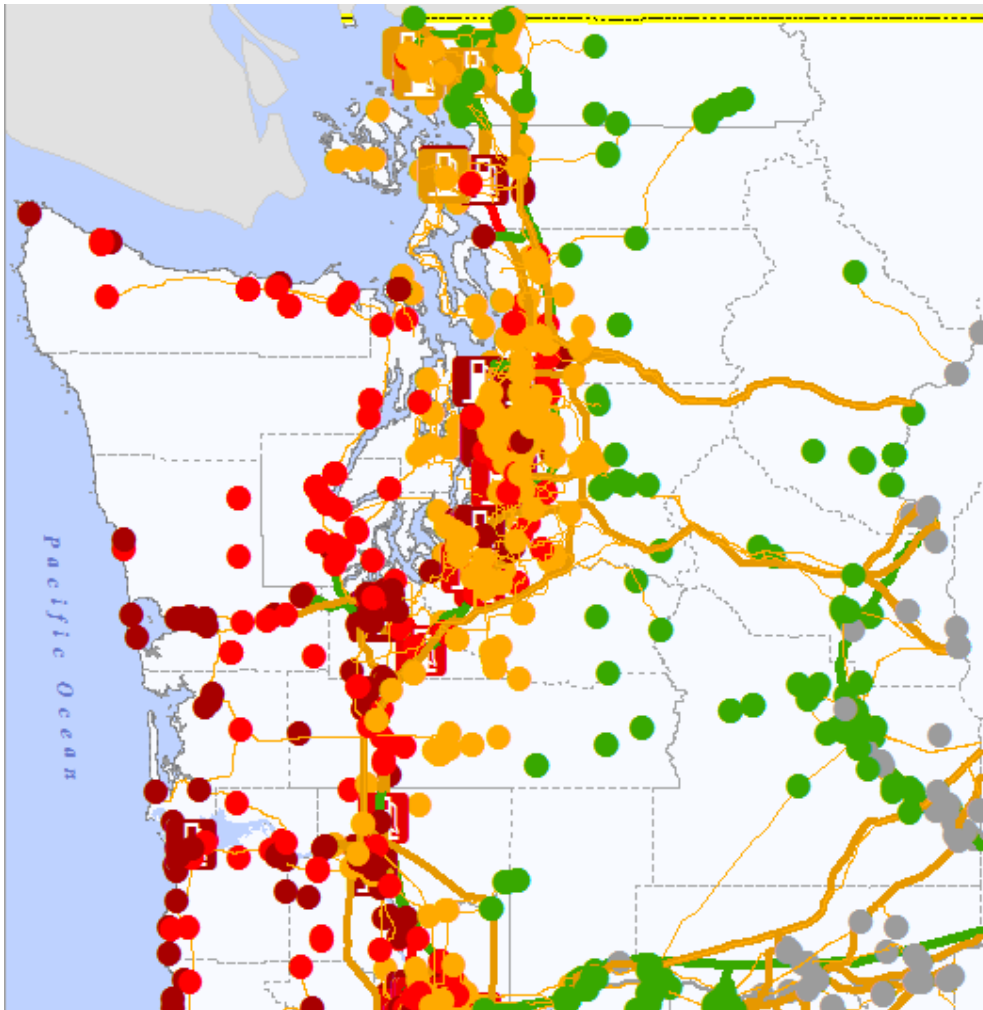
Virtually every highway crosses numerous bridges. Route identification that does not cross a bridge will not be possible when attempting to reach any isolated community. Bridges in the affected are predominantly old and were built prior to establishment of significant seismic building requirements.

The assessment of bridges as early in the IAA process as possible will be key to the development of routes into isolated communities. Identifying bridges that need the least repairs will speed up recovery operations.

The lack of suitable bridges will be a factor in the determination of the recovery efforts and timelines.



# Utilities



- This slide provides an overview of the utilities networks across the affected area. In general the amount of damage decreases from West to East. Major networks will be out-of-service until significant repairs can be made.
- There are approximately 440 major electrical facilities and a vast network of electrical power lines, both above and underground throughout the region.
- There are 68 major Natural Gas facilities and 12 counties contain 22 major sections of NG pipe network.
- There are 54 petroleum processing facilities, and 9 counties contain 16 major sections of petroleum pipeline.
- There are 35 known Potable Water Facilities.

# Planning Factors (FEMA)



	Washington Total	Notes
Land Area (Sq. Miles)	71,303	
Miles of Pacific Coastline	157	Does not include Strait of Juan de Fuca or shores of Puget Sound.
Population	6,894,121	
Population exposed to tsunami	50,190	
Residential buildings damaged (Slight to complete damage)	507,701	
Short term human sheltering requirements	410,127	
Short term pet sheltering requirements	254,357	
Mass feeding and hydration requirements (People)	1,274,327	
Mass feeding and hydration requirements (Pets)	777,340	
Deaths	8,440	Projection accounts for initial earthquake and tsunami, does not account for exposure, disease, dehydration, starvation, or follow on tsunami's and aftershocks.
Injuries	12,114	
Hospital patient evacuation requirements	15,501	Evacuation requirements based on projected numbers of facilities determined to be unusable. Does not account for evacuation to create room for newly injured.
Nursing home patient evacuation requirements	65,249	
Building debris (Cubic Yards)	13,174,243	



# Historical Comparisons

Date	Location	Significant Statistics	Aftershocks	Tsunami
1700	Cascadia	M8.7–9.2	Unknown	Height unknown Reached Japan
1960	Chile	M9.5 2,000 deaths 3,000 injured	5 of M7.0+	80 feet Affected Hawaii, Japan, Philippines, Australia, New Zealand and the United States
1964	Alaska	M9.2 12 deaths from quake Shaking for 4–6 minutes 119 deaths from tsunami	11 of M6.0+ in first day 9 of M6.0+ in 3 weeks 10,000+ in a year	30–50 feet Affected the U.S. West Coast
2004	Sumatra	M9.0 230,000 deaths in 14 countries Shaking for 4–10 minutes	1 of M7.1 within 3 hours 13 of M6.0+	98 feet
2010	Chile	M8.8 525 deaths Shaking for 3 minutes	Several M6.0–7.0 Lasted over a year	8.5 feet
2011	Japan	M9.0 16,000 deaths Shaking for 3–5 minutes	M7.9 & 7.7 same day Many M4.5–6.0+	130 feet Inundation 6 miles inland

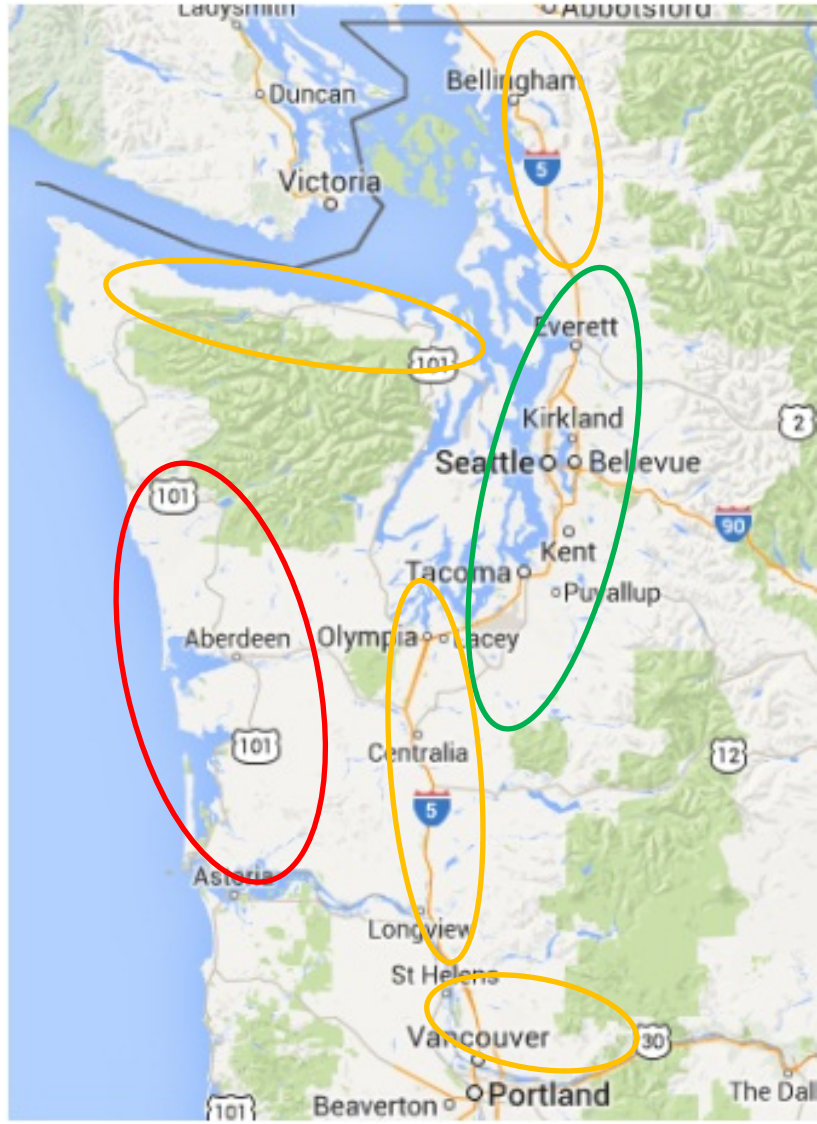
Sources: CREW (2005), USGS Earthquake Hazards Program (2012), Asahi Shimbun (2011), oregonlive.com (2011)



# The Plan



# TAG's Initial Guidance



**LARGEST RESPONSE**

- Majority of Urban SAR
- Majority of ground distribution capability (Largest population)
- More people, less vehicles (Most stuff)
- Most civilian assistance
- Limited Aerial Distribution (Rotary Wing)
- Majority of Security Force capability
- Level III Medical capability
- Large scale evacuation capability
- Minimal Route Clearance effort
- Most civilian assistance

**MOST CRITICAL**

- Majority of Aerial SAR
- Majority of Aerial distribution (Rotary Wing)
- Limited ground distribution capability (Smallest population)
- Less vehicles, less people (Least stuff)
- Least civilian assistance
- Limited Security Force capability
- Level I and II Medical capability
- Moderate evacuation capability
- Maximum Route Clearance effort
- Least civilian assistance

**MOST SPREAD OUT**

- Minimal Urban SAR
- Moderate ground distribution capability (Significant population)
- More vehicles, less people (Medium stuff)
- Limited Aerial Distribution (Rotary Wing)
- Moderate Security Force capability
- Level I and II Medical capability
- Minimal evacuation capability
- Minimal Route Clearance effort
- Significant civilian assistance



# The Guard Response

Washington Military Department's coordination of DOD assets under the Dual Status Commander concept IOT provide support and sustainment to Federal and State ESF actions



# CONPLAN limits

- The DOD response does not solve all the problems.
- **The State and Federal ESFs solve the majority of the issues.**
- **DOD assets** in this plan, support ESF asset movement and sustainment, while also providing specific DOD capabilities that are rapidly available.
  - **Enduring missions:**
    - Sustainment of response assets
    - Distribution of personnel, commodities, equipment, and supplies for the response
  - **Additional Core Competencies DOD can provide** (Not a complete list)
    - Expeditionary Medical Aid and assistance
    - Water production, purification, distribution
    - Security
    - Hazardous Material (Toxic Industrial Chemical / CBRN) Reconnaissance, mapping, and rescue
    - Fatality Search and Recovery, and Mortuary Affairs assistance
    - Fuel handling, delivery and management
    - Limited Search and Rescue
    - Engineering support



# Critical Facts & Assumptions

- Facts:
  - The CSZ response will provide assets from outside the affected area to local ICs. Few of the municipalities have a plan or resources to receive or care for these resources (basing, housing, feeding)
  - Medical Evacuation movement capabilities provide large gap area (HHS, Transcom)
- Assumptions:
  - CSZ effects and infrastructure damage estimates are all per the FEMA analysis.
  - Region X states receive immediate presidential “Major Disaster” declarations
  - A CSZ event will become the DOD main effort
  - Washington National Guard will not be lead agency – they will always be in support.
  - State identified State Staging Areas (SSA) are proposed to be WANG managed.
  - Current logistics flow model for the response are inadequate when compared to the requirements, but can be negotiated with FEMA and DOD
  - Required space / land allocations will be confirmed via MOA/MOU once plan is approved.



# Critical Assumptions

- During Phase 2a a maximum of 50% of Soldiers and Airmen in the WANG that reside in Western Washington, (85% Eastern) will be capable of reporting in any capacity.
- First Responders and Medical Personnel are not available to a Guard mobilization post-CSZ event. (20% of otherwise available Guardsmen/women).
  - Local, County, State Police
  - Federal Law Enforcement
  - Corrections Officers
  - Privately employed Security Forces
  - EMTs, Paramedics, Fire fighters
  - Hospital employees (Nurses, Doctors, etc)
  - Senior Living Facilities (or any 'inpatient' facility) employees
  - Utility company employees (?) (electric, water, sewer, natural gas, petroleum)
- Through the approval of this plan, once published, WMD will receive broad operating approval from the Office of the GOV for the missions and planned response efforts laid out in this plan.
- **Governor approval of this plan constitutes a request from Civil Authority for T10 Immediate Response Authority missions.**



# Coordinating Entities

- The following is a partial list of agencies, organizations, jurisdictions, and entities that we can expect to work closely with in the response:
  - DOD
    - NorthCom
    - ArNorth
    - MarNorth
    - AFNorth
    - US TRANSCOM
    - 3<sup>rd</sup> Fleet / 1<sup>st</sup> MEF
    - Navy Region NW
    - 1<sup>st</sup> Corps
    - NGB
    - Civil Air Patrol
  - States
    - Oregon
    - Idaho
    - Alaska
    - California
    - Hawaii
  - State Agencies
    - Dept of Health
    - Dept of Transportation
    - Dept of Commerce
    - Dept of Natural Resources
    - Dept of Agriculture
    - Dept of Ecology
    - Wa State Patrol
    - Wa Military Dept
  - Federal Agencies
    - DHS - FEMA
    - DHS – USCG (D13)
    - Federal Aviation Admin
    - Health and Human Svcs
    - ATF
  - Local Municipalities & Groups
    - 39 County EMs
    - 7 HLS Regions
    - Numerous City EMs
    - County Commissioners
    - Port Authorities
    - Fire and Hospital districts
    - NW Regional Aviation
    - WA Airport MGRs Assoc
    - Washington Pilots Assoc
  - Tribes
    - Quinault Nation
    - Shoalwater Nation
    - Muckleshoot Nation
    - Tulalip Nation
    - Puyallup Nation

This is a partial list

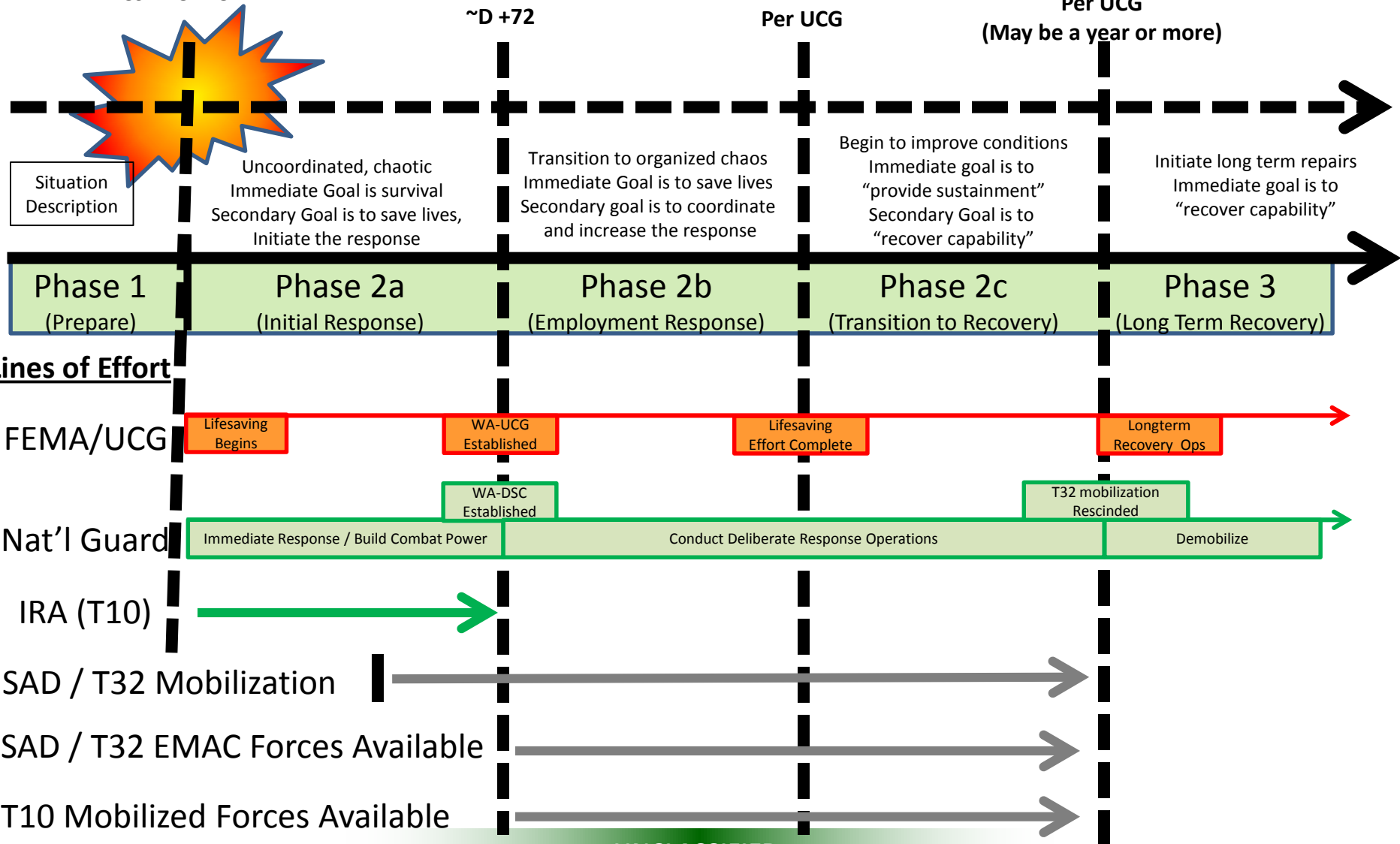


# Operational Concepts

# FEMA Phases



CSZ RUPTURE







# UCS (JFO) / UCG Construct

## Initial Operating Facility (IOF) transitions to Unified Coordinating Staff (UCS)

Supporting Staff

### Unified Coordination Group (UCG)

State and Federal  
Agency  
Representatives

SCO

TAG

FCO

Liaisons

NGOs

Sr LEA

GAR

DCO

Response  
Coordination

VOADs

Other Senior Officials  
(As required by situation or invitation)

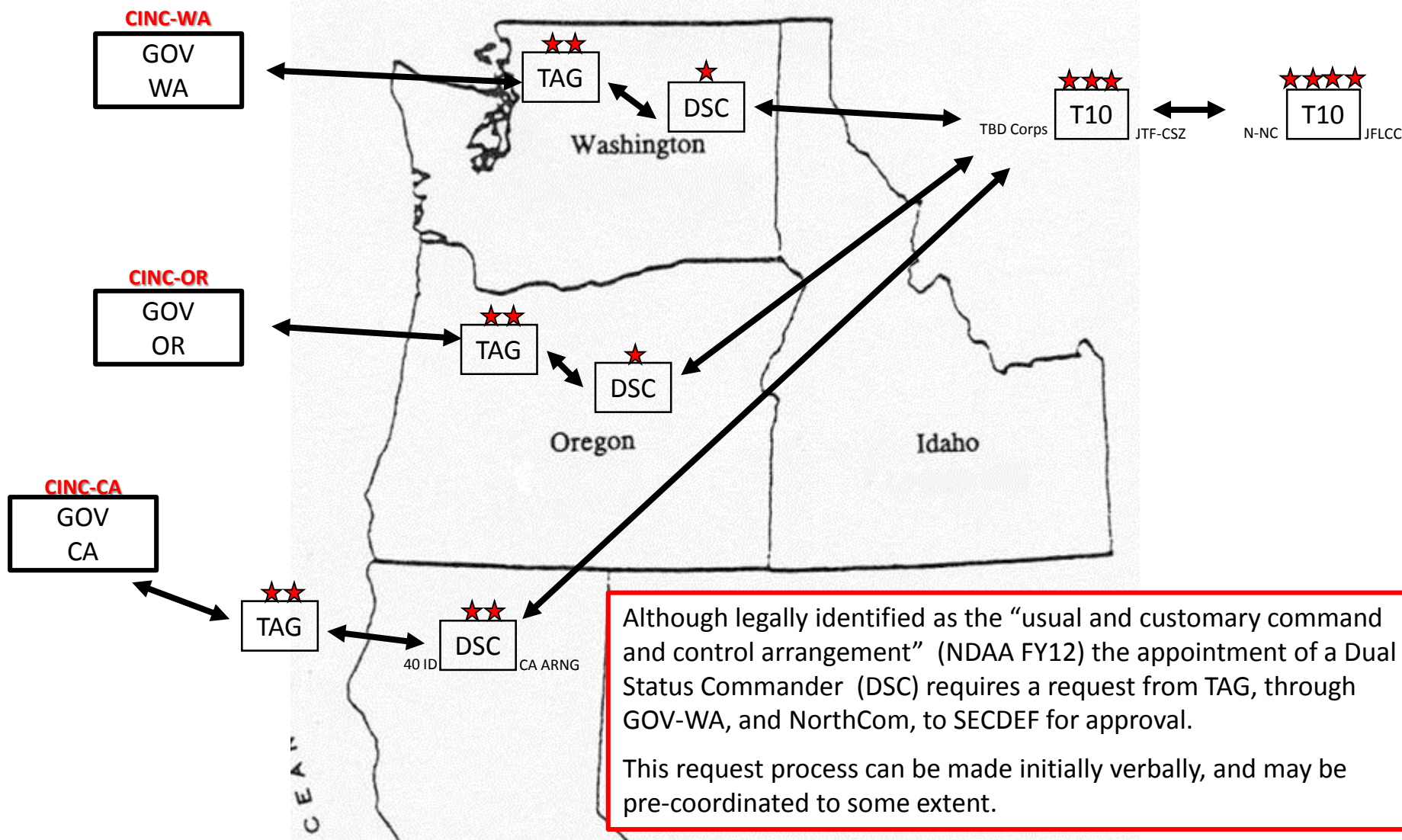
ESF Representatives

EOC Representatives

A UCS may (**will**) be established locally to provide a central point for Federal, State, Tribal, and local executives to coordinate their support to the incident. The Unified Coordination Group leads the UCS. The Unified Coordination Group typically consists of the **FCO**, **SCO**, and **senior officials** from other entities **with primary statutory or jurisdictional responsibility and significant operational responsibility** for an aspect of an incident. This group meets to develop a common set of objectives and a coordinated initial UCS action plan. **\*\*The UCS is often referred to as the "JFO". Technically, the JFO is the building in which the UCS operates.**



# DOD C2 Construct





# Tiered Base Concept

National Level  
"Point of Origin"

## FEMA Basing Terms:

**ISB** – Incident Support Base – First level of logistical distribution. Provides distribution to FSAs. All handled commodities belong to FEMA until assigned to an FSA. One ISB is tentatively allocated to Wash State in CSZ.

**FSA** – Forward Staging Area – Second level of distribution, provides distribution to State Staging Areas. Doctrine is changing to create three sub-types of FSA (Type, 1, 2, 3, based on capacity). Two FEMA FSAs are tentatively allocated to Wash State in the CSZ.

**RBC** – Responder Base Camp – Third level of FEMA basing. This is where out-of-state responders are based upon arrival. These are the State's responsibility to manage.

**CPOD** – Community Point of Distribution - This is the final step in the logistical distribution. It is the responsibility of the local EM / IC to coordinate.

Flow of Logistics and Inbound Resources

### Tier 1

- Based on existing airports
- Largest capability (747/C5)
- Identified now
- Preplan usage now
- Pre-coordinate design now
- Acts as all Tiers
- Provides distribution to local communities

### Tier 2

- Based on existing airports
- 2<sup>nd</sup> largest capability (C17/C130)
- Identified now
- Preplan usage
- Pre-coordinate design
- Serves as log base and RBC
- Provides distribution to local communities

### Tier 3

- Based on existing airports
- 3<sup>rd</sup> largest capability (<C130)
- Identified now
- Preplan usage
- Pre-coordinate design
- Serves as log base and RBC
- Provides distribution to local communities

### Tier 4

- Rotary Wing / Vertical Lift
- Same capabilities, less capacity
- Location selected ICW local EM
- Template now, confirm later

### Tier 5

- Final Point of Distribution
- Identified by Local EM
- Established daily





# Tiered Base Concept

- **Tier 1** (BSI/ISB/SSA)
  - JRSOI/RIP
  - Equipment staging & bed down
  - Resource transfer (H2O, CL I-IX)
  - Refuel (Ground & Rotary Wing)
  - Medical triage / treatment / transfer (Level III)
  - Limited human & pet sheltering
  - Responder sustainment
  - Distribution LOD for local area
  - 747/C5 capable
  - Possible Railhead / Trucking depot
- **Tier 2** (BSI/FSA/SSA)
  - JRSOI/RIP
  - Equipment staging & bed down
  - Resource transfer (H2O, CL I-IX)
  - Refuel (Ground & Rotary Wing)
  - Medical triage / treatment / transfer (Level II)
  - Limited human & pet sheltering
  - Distribution LOD for local area
  - Responder sustainment
  - C17 / C130 capable
  - Possible railhead / truck depot
- **Tier 3** (FSA/SSA)
  - JRSOI/RIP (Limited)
  - Equipment staging & bed down
  - Resource transfer (H2O, CL I-IX)
  - Refuel (Ground & Rotary Wing)
  - Medical triage / treatment / transfer (Level II)
  - Limited human & pet sheltering
  - Distribution LOD for local area
  - Responder sustainment
  - Less than C130 capable (C23)
  - NOT rail or truck capable (Isolated)
- **Tier 4** (SSA/RBC)
  - Equipment staging & bed down
  - Resource transfer (H2O, CL I-IX)
  - Refuel (Ground & Rotary Wing)
  - Medical triage / treatment / transfer (Level I)
  - Limited human & pet sheltering
  - Responder sustainment
  - Distribution LOD for local area
  - Rotary Wing / vertical lift capable
- **Tier 5** (CPOD)
  - Community Points of Distribution
  - Medical CCPs (Basic First Aid)
  - Hasty Collection Points (SAR)

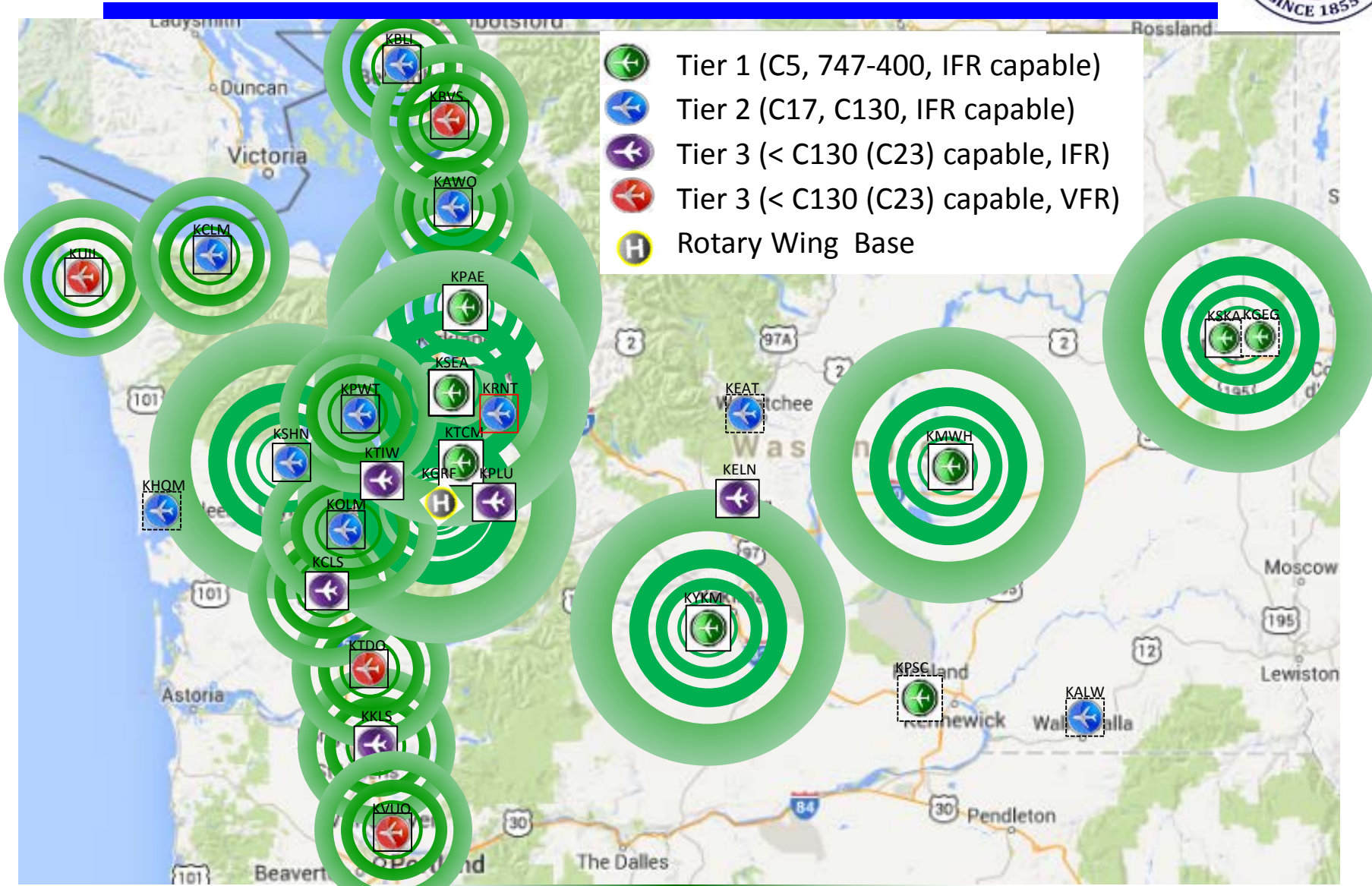
# Tiered Base Locations



Tier	Airport Code	City	County	Region
1	PKAE	Paine Field (Everett)	Snohomish	1
1	KTCM	McChord AFB (Tacoma)	Pierce	5
1	KSEA	SEATAC Airport	King	6
1	KSKA	Fairchild AFB (Spokane)	Spokane	East
1	KMWH	Moses Lake	Grant	East
1	KPSC	Pasco	Franklin	East
1	KYKM	Yakima	Yakima	East
1	KGEG	Spokane	Spokane	East
2	KBLI	Bellingham	Whatcom	1
2	KEAT	Wenatchee	Chelan	East
2	None (I-5)	Clark County Fairgrounds	Clark	4
2	KALW	Walla Walla	Walla Walla	East
2	KHQM	Hoquiam	Grays Harbor	3
2	KAWO	Arlington	Snohomish	1
2	KPWT	Bremerton	Kitsap	2
2	KCLM	Port Angeles	Clallam	2
2	KOLM	Olympia	Thurston	3
2	KSHN	Shelton	Mason	3
2	KRNT	Renton	King	6
3	KBVS	Mount Vernon	Skagit	1
3	KUIL	Quillayute	Clallam	2
3	KCLS	Chehalis	Lewis	3
3	KTDO	Toledo	Lewis	3
3	KELN	Ellensburg	Kittitas	East
3	KTIW	Tacoma	Pierce	5
3	KKLS	Kelso	Cowlitz	4
3	KPLU	Puyallup	Pierce	5
3	KVUO	Vancouver	Clark	4

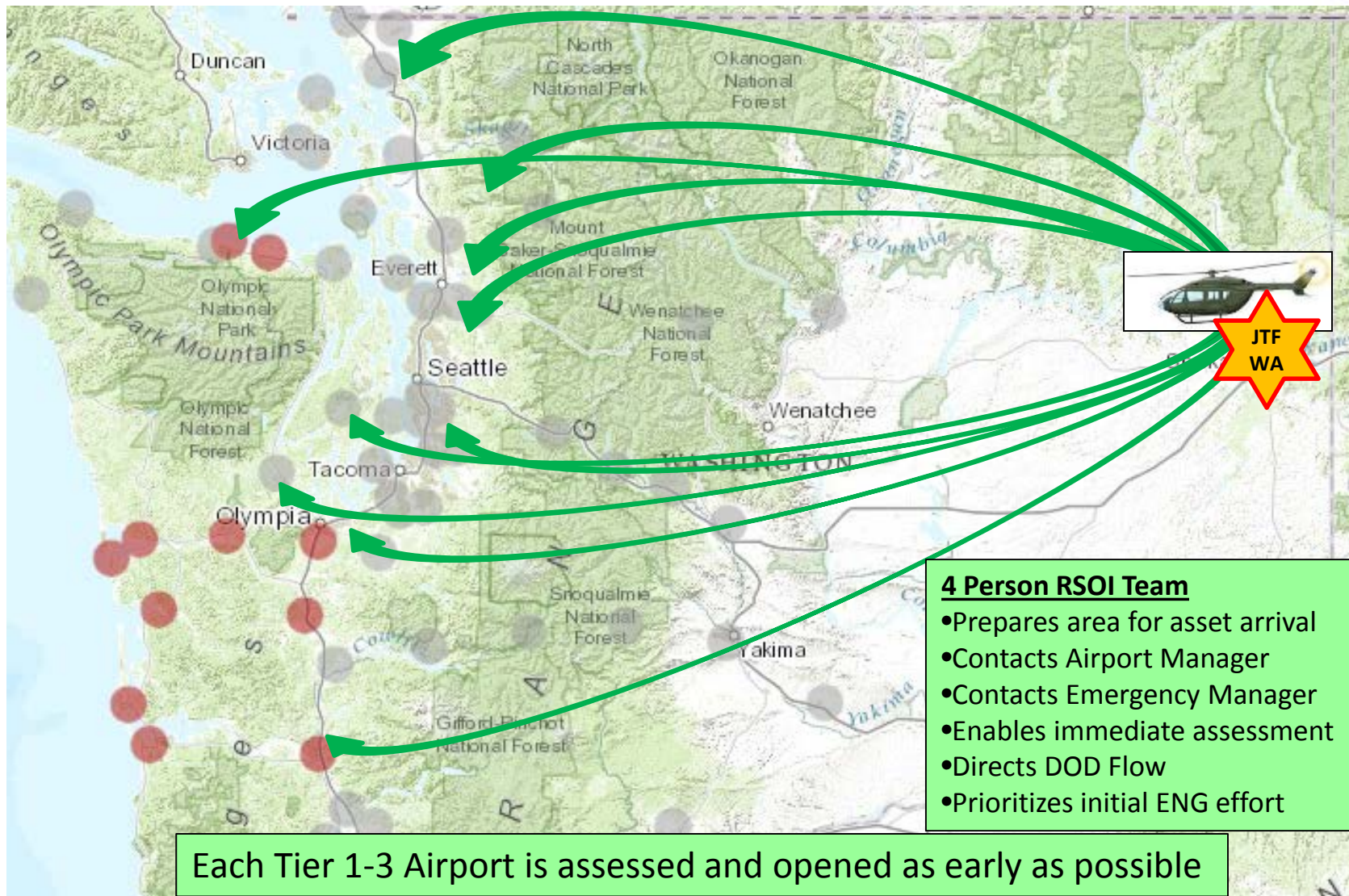


# Basing Concept





# Rapid Assessment / Early Opening

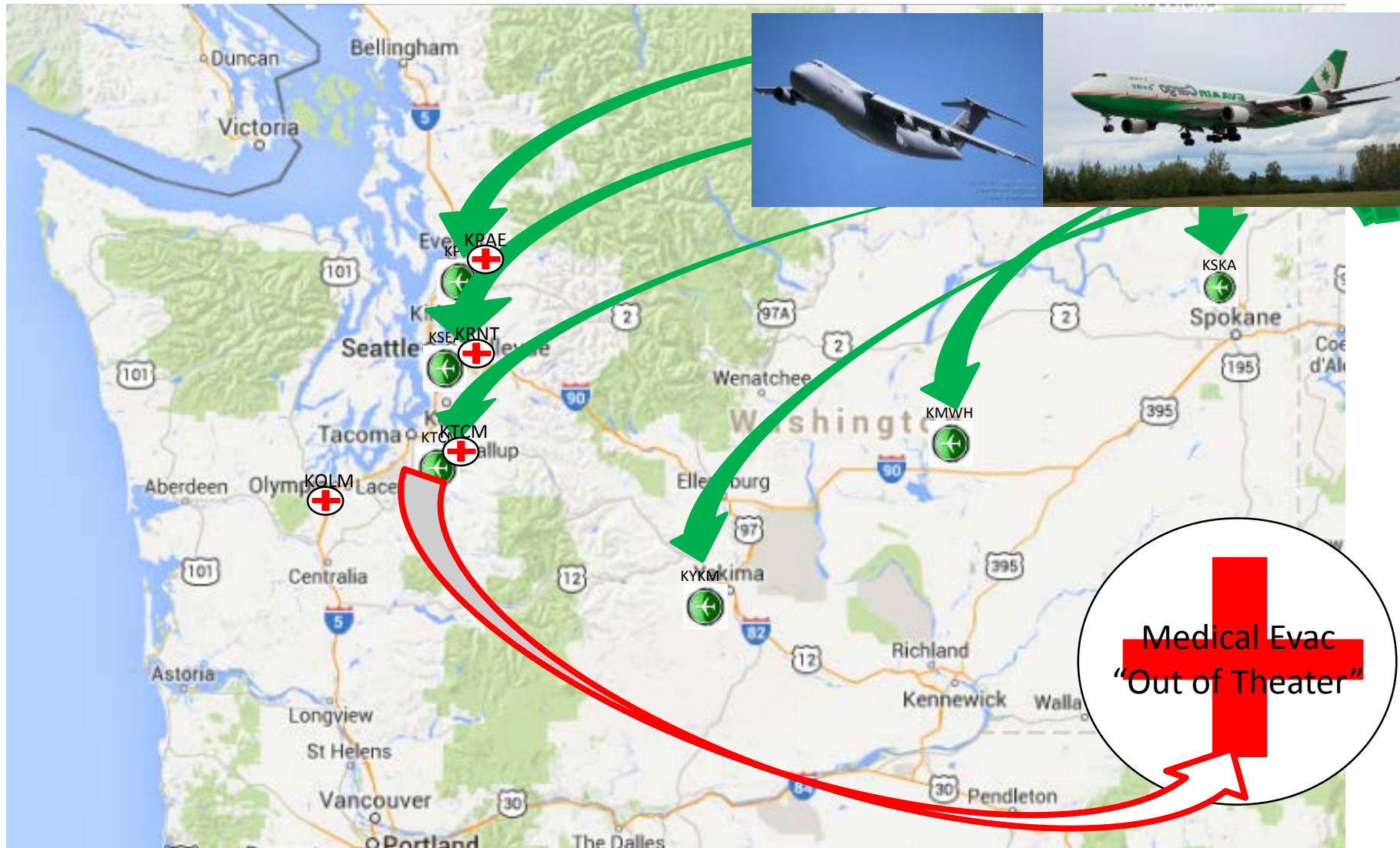


- 4 Person RSOI Team**
- Prepares area for asset arrival
  - Contacts Airport Manager
  - Contacts Emergency Manager
  - Enables immediate assessment
  - Directs DOD Flow
  - Prioritizes initial ENG effort

Each Tier 1-3 Airport is assessed and opened as early as possible



# Establish Tier 1 Bases



**Medical Evac**  
**"Out of Theater"**

747/C5 Capable

DASF / Level III Med



# Establish Tier 2 Bases



Establish Tier 2 Bases:  
 Tier 1 (Or assets from elsewhere across the nation) resources push forward into affected area and establish Tier 2s. This action occurs nearly simultaneous to establishment of Tier 1s to quickly establish a support network in the affected area.

C17/C130 Capable



# Establish Tier 3 and 4 Bases



Establish Tier 1-4 Logistic Support Bases:  
 Initiate distribution networks from tiered bases.  
 Ground distribution networks service accessible areas. Rotary wing expand the network to areas that are isolated or non-reachable by ground.  
 USN/USMC assets integrate in coastal areas when available, and are coordinated through the JFO/UCG and DCO.

<C130 Capable, IFR <C130 Capable, VFR

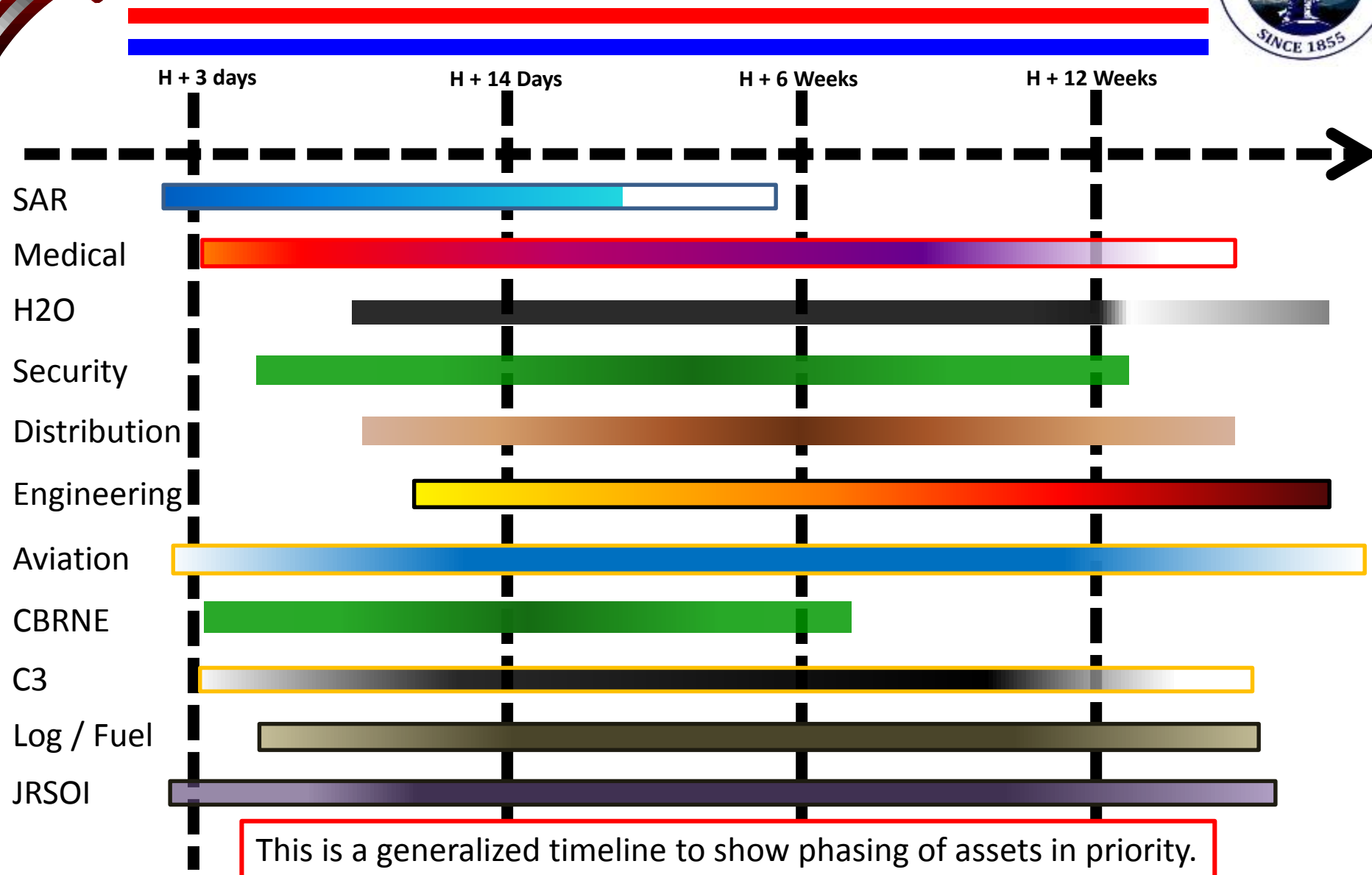
Rotary Wing / Vertical Lift Only



# Lines Of Effort



# Lines Of Effort



This is a generalized timeline to show phasing of assets in priority.



# Immediate Response - Ground



## Ground Search & Rescue

Following a CSZ rupture, Title 10 Forces conduct immediate Search & Rescue operations from the following installations:

- Naval Station Everett
- Naval Base Kitsap – Bangor
- Naval Base Kitsap - Bremerton
- Naval Air Station Whidbey
- USCG Port Angeles
- Manchester Fuel Depot
- JBLM

Meanwhile, Pararescue Jumpers arrive to coordinate wide area search efforts along side local Emergency Managers.

Tactical Air Control Party (TACP) personnel begin to establish helipads to enable deliberate SAR efforts.

Under Immediate Response Authority, Search & Rescue operations emanate from T10 installations into local communities in order to conduct immediate life saving operations and to gather IAA.

As the response becomes organized over time, T10 forces transition to deliberate Search & Rescue via ground and air.



# Immediate Response - Air



## Hasty SAR (0-24 hours)

Available rotary wing assets self deploy and provide Hasty SAR under Immediate Response Authority. Contact is made with local (County, City, Tribal) Emergency Managers and priorities of local SAR are established.

- Rescued individuals are transported to hasty Survivor Collection Points (SCPs)
- Survivors requiring medical treatment are positively handed off to medical personnel at hasty medical facilities

## Jurisdictional Assignments\*

Region 1: Navy & SnoCo Sheriff's Dept.  
 Region 2: Coast Guard  
 Region 3: Army  
 Region 4: Army  
 Region 5: Army  
 Region 6: King County Sheriffs Office  
 \*All Military aircraft are intended to augment civil capabilities

National level assets launch immediately, but may not arrive for several days.

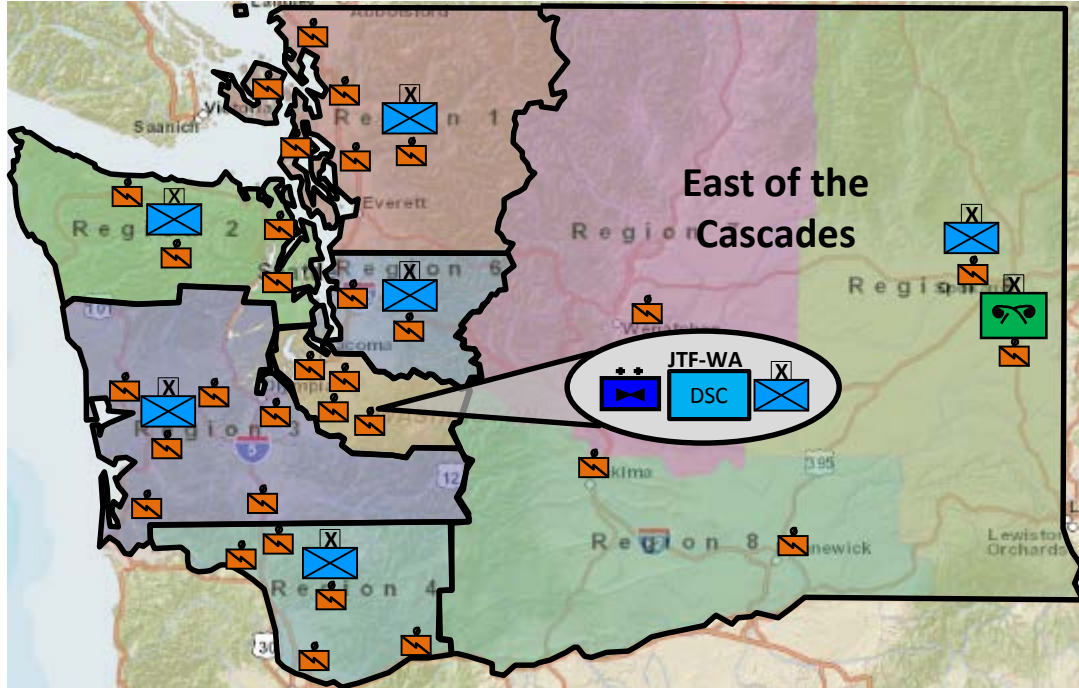
US Army aircraft provide response to all HLS Regions as capability increases.

## PJ and TACP Employment

Tactical Air Control Party (TACP) members deploy to select locations on the coast to coordinate Hasty Survival Collection Points and to establish HLZs. Pararescue Jumpers (PJ) engage local Emergency Managers to coordinate Wide Area Search operations. Together, PJs and TACPs establish the initial aerial Search and Rescue capability along the coast.



# C3 – Command, Control, & Communications



### Military Task Force Headquarters

A military Task Force Headquarters is assigned to each Homeland Security Region (1x HQ to East of the Cascades, Regions 7-9) to provide Command and Control of military assets, and to provide priority allocation of resources to ICs within that HLS Region. There will be 7x Brigade level headquarters.

### Joint Incident Site Communications Capability

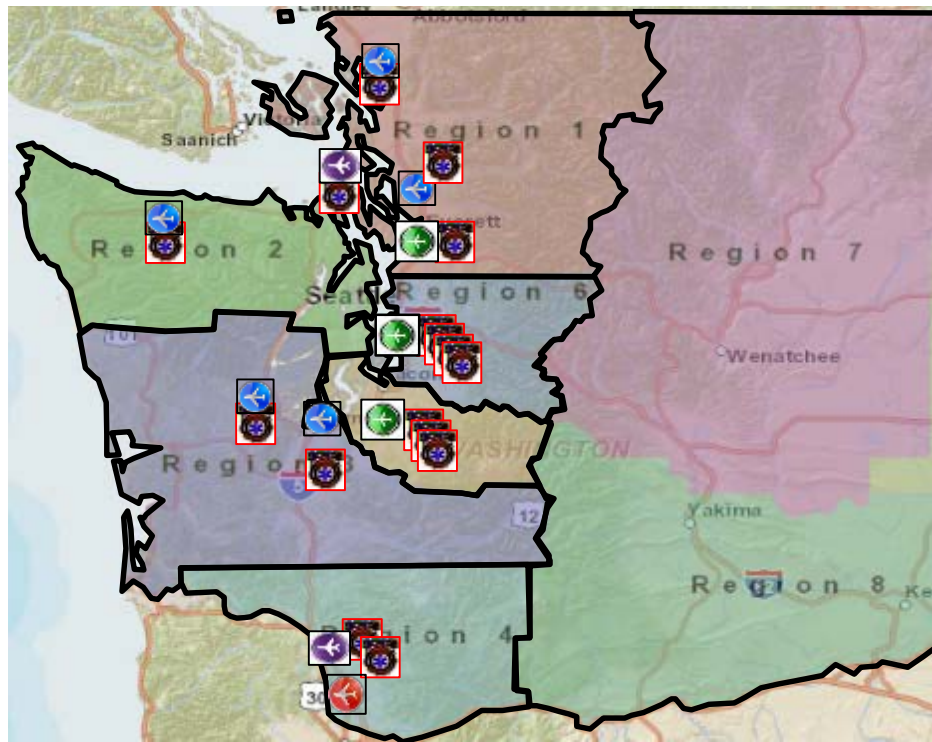
Initial distribution is to each County EOC and to each TF Command Post, including the DSC. Total request is for 40 JISCC, to provide 9 spares to be placed as mission requires (31 employed and 9 spare).

### JISCC Emplacement Priority

1 <sup>st</sup> Wave Priorities	2 <sup>nd</sup> Wave Priorities	3 <sup>rd</sup> Wave Priorities
Dual Status Command	TF HQ Region 6	EOCs Region 2
TF Aviation	TF HQ Region 5	EOCs Region 4
TF HQ Region 3	TF HQ Region 1	EOCs Region 6
TF HQ Region 2	TF CBRNE	EOCs Region 5
TF HQ Region 4	EOCs Region 3	EOCs Region 1



# Deliberate SAR - Ground



1-US&R Team: ~71 PAX total footprint (-OIC, ~6 logistics personnel)  
 -Capable of dividing into two ~31 PAX teams  
 -NOTE: below reflects support package for 1 full ~71 PAX team

- Rolling Stock:**
- 4 DS to OIC & rapid response element with personal gear immediate access
  - 4 Immediate access gear transport & limited PAX movement
  - 2 **OR** 1 Bulk/ palletized gear movement
  - 5 US&R PAX movement

//////////OR//////////

*In the event that the ground mobility corridors are impassable and Rotary Wing is required to insert and support the US&R Team*

- Aerial Support:**
- 2 Ch47s & UH60s to insert, resupply, and extract the US&R team with gear by multiple turns. Bulk/ palletized gear will be re-configured to be compatible with aerial platforms (requiring additional time)
  - 2

### USAR Team Placement by Phase / Priority

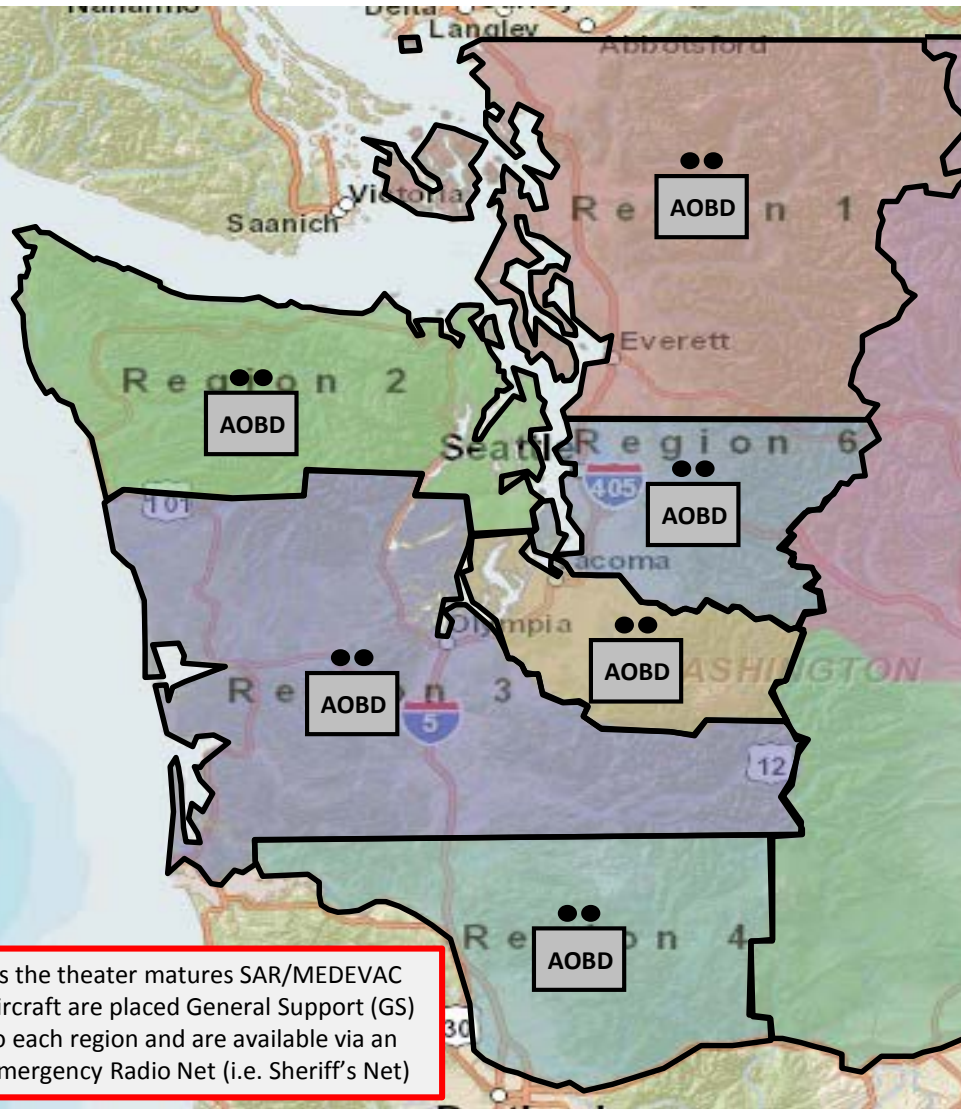
1 <sup>st</sup> Wave Priorities	2 <sup>nd</sup> Wave Priorities	3 <sup>rd</sup> Wave Priorities	4 <sup>th</sup> Wave Priorities
Region 3	Region 2	Region 5 (2)	Region 2 (2)
Region 6	Region 1	Region 4 (2)	Region 6 (4)
Region 5	Region 3 (2)	Region 1 (2)	Region 5 (3)
Region 4	Region 6 (2)	Region 6 (3)	Region 1 (3)

Tier 1  
 Tier 2  
 Tier 3 (IFR)  
 Tier 3 (VFR)





# Deliberate SAR - Air

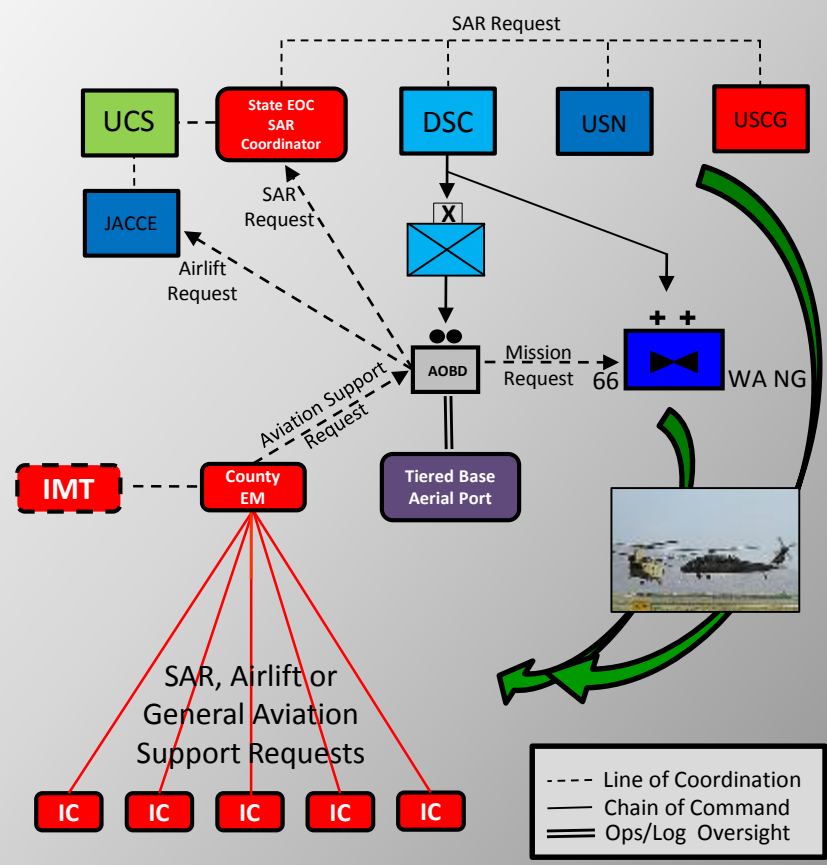


As the theater matures SAR/MEDEVAC aircraft are placed General Support (GS) to each region and are available via an Emergency Radio Net (i.e. Sheriff's Net)

Air Operations Branch Director

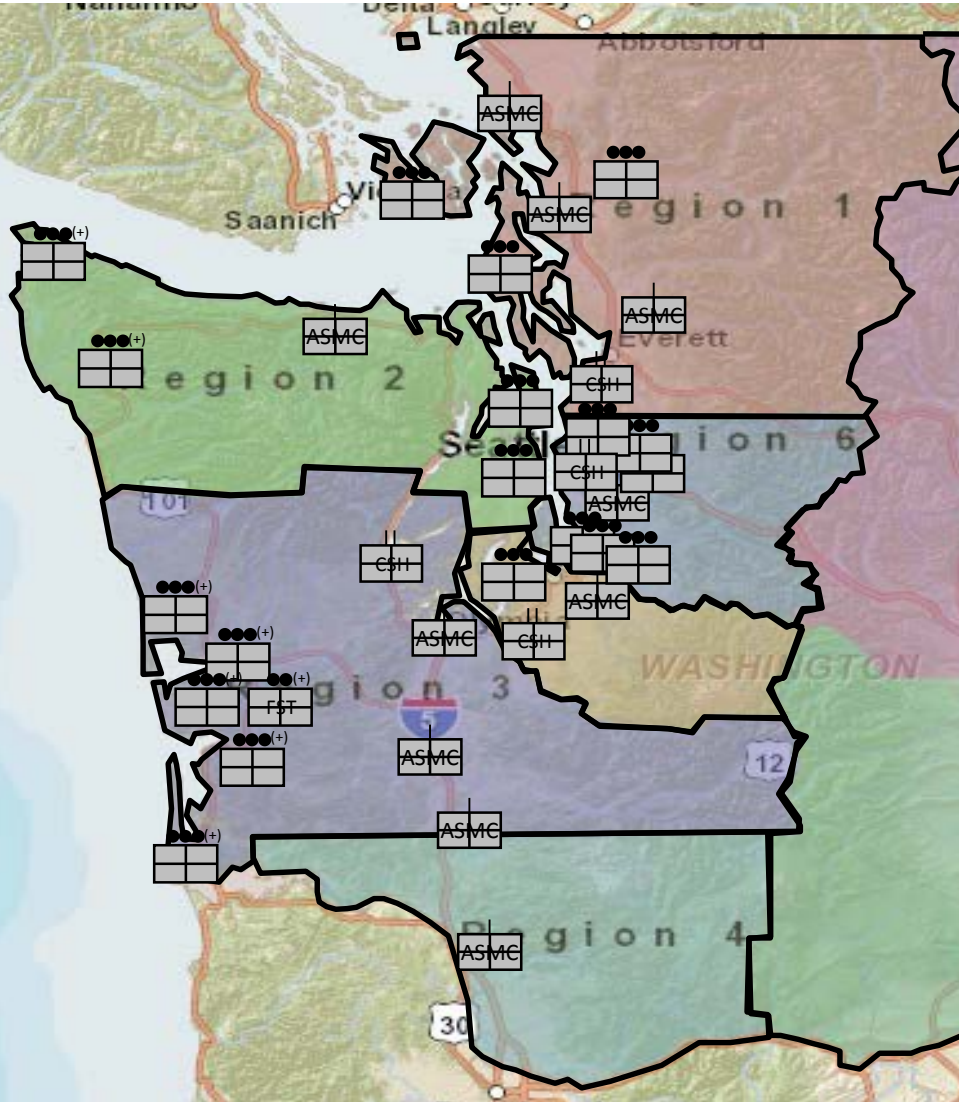
## Deliberate SAR - Air

While TF Aviation is being established, Regional TF Staff (including Air Ops Branch Director's (AOBD's)) are deployed to each TF Region. Upon arrival, AOBDs work with Local Emergency Managers in support of regional Search & Rescue efforts and process requests for aviation assets.





# Expeditionary Medical



## Mission

Establish Level I, II, and III aid stations throughout the State in order to provide emergent life saving services for any injured persons and to evacuate to higher echelons of care.

## Treatment

Triage, treat, return to duty, or coordinate evacuation of injured survivors through necessary echelons of care.

## Evacuation

Air evacuation is preferred but ground evacuation will be utilized where feasible. Level I facilities will evacuate patients to level II or III facilities. Level II will evacuate patients to level III facilities, and Level III will evacuate patients out of theater.

## Aid Station Locations



Level I: Co-located with Tier 4 Bases



Level I augmented with Civilian Doctors & Nurses



Level II: Co-located with Tier 2 & 3 Bases



Level III: Co-located with Tier 1 Bases

## Acronyms

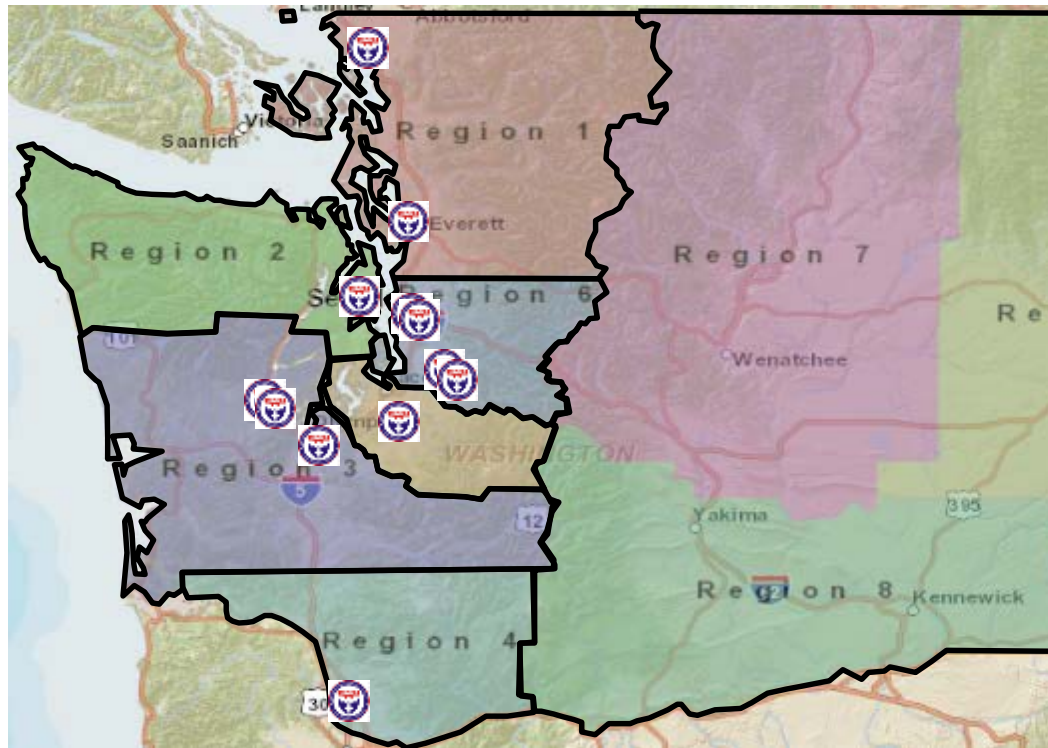
ASMC: Area Support Medical Company

CSH: Combat Support Hospital

FST: Field Surgical Team



# Proposed DMAT Locations



Disaster Medical Assistance Teams are established at Tier 1, 2 & 3 Airports and can support up to 250 patients per day.

- | <u>Tier</u> | <u>Airport Location</u>    |
|-------------|----------------------------|
| Tier 2      | KBLI: Bellingham           |
| Tier 1      | KPAE: Everett              |
| Tier 1      | KSEA: SEATAC               |
| Tier 2      | KPWT: Bremerton            |
| Tier 2      | KRNT: Renton               |
| Tier 1      | KGRF: JBLM                 |
| Tier 2      | KOLM: Olympia              |
| Tier 3: IFR | KSHN: Shelton              |
|             | None: I-5 (Near Vancouver) |

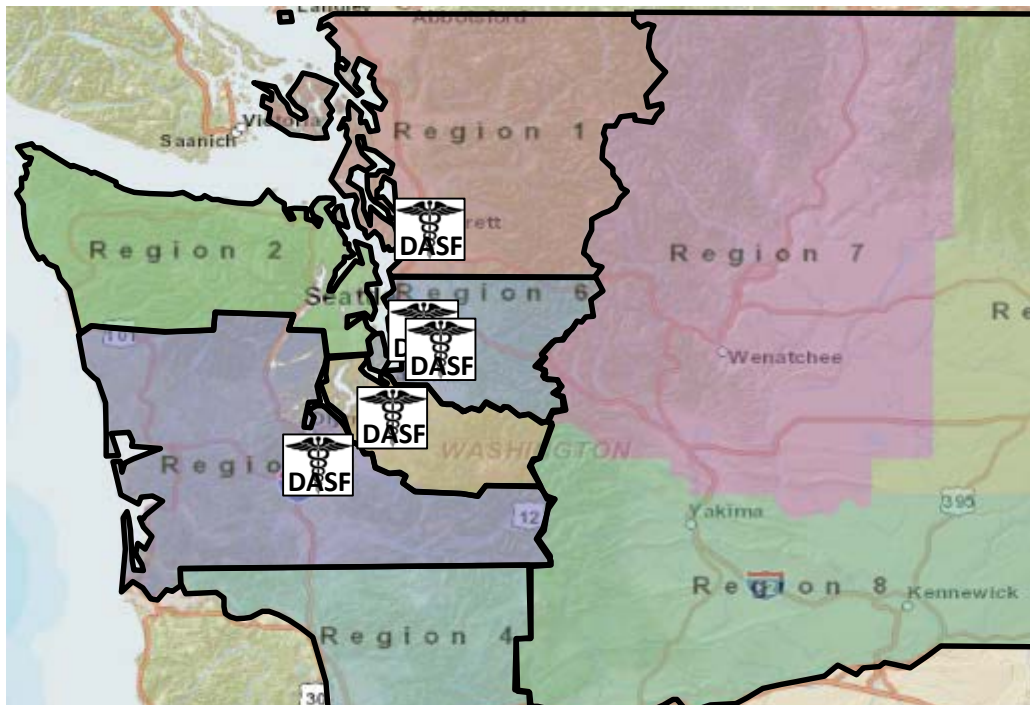
### DMAT Placement by Phase / Priority

1 <sup>st</sup> Wave Priorities	2 <sup>nd</sup> Wave Priorities	3 <sup>rd</sup> Wave Priorities
Shelton	Vancouver	Bellingham
Seattle	Renton	Shelton (Additional DMAT)
JBLM	Olympia	Seattle (Additional DMAT)
Everett	Bremerton	Renton (Additional DMAT)





# Proposed DASF Locations



Disaster Air Staging Facilities (DASF) are USTRANSCOM assets which provide medical triage, patient holding and movement. The following are proposed locations for DASFs:

Tier	Airport Location
Tier 1	KSEA: Seattle
Tier 1	KTCM: Tacoma
Tier 1	KPAE: Everett
Tier 2	KOLM: Olympia

## DASF Placement by Priority

### 1<sup>st</sup> Wave Priorities

Seattle

Olympia

Everett

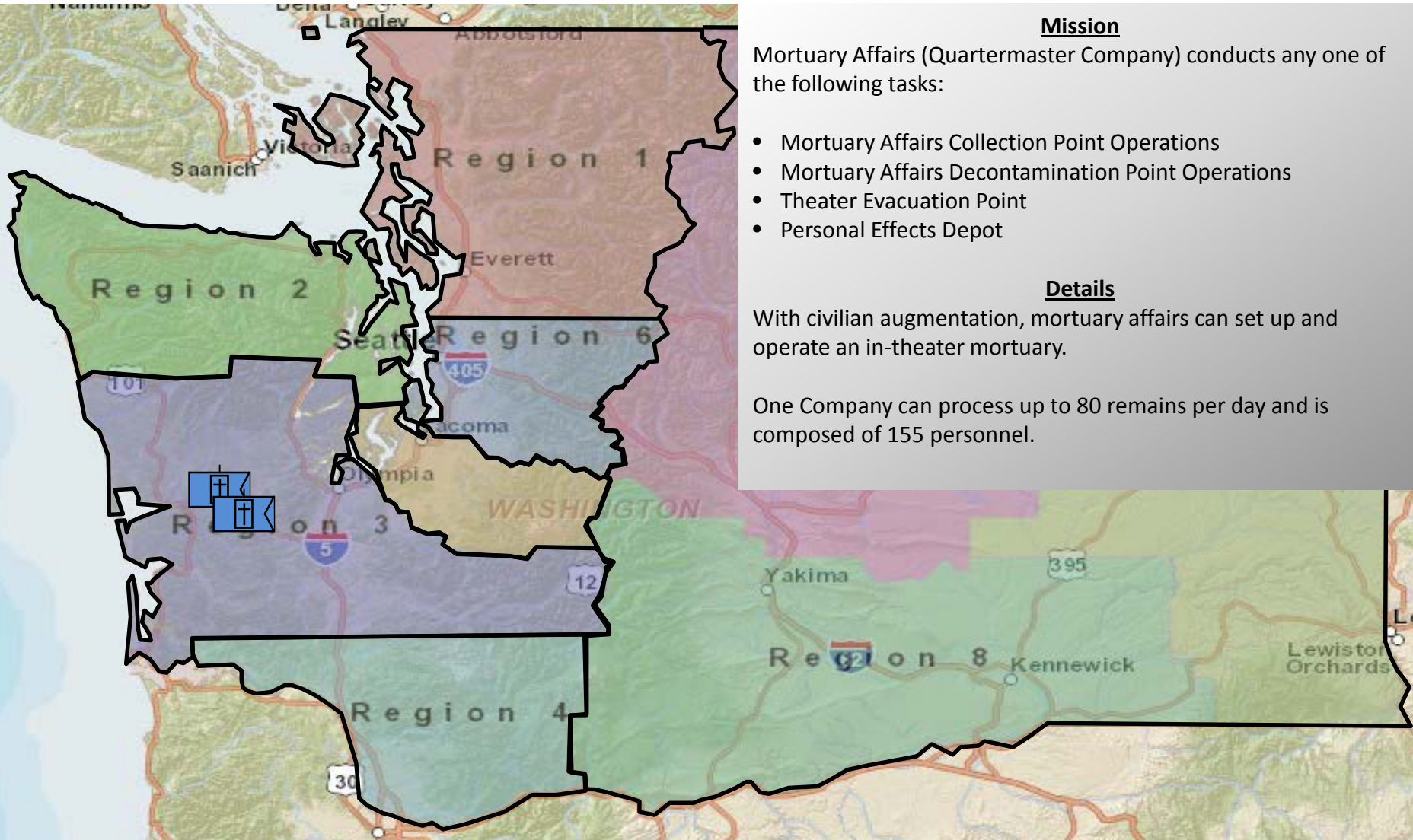
Tacoma (McChord)

Seattle





# Mortuary Affairs Concept



## Mission

Mortuary Affairs (Quartermaster Company) conducts any one of the following tasks:

- Mortuary Affairs Collection Point Operations
- Mortuary Affairs Decontamination Point Operations
- Theater Evacuation Point
- Personal Effects Depot

## Details

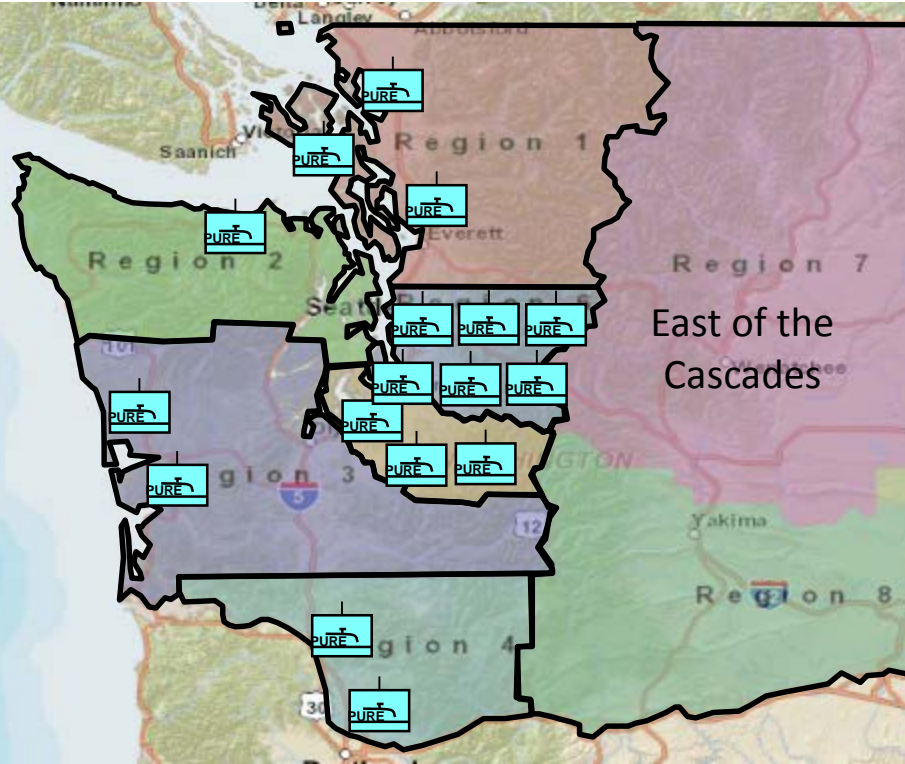
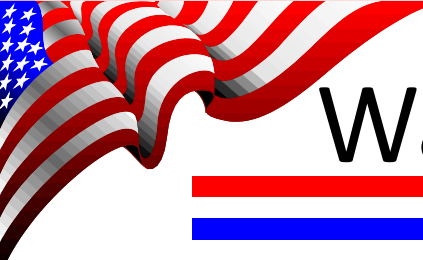
With civilian augmentation, mortuary affairs can set up and operate an in-theater mortuary.

One Company can process up to 80 remains per day and is composed of 155 personnel.





# Water Purification Concept



Region	Population (2010 census)	# QM COs	Water Produced per Day from QM COs	% Population Served Daily
1	1,031,352	3	567,000	56%
2	352,409	1	378,000	53%
3	482,135	2	378,000	78%
4	542,817	2	378,000	69%
5	795,225	3	567,000	71%
6	1,931,249	6	945,000	58%

1 Quartermaster Company (Water Purification and Distribution) has 3 LWPS and 3 ROWPU. 1 ROWPU produces 60,000 GPD and 1 LWPS produces 3,000 GPD. Therefore, each Quartermaster Company produces 189,000 GPD.

Priority of military water purification (production) assets will be in urban areas due to a lack of fresh water resources, while rural areas near fresh water sources receive individual filtration devices to augment water production services. Distribution of purified water will be rudimentary initially, as bottling capacity arrives later in TPFDD.

### LWPS & ROWPU Placement by Phase / Priority

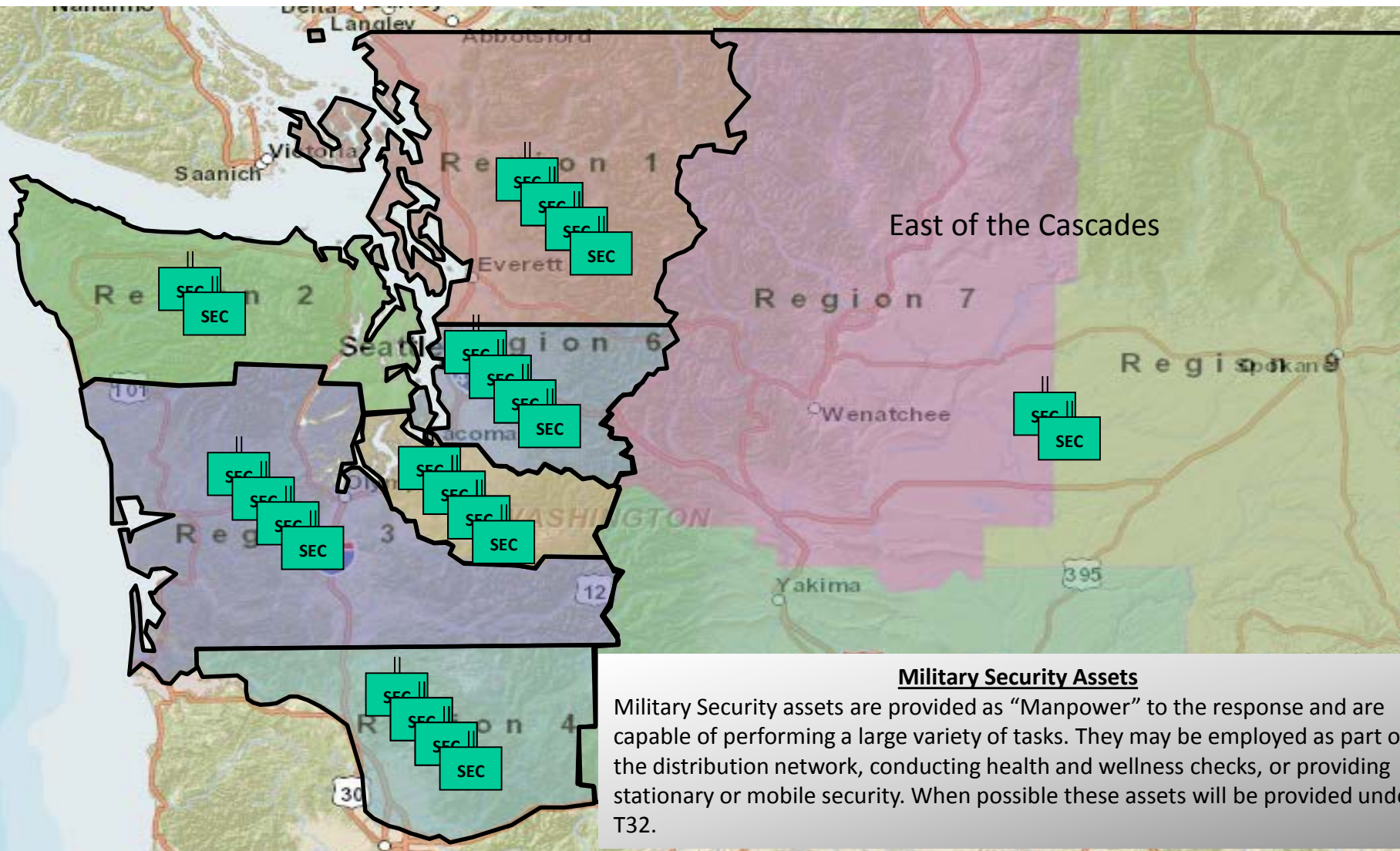
1 <sup>st</sup> Wave Priorities	2 <sup>nd</sup> Wave Priorities	3 <sup>rd</sup> Wave Priorities	4 <sup>th</sup> Wave Priorities
Regions 3 (Coastal Communities)	Region 1 (Everett)	Region 1 (Bellingham)	Region 5 (Pierce County)
Region 2 (Coastal Communities)	Region 4 (Vancouver)	Region 3 (Bremerton)	Region 6 (King County)
Region 6 (Seattle)	Region 6 (Bellevue, Kirkland)	Region 6 (Renton)	Region 1 (San Juan, Island County)
Region 5 (Tacoma)	Region 5 (Pierce County)	Region 6 (King County)	Region 4 & 6



Quartermaster Company Water PUR & DIST



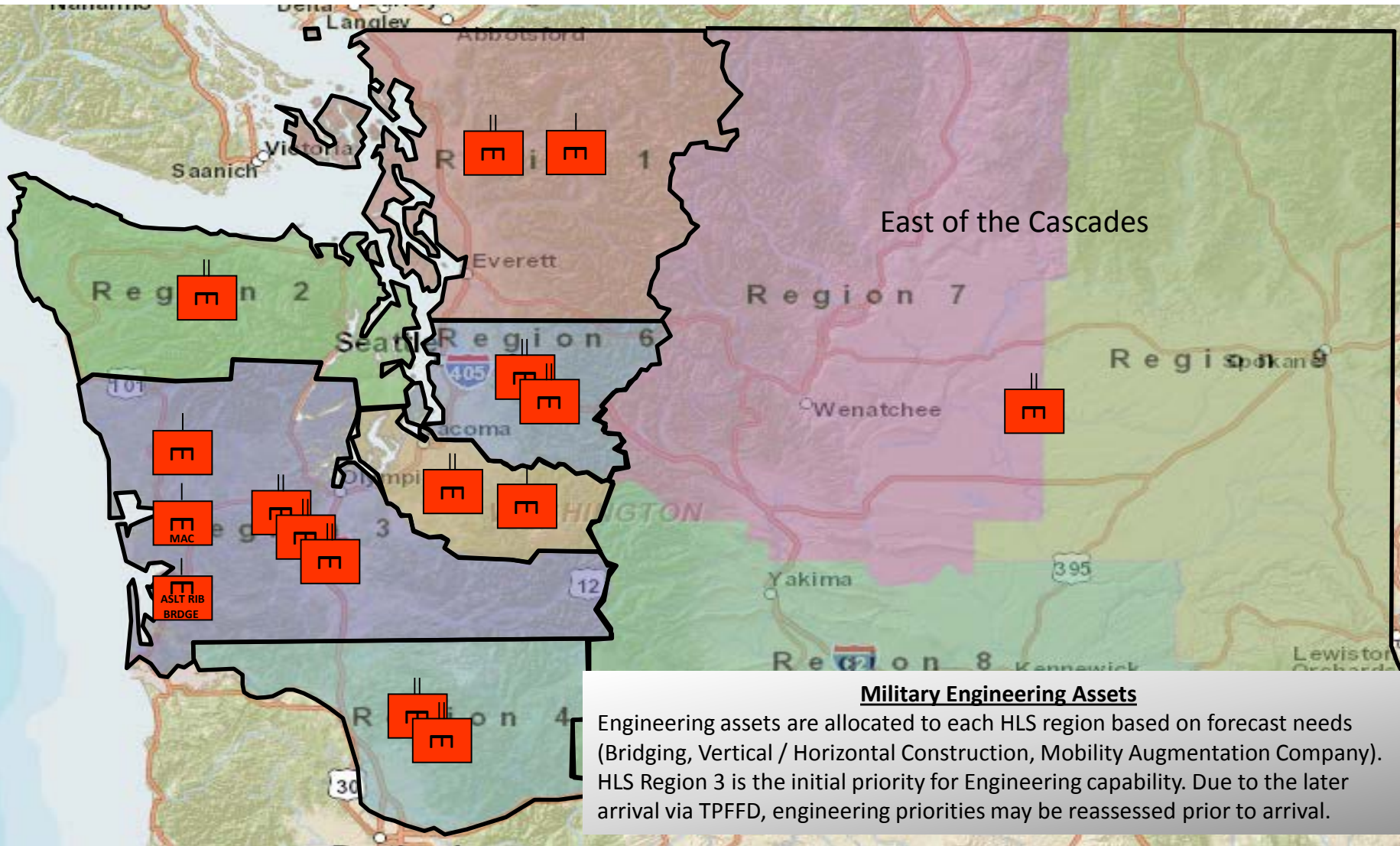
# Security Concept



### Military Security Assets

Military Security assets are provided as “Manpower” to the response and are capable of performing a large variety of tasks. They may be employed as part of the distribution network, conducting health and wellness checks, or providing stationary or mobile security. When possible these assets will be provided under T32.

# Engineering Concept

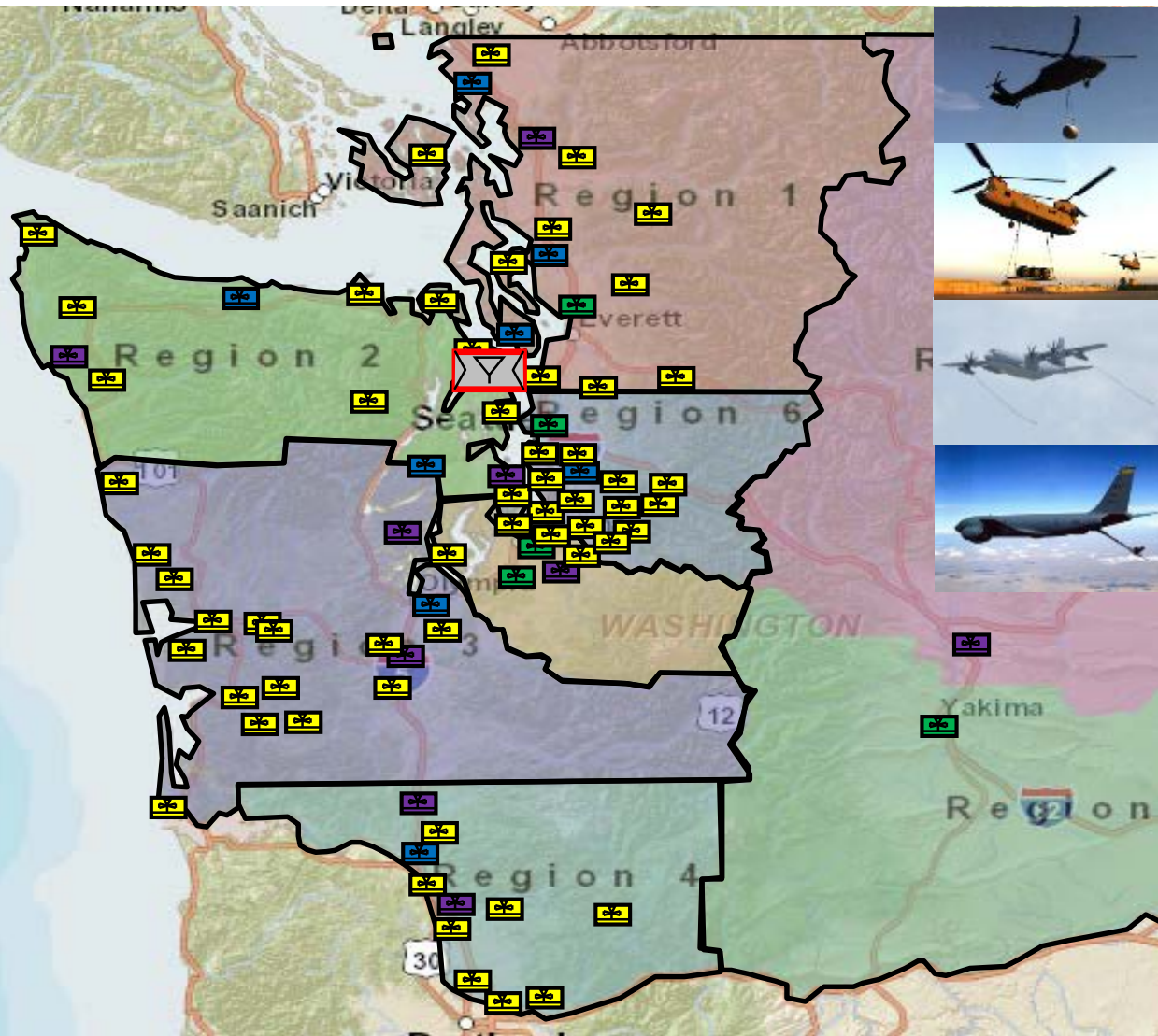
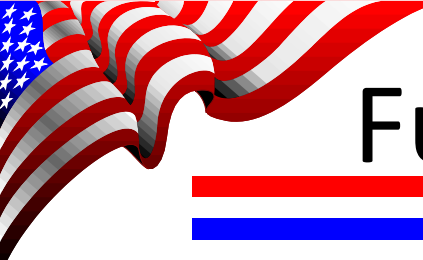


### Military Engineering Assets

Engineering assets are allocated to each HLS region based on forecast needs (Bridging, Vertical / Horizontal Construction, Mobility Augmentation Company). HLS Region 3 is the initial priority for Engineering capability. Due to the later arrival via TPFDD, engineering priorities may be reassessed prior to arrival.



# Fuel Distribution Concept



**DLA Fuel Farm at Manchester**  
 ~25 Million gallons of Diesel  
 ~50 Million Gallons of Jet Fuel

This fuel is used early in PH2A/B to sustain the response as infrastructure is emplaced that will enable long term sustainment. Distribution is via fuel barge on waterways, and heavy lift helicopter and fuel bladders to response critical need.



**40K gallon fuel farm (minimum)** established via above ground fuel bladders (2x 20K bladders minimum), fueled from fixed wing download.



**20K Gallon fuel farm (minimum)** established via above ground fuel bladders (1x 20K bladders minimum), fueled from fixed wing download.



**20K Gallon fuel farm (minimum)** established via above ground fuel bladders (1x 20K bladders minimum), fueled from fixed wing download.

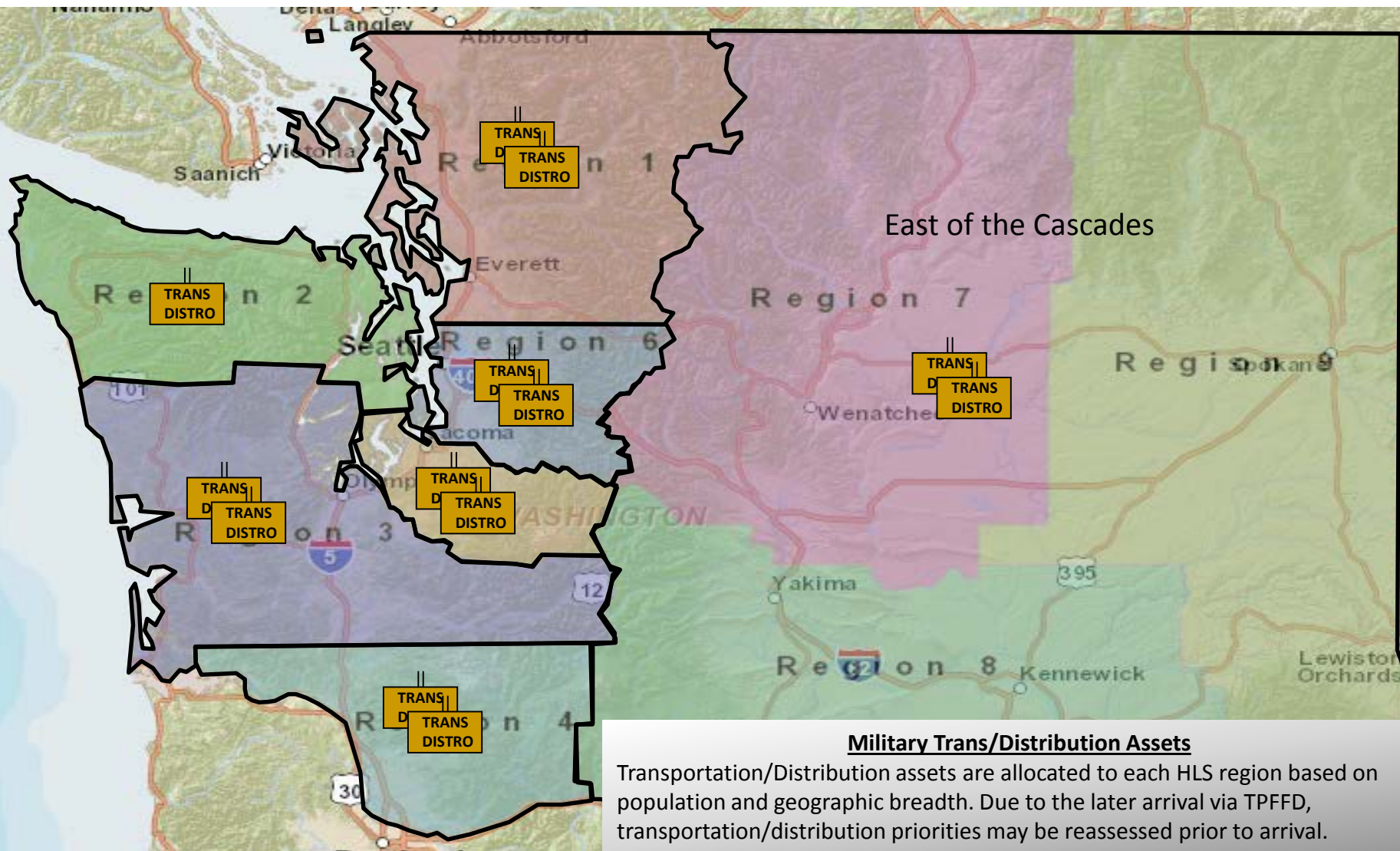


**10K Gallon Fuel farm, based on need, established via above ground fuel bladders, fueled by rotary wing or over-the-ground when available.**

**NOTE:** There is virtually no DOD capacity for storage, transfer, or distribution of bulk MOGAS or LPG.




# Trans/Distribution Concept



### Military Trans/Distribution Assets

Transportation/Distribution assets are allocated to each HLS region based on population and geographic breadth. Due to the later arrival via TPFFD, transportation/distribution priorities may be reassessed prior to arrival.

 Transportation / Distribution Unit




















# Geographic Task Forces



# DOD Forces Required

The icons below are not necessarily Service Component specific. In some cases these resources are only available in one Service Component. A typical configuration was used to perform calculations. In most cases Army organizational structure was used as the default.

 <p>EN BN PAX: 432</p>  <p>1 X HORIZ CO PAX: 162 VHCL: 112</p> <p>1 X VERTICAL CO PAX: 162 VHCL: 22</p>	 <p>1 X MANEUVER BN PAX: 650 VHCL: 86</p>	 <p>TRANS/DISTRO BN PAX: 526 VHCL: 160</p> <p>1 X DIST CO PAX: 142 VHCL: 57</p>	 <p>1 X QM CO WATER PUR &amp; DIST PAX: 130 VHCL: 57</p>  <p>1 X MORTUARY AFFAIRS CO PAX: 155 VHCL: 64</p>	 <p>1 X JISCC PAX: 5 VHCL: 2</p>  <p>1 X CIVIL AFFAIRS CO PAX: 31 VHCL: 7 (Five 4-man teams)</p>	 <p>CBT SPT HOSPITAL PAX: 244 VHCL: 35</p>  <p>ASMC PAX: 75 VHCL: 26</p>  <p>MED PLT PAX: 32 VHCL: 8</p>	 <p>BDE TF HQ PAX: 61 (Includes 16 AF Weather Det PAX)</p>	 <p>MANCHESTER FUEL FARM PAX: 30</p>  <p>TIER 1 FUEL FARM PAX: 30</p>   <p>TIER 2/3 FUEL FARM PAX: 20</p>  <p>TIER 4 FUEL FARM PAX: 10</p>
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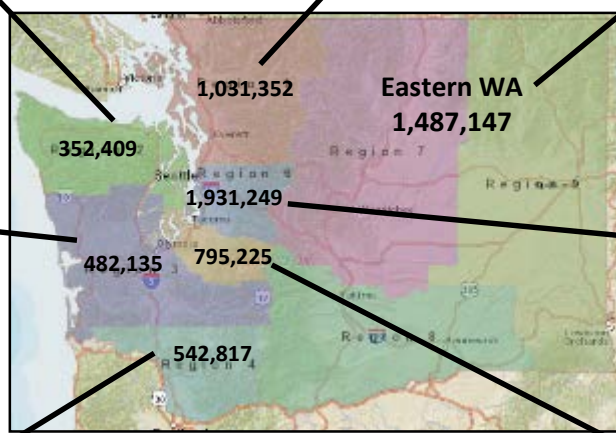
# DOD Task Force Composition

**Region 2**  
DOD Forces

**Region 1**  
DOD Forces

**East**  
DOD Forces

**Region 3**  
DOD Forces



**Region 6**  
DOD Forces

**Region 4**  
DOD Forces

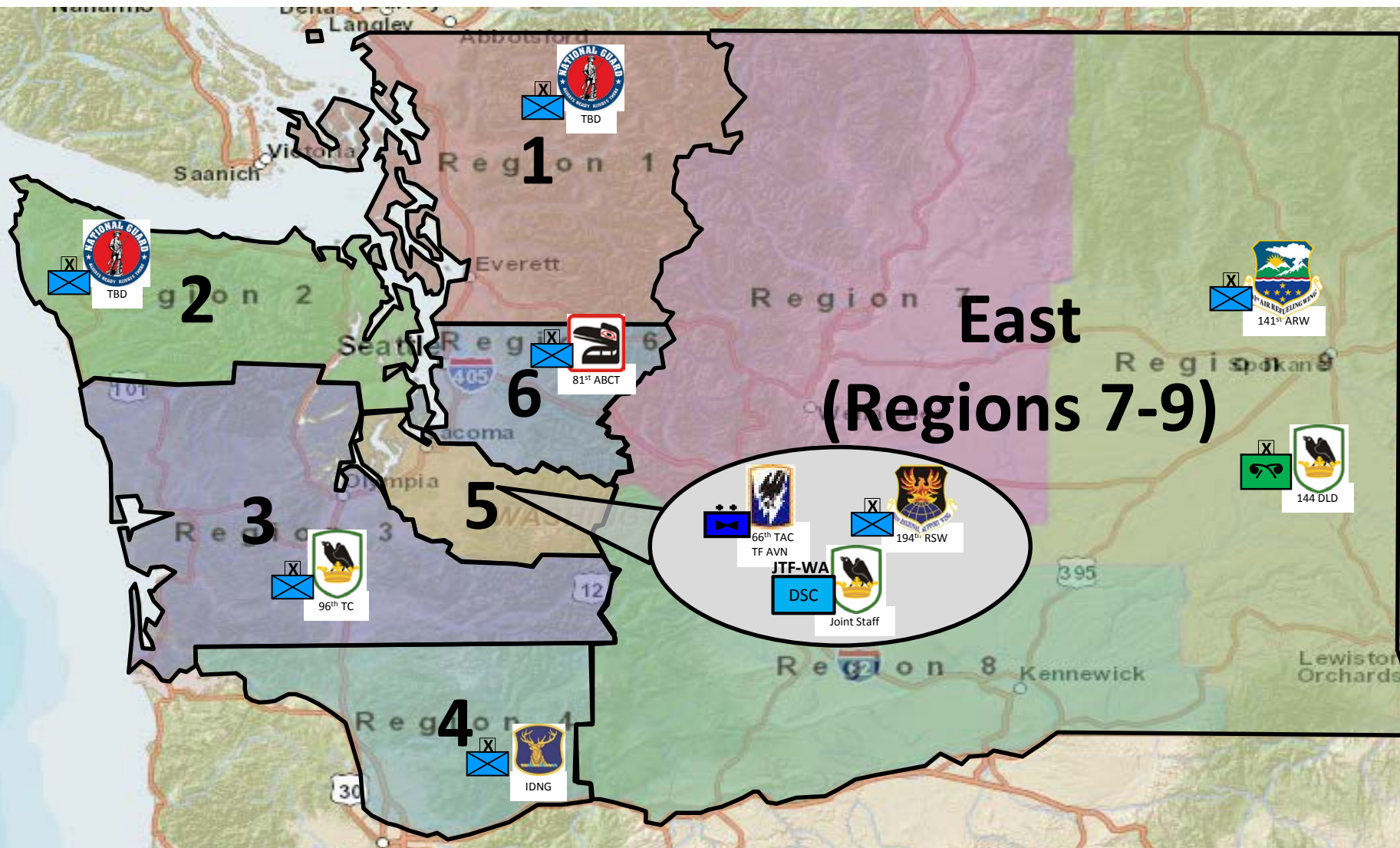
**DOD Personnel Requirement**

Region 1: 5,637	Region 6: 6,260
Region 2: 2,881	East: 2,896
Region 3: 6,891	TF Aviation: 2,689
Region 4: 3,610	TF CBRNE: 4,152
Region 5: 5,059	<b>Total: 40,075</b>

**Region 5**  
DOD Forces

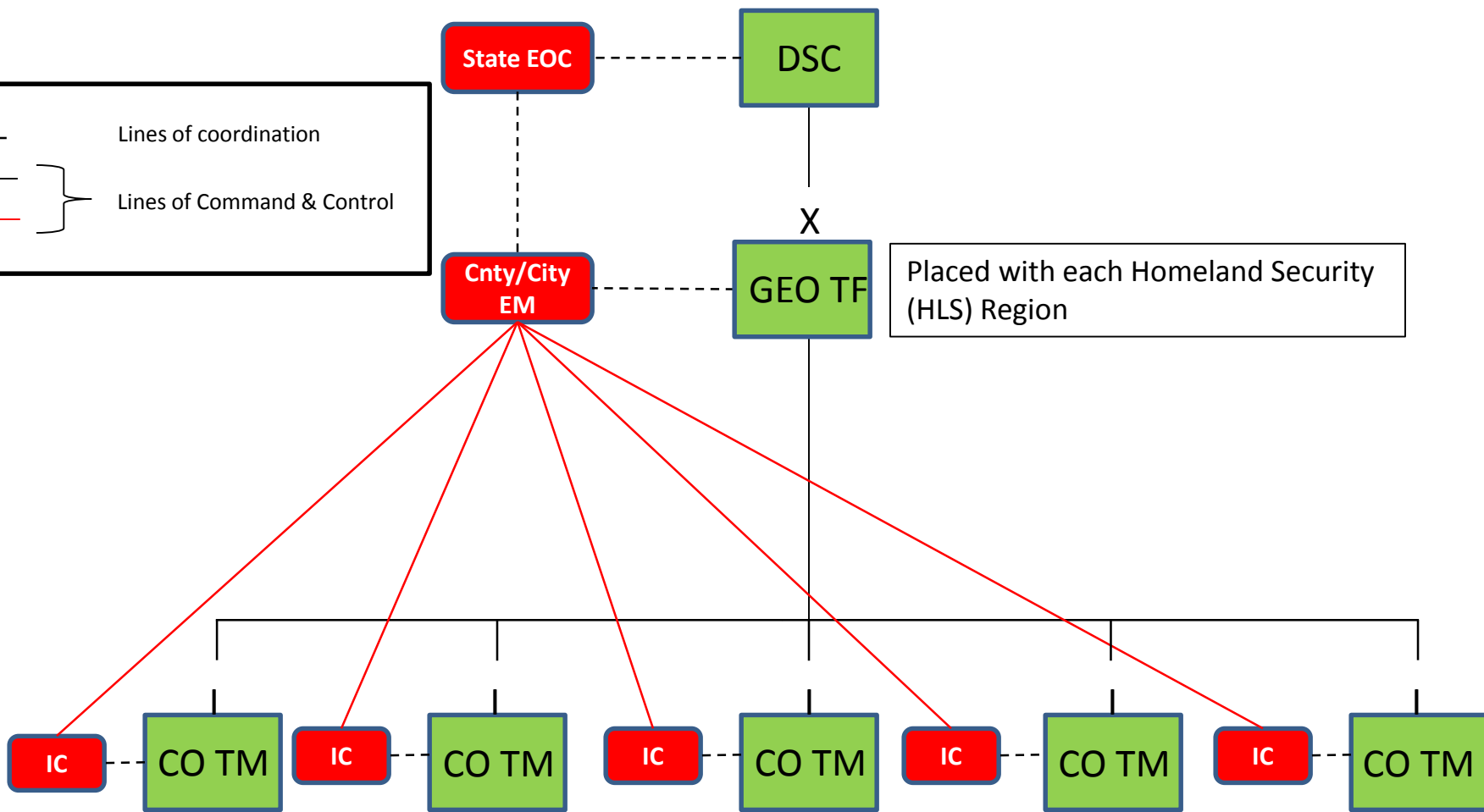
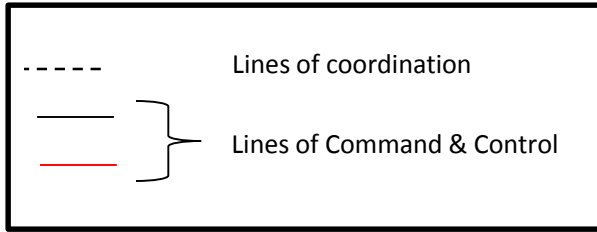
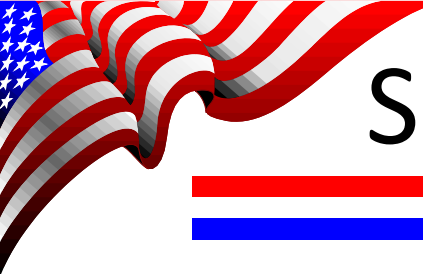


# Headquarters Alignment



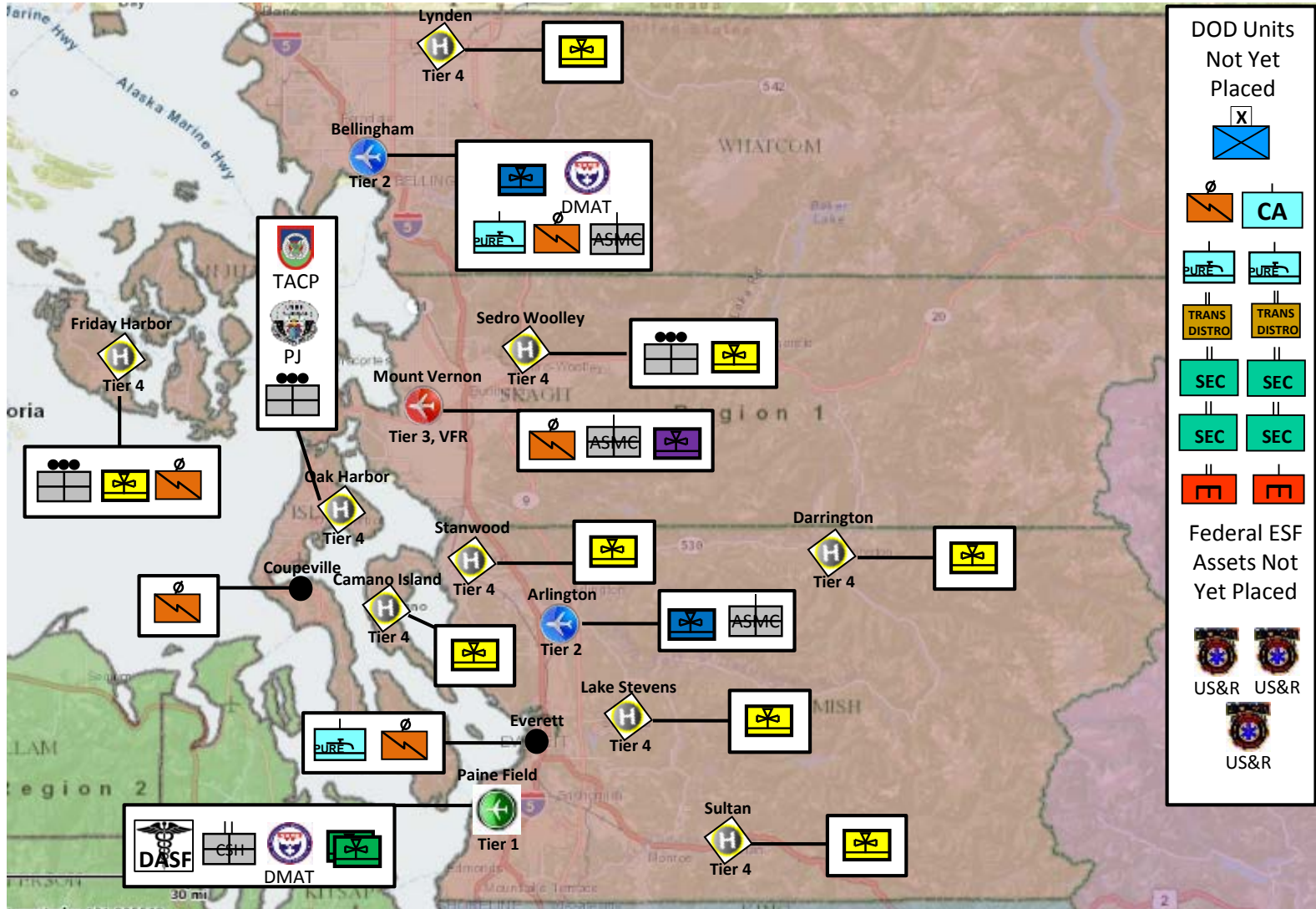


# Support Intent / Concept



Military units retain command and control over military units. Commanders at all levels provide support to local civilian authority via established supporting relationships.

# HLS Region 1



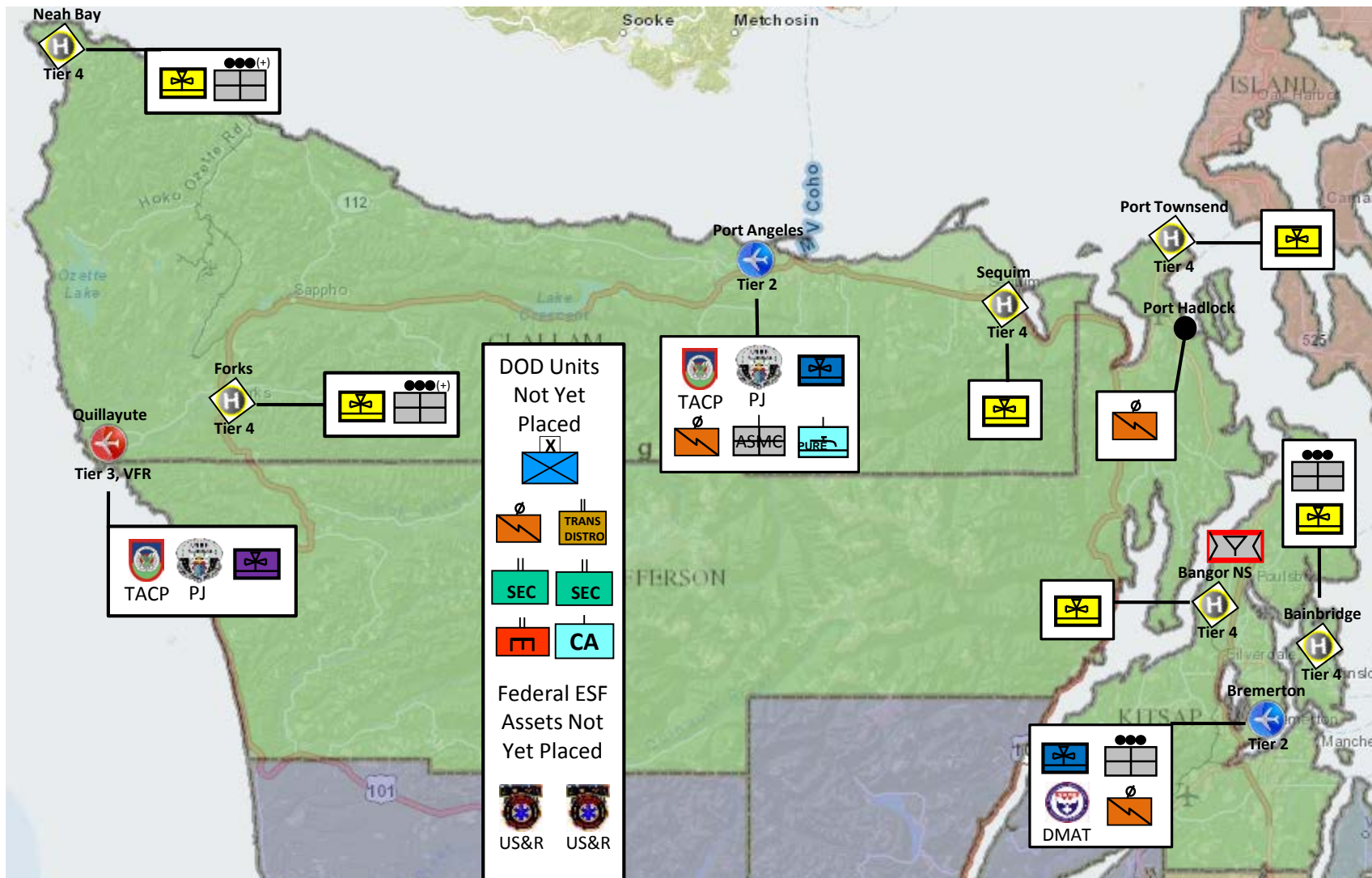
**DOD Units Not Yet Placed**

- Blue lightning bolt icon with 'X'
- Orange lightning bolt icon
- CA (Cyan lightning bolt icon)
- PURE (Cyan lightning bolt icon)
- PURE (Cyan lightning bolt icon)
- TRANS DISTRO (Yellow lightning bolt icon)
- TRANS DISTRO (Yellow lightning bolt icon)
- SEC (Green lightning bolt icon)
- SEC (Green lightning bolt icon)
- SEC (Green lightning bolt icon)
- SEC (Green lightning bolt icon)
- Red lightning bolt icon
- Red lightning bolt icon

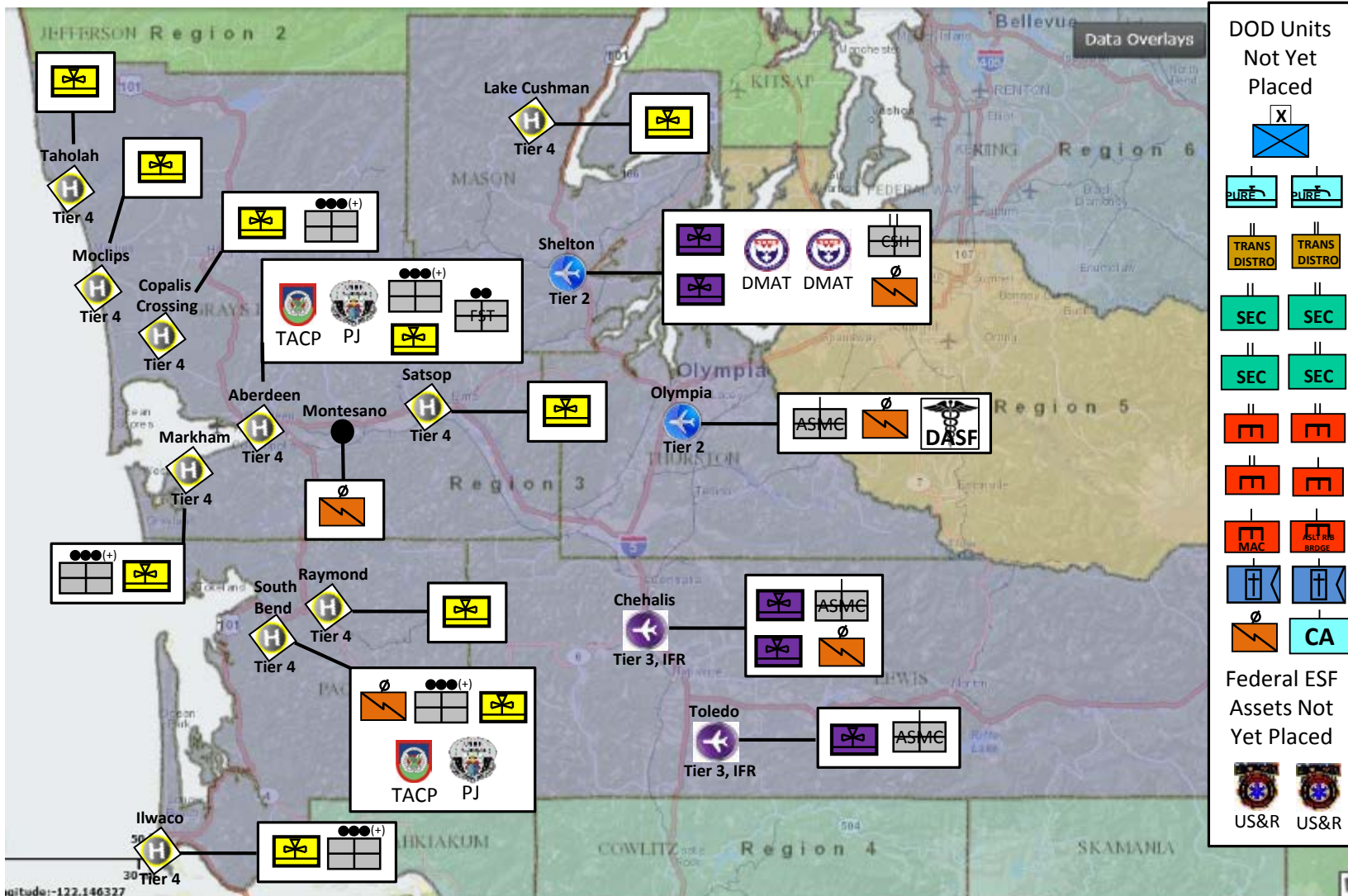
**Federal ESF Assets Not Yet Placed**

- US&R (US&R icon)
- US&R (US&R icon)
- US&R (US&R icon)

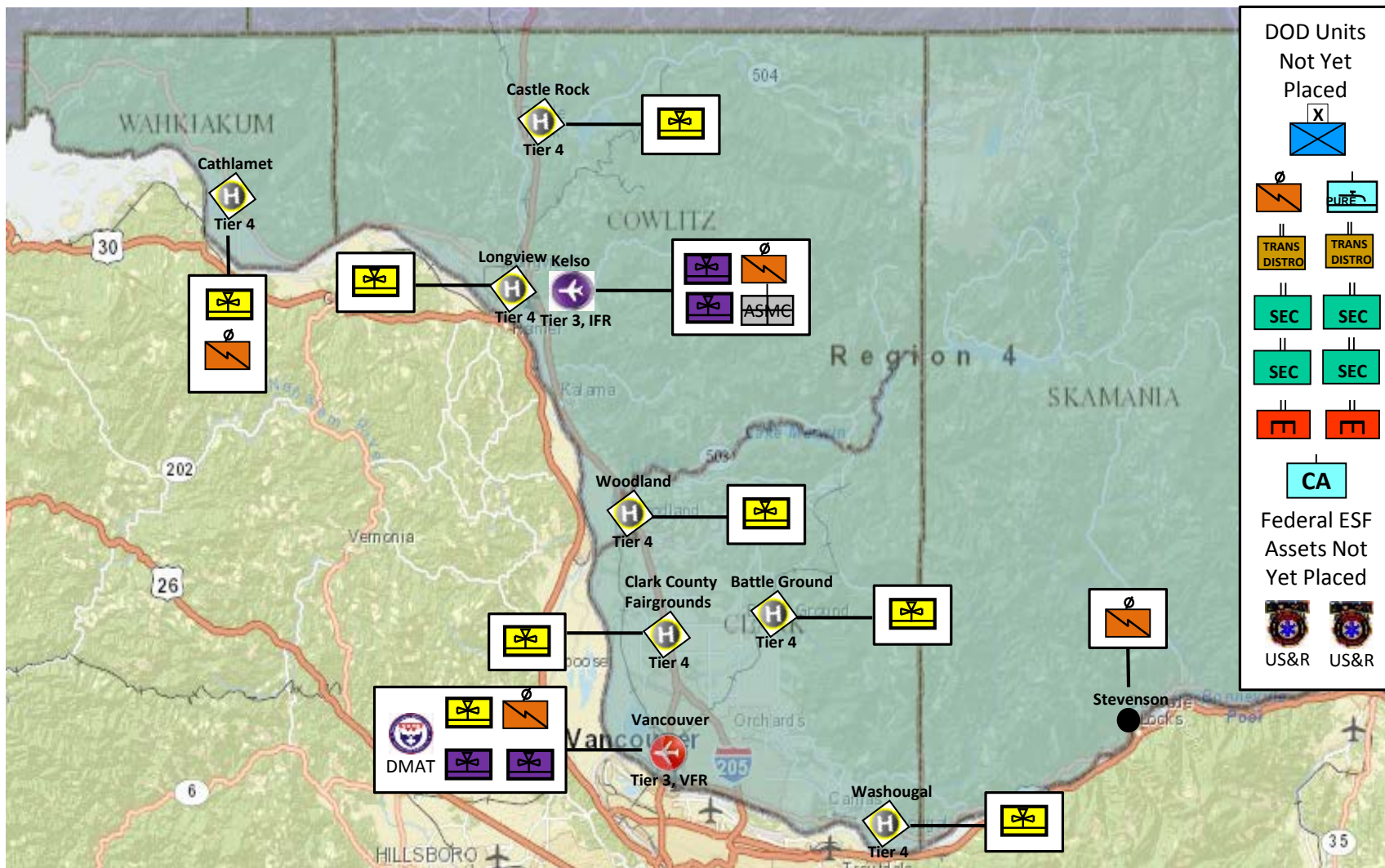
# HLS Region 2



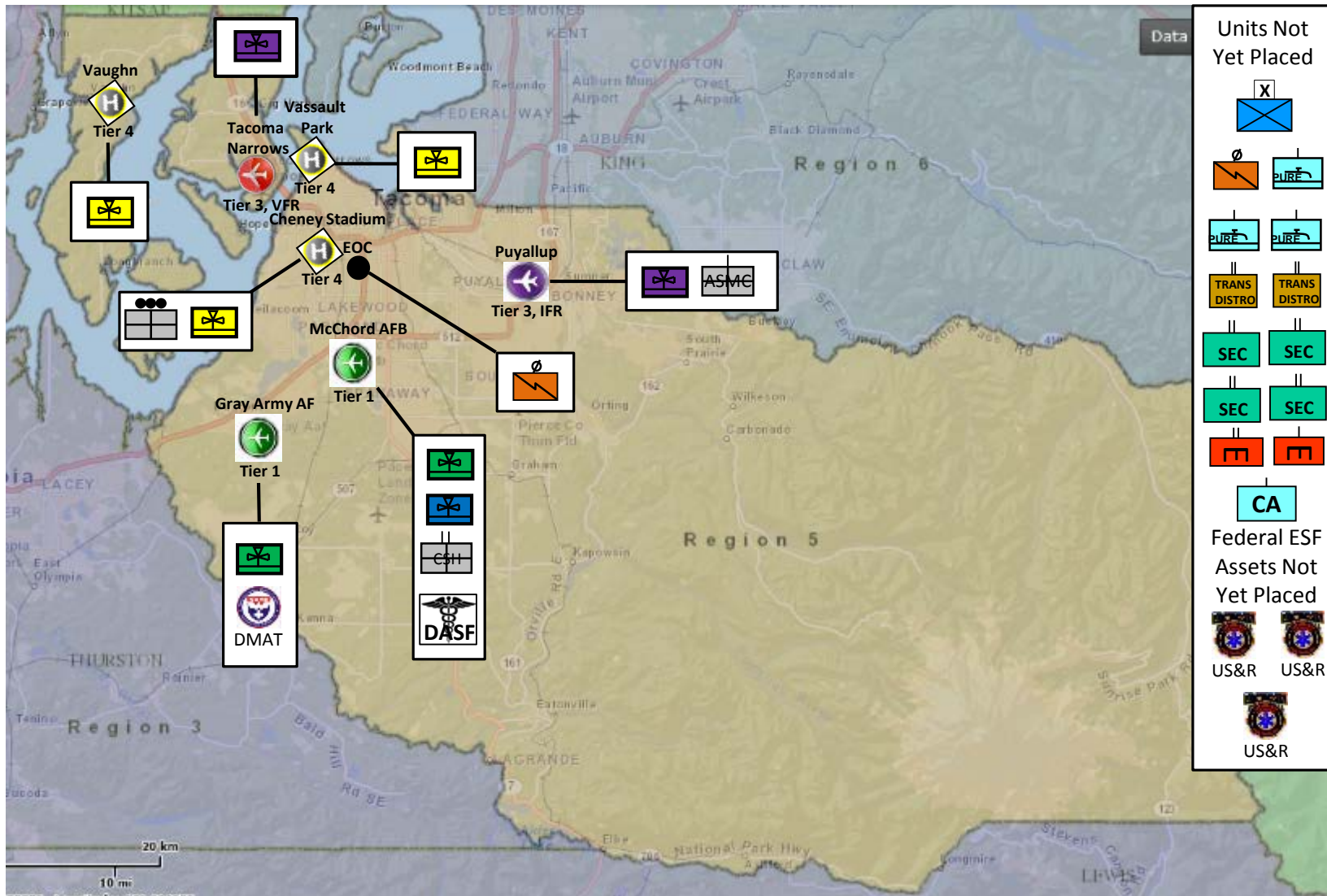
# HLS Region 3



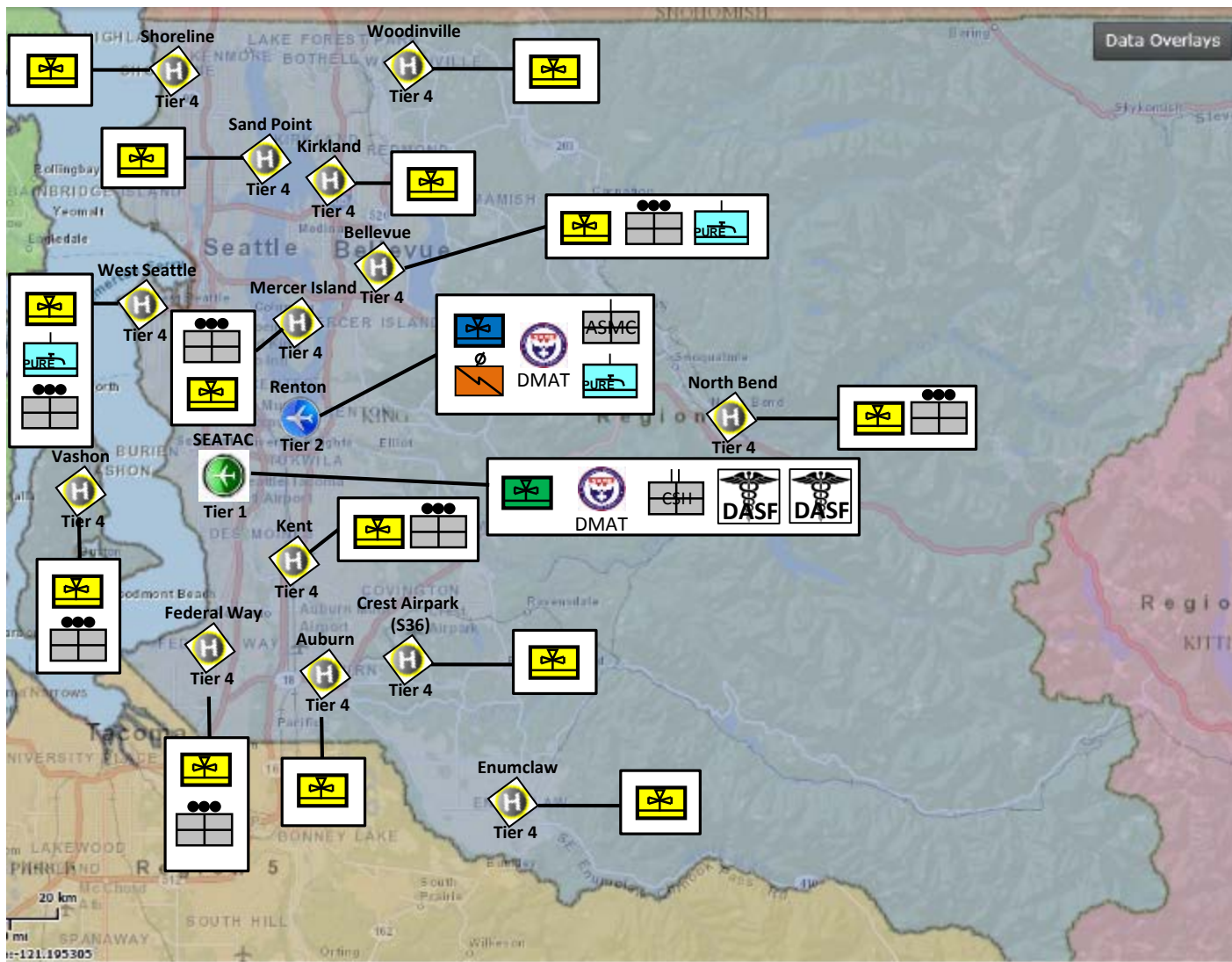
# HLS Region 4



# HLS Region 5



# HLS Region 6



**DOD Units Not Yet Placed**

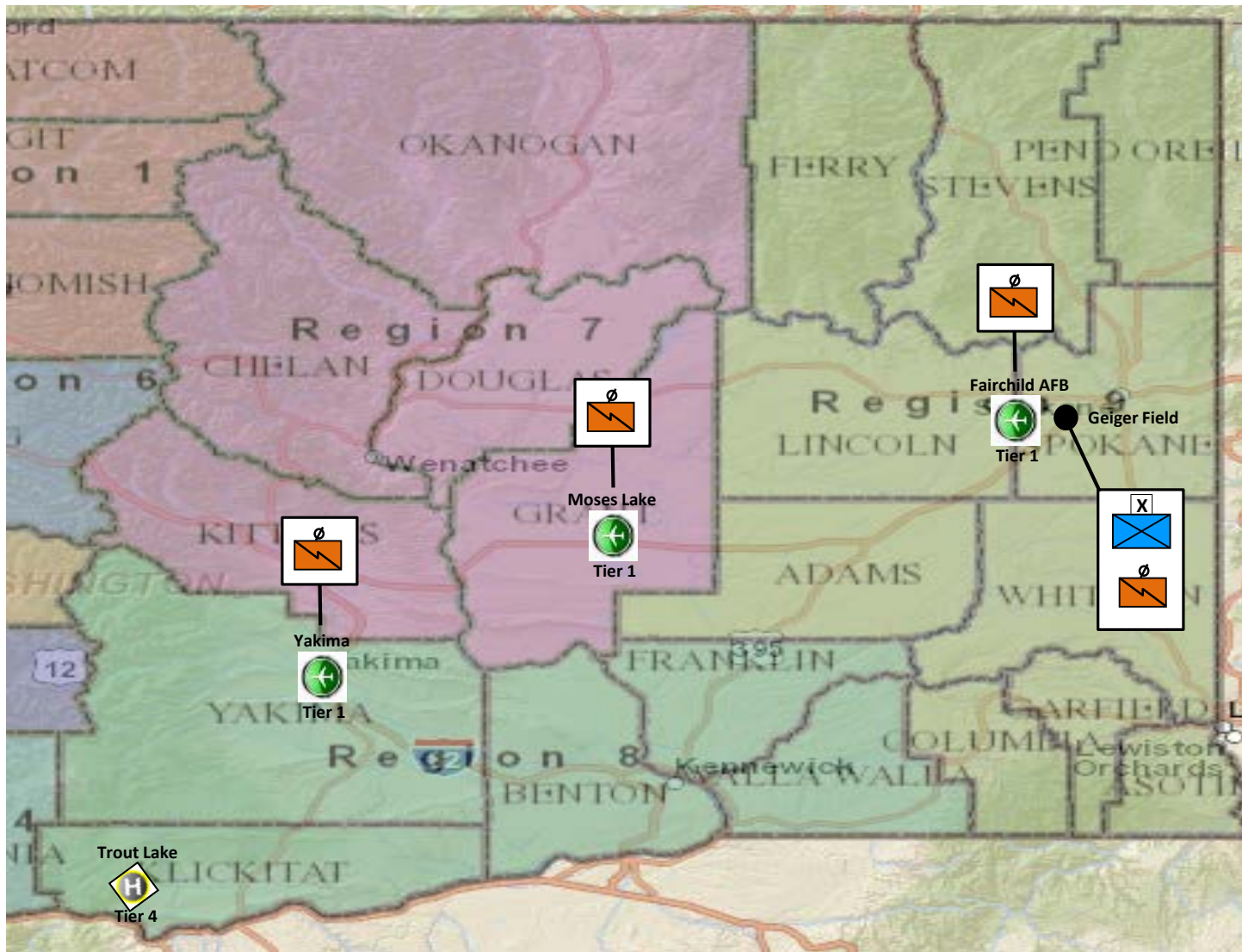
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**Federal ESF Assets Not Yet Placed**

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# HLS Region 7-9 (TF East)

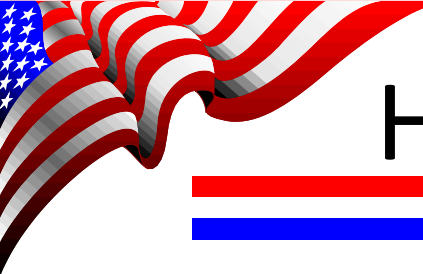


DOD Units Not Yet Placed

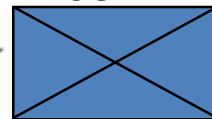
TRANS DISTRO	TRANS DISTRO
SEC	SEC
CA	CA



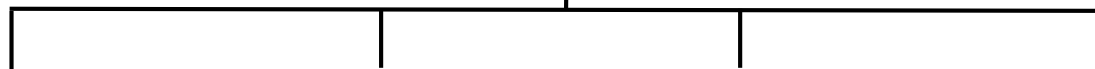
# Headquarters Alignment



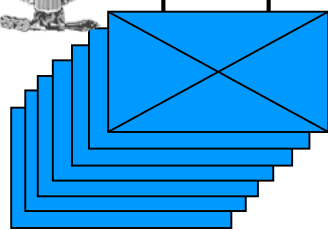
DSC-WA



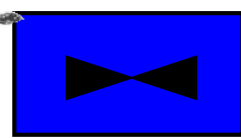
JTF-WA



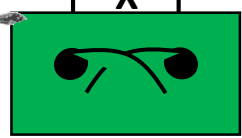
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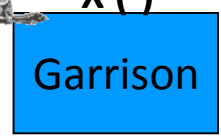
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X





X (-)




Geographic Task Forces


TF Region 1  TBD

TF Region 2  TBD

TF Region 3  96<sup>th</sup>

TF Region 4  (IDNG)

TF Region 5  194<sup>th</sup> RSW

TF Region 6  81<sup>st</sup> ABCT

TF East  141<sup>st</sup> ARW

TF Aviation  66<sup>th</sup> TAC

TF CBRNE  144<sup>th</sup> DLD

 WSG

Functional Task Forces

CDR, CPM Garrison  
CDR, WSG

# The Way Forward




- **Disseminate the Plan**
  - Road show to the Homeland Security Regions / Counties / Tribes
    - Briefing all WA NG MSCs and each Homeland Security Region in Washington State.
    - CSZ Plans Seminar, January
  
- **Exercise the Plan**
  - **FY 15 Washington Military Department Internal Rehearsal (Evergreen Tremor)**
    - Focus effort on validating concepts in the plan
    - Engage specific State/Federal agencies and local municipalities to conduct rehearsal
  - **FY 16 Exercise and Plan Rehearsal (Cascadia Rising)**
    - Regional (Region X States) and may become NEPCE event
    - Full state agency and EMD participation
      - Not only for main event, but also for ramp up exercises
    - Maximize participation with local municipalities and Federal partners
  
- **Complete and Refine the Plan**
  - Continue to conduct detailed planning
    - Logistics summit, JRSOI summit, others as necessary and if opportunity arises
    - More detailed planning with each HLS Region and Geographic Task Force Staff
  - Incorporate recommended changes and update this plan
    - Publish “Final Draft” after the FY15 exercise
    - Publish the “Final” plan after the FY16 exercise




# Regionally Aligned Federal Resources

**Region 2**  
Federal ESF Assets



US&R DMAT

**Region 1**  
Federal ESF Assets



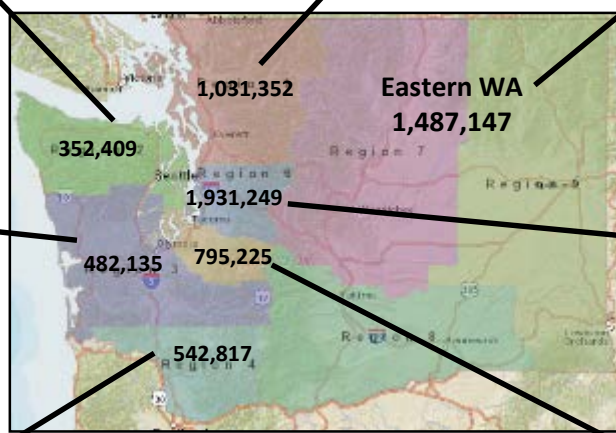
US&R DMAT

**East**  
Federal ESF Assets


**Region 3**  
Federal ESF Assets



US&R DMAT



**Region 6**  
Federal ESF Assets



US&R DMAT

**Region 4**  
Federal ESF Assets




US&R

**Non-DOD Personnel Requirement**

Region 1: 513	Region 5: 363
Region 2: 292	Region 6: 734
Region 3: 442	East: 0
Region 4: 300	<b>Total: 2,644</b>

**Region 5**  
Federal ESF Assets



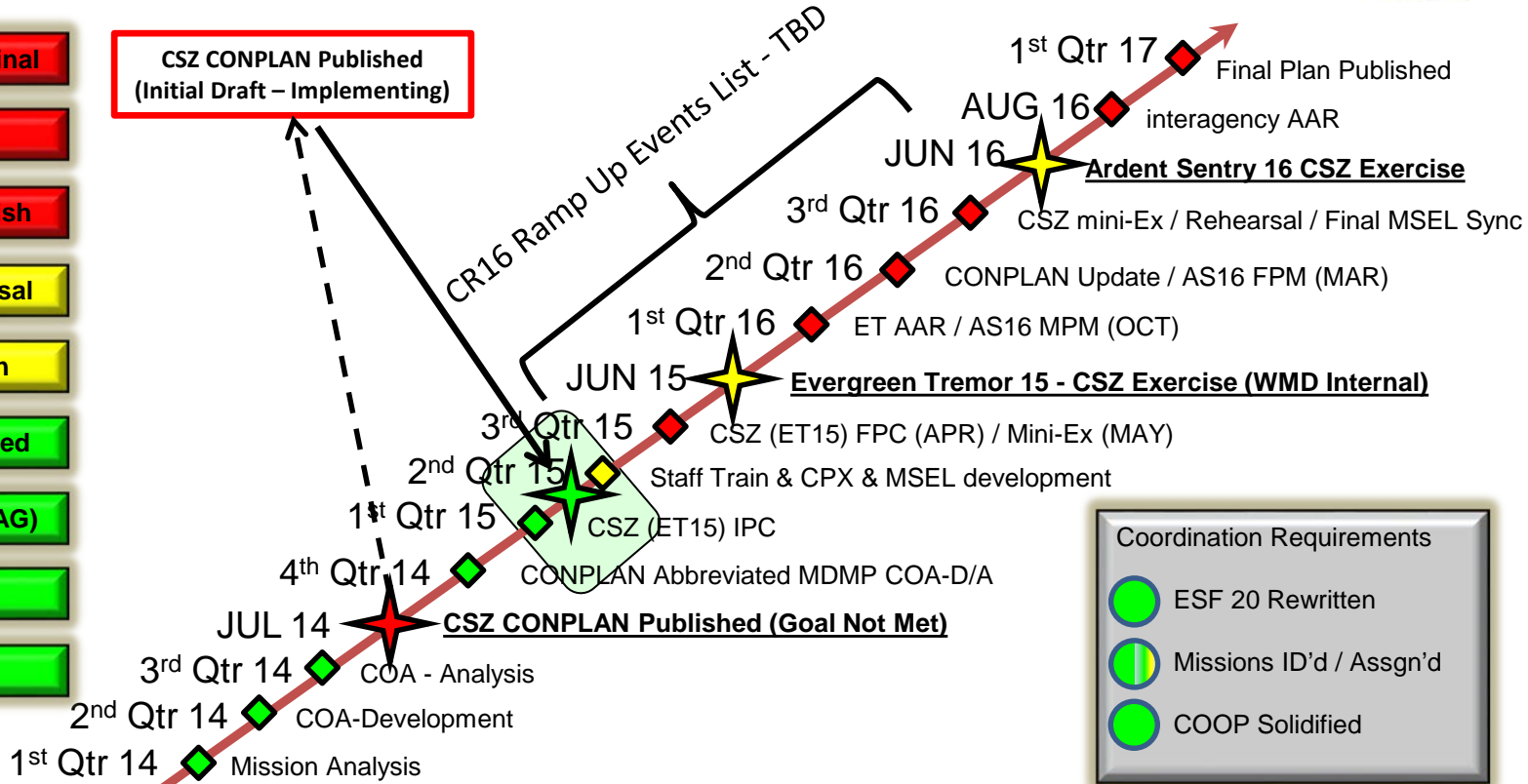
US&R DMAT

# CSZ CONPLAN Timeline



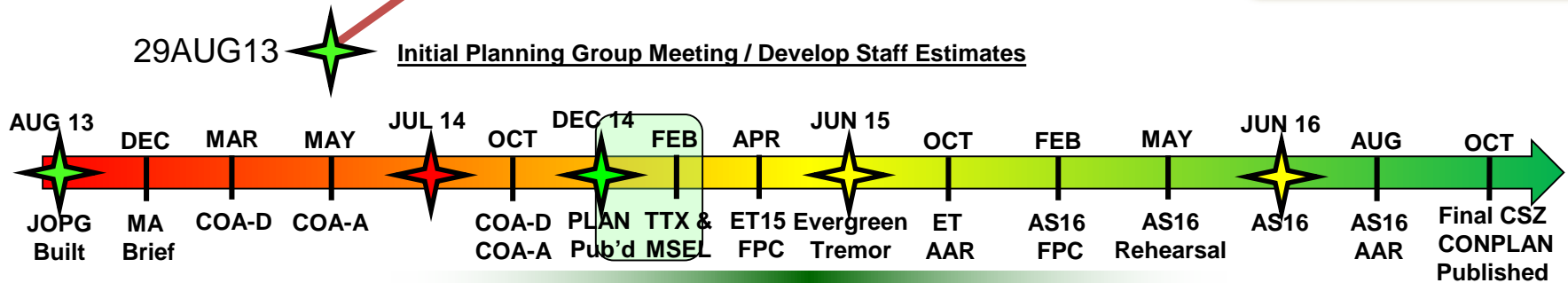
- CSZ Plan Published - Final
- Cascadia Rising 16
- CSZ CONPLAN re-publish
- ET 15 - Internal Rehearsal
- CSZ Plan Dissemination
- CSZ CONPLAN Published
- Plan Approved (GOV/TAG)
- JPT JOPP on CSZ
- Establish JPT

CSZ CONPLAN Published (Initial Draft - Implementing)



Coordination Requirements

- ESF 20 Rewritten
- Missions ID'd / Assgn'd
- COOP Solidified





# Questions / Discussion



Thank you for your time!