



ESS

Explosive Safety Siting



ESS Web Beta 1.0 Status

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Shea Broussard -Presenter
Michael Oesterle, PhD, PE
David Bianchi, GISP



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Explosive Safety Siting



ESS Desktop's Biggest Problems:

- Data resides on individual user's computers
- ESS requires an ArcGIS license per desktop, which adds license costs, certification and accreditation cost for each military service, and can limit ESS usability depending on approval and funding limitations.
- Antiquated code repositories.



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Web-Based ESS Benefits

- Removal of user requirement to have a local copy of ArcGIS
- Centralized storage to ensure data integrity and standardization.
- Enhanced collaboration among multiple users
- Platform for site plan submission and approval process
- Simplified IA compliance across multiple Military Services
- Accelerated product deployment
- Load balanced and scaling capacity
- Capability to access enterprise data



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Schedule

- **October 2015**; DDESB / EXWC partnered with DISDI for Hosting:
 - 2015 Project defined
- **April 2016**; Project requirements defined.
- **September 2017**; Task order awarded
 - Initial design | Web-based ESS V. Beta 1.0 & V. 1.2 requirements defined
 - 2017 Task order awarded
- **December 2018**; ESS web broke ground
 - Re-write of key ESS features
 - Four to five spiral development with evaluation periods
 - 2018 ESS Web Beta 1.0
- **March-June 2019**; ESS Web v1.2 Capable of generating and submitting site plans
 - Repository for NEES data
 - 2018 ESS Web v. 1.2
- **TBD**; Web-Based ESS v1.3 and beyond
 - RBESS- Tier 1, 2a, and 2b
 - Automation of GIS, RPI, and PES data updates
 - Re-work site approval process
 - TBD ESS Web v. 1.3



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Collaboration with DISDI

- **Solidified in Late 2017;** DDESB / EXWC partnership with DISDI:
- DISDI currently host ESS application within DISDI Dev Portal
- The host site is Amazon Web Services. Gov. Cloud
- Pursuing accreditation that includes ESS being bundled with the existing DISDI accreditation.

ESS Welcome Screen

Follow the Below Steps

Installation Option

Facility Selector

Measure Units

Analysis Settings

Confirmation



Welcome!

The Explosives Safety Siting Application automates the calculation and display of Explosives Safety Quantify Distance (ESQD) arcs for explosives storage or handling sites and assist with the development of the site plan packages.

Select one of the options in the left column.

Cancel

Previous

Next >

Under the hood

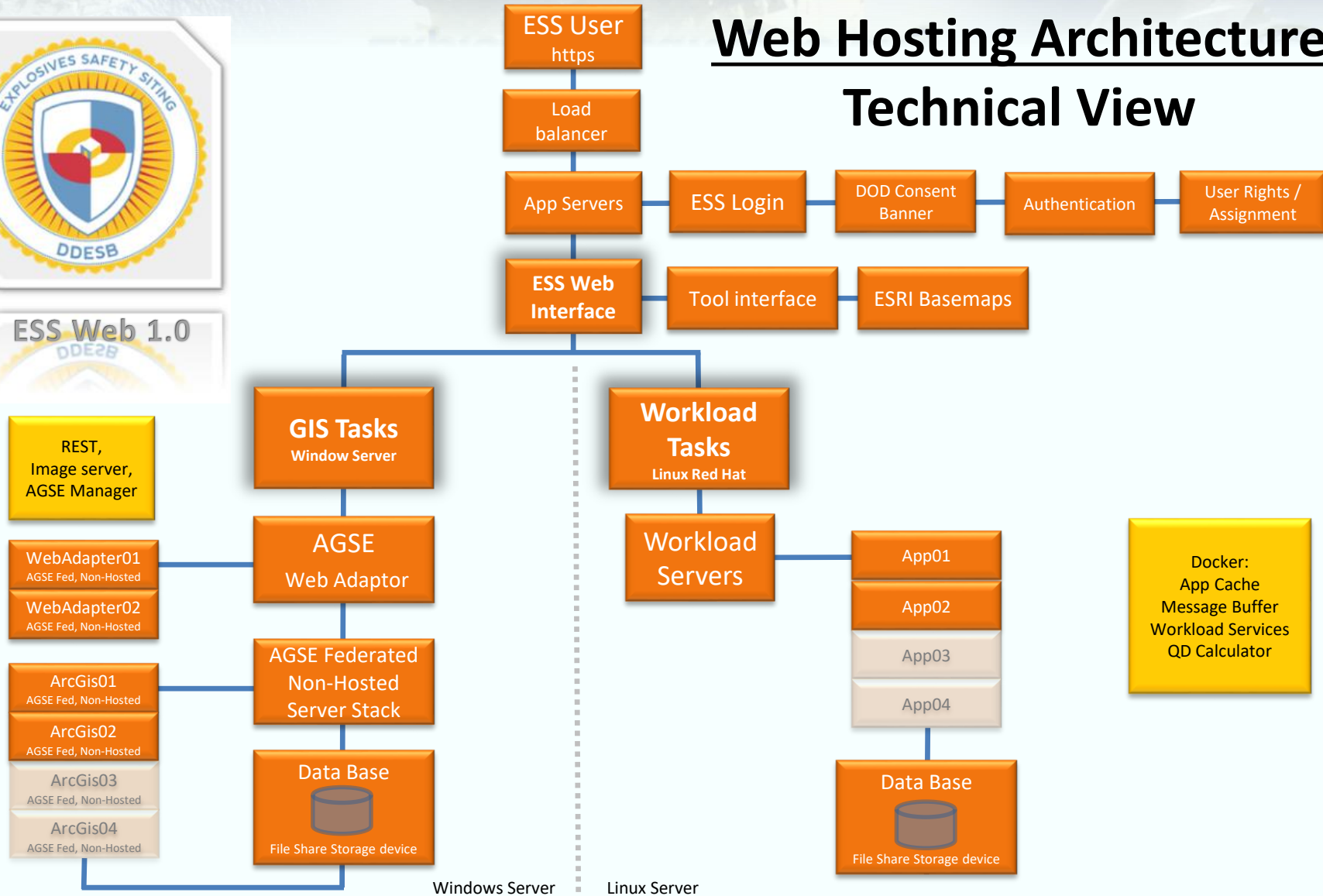




ESS Explosive Safety Siting



Web Hosting Architecture Technical View

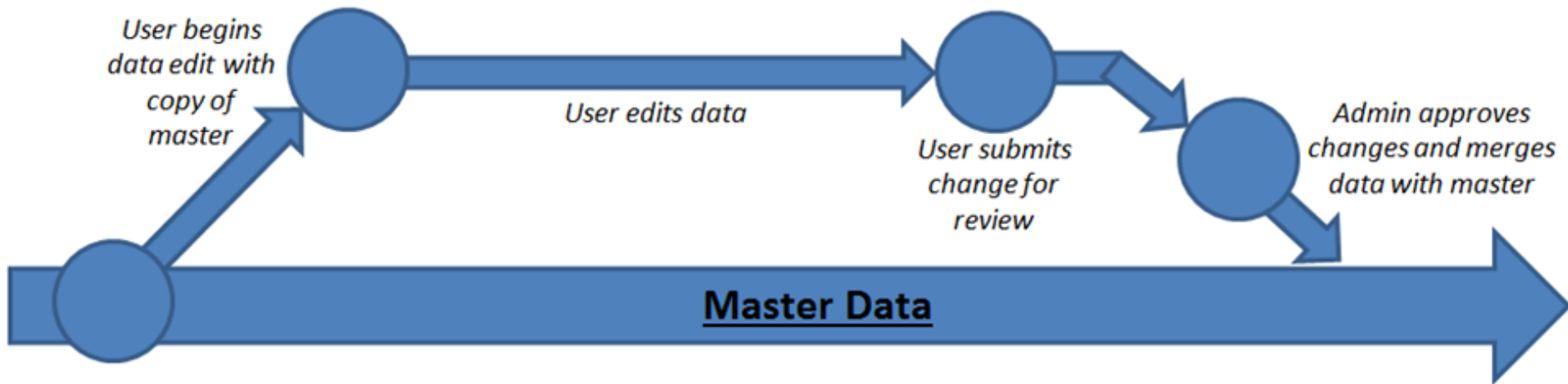




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Web ESS Dataflow

Scenario 1- Single User Edit



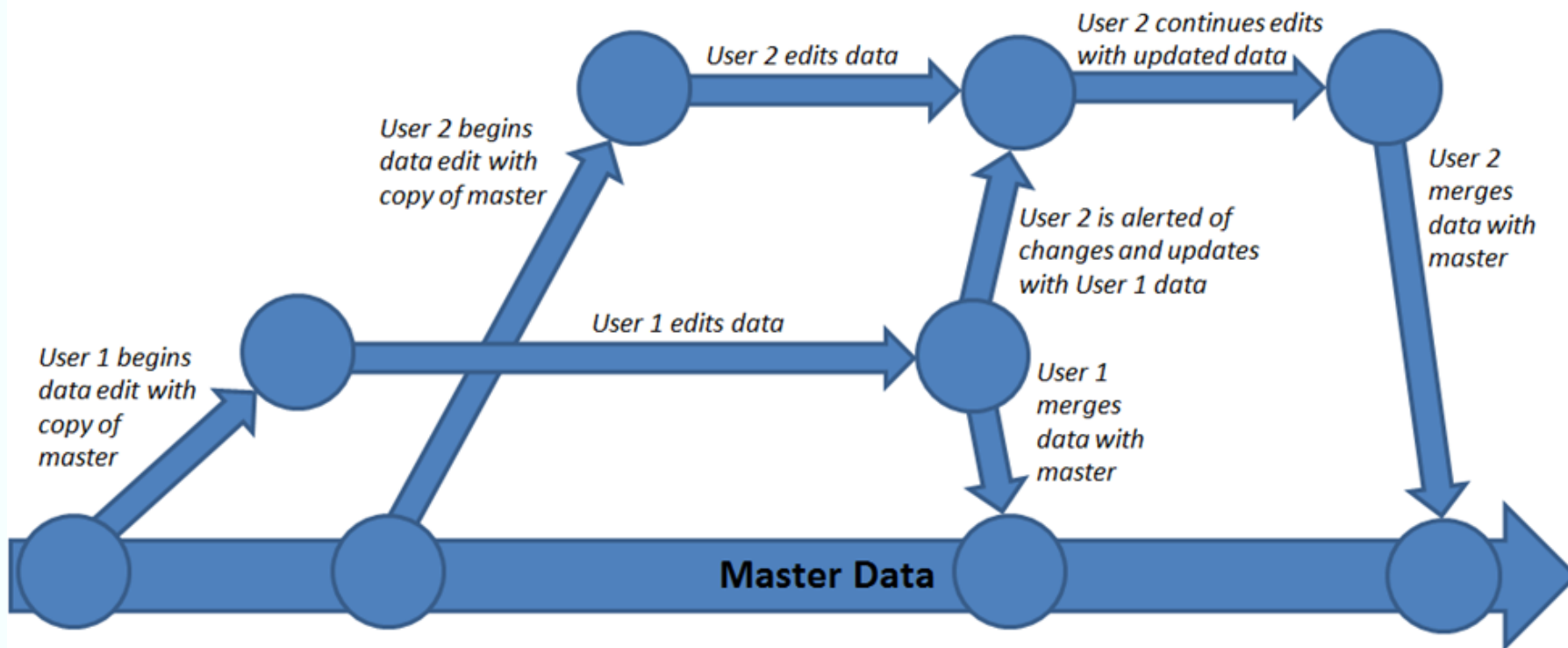
ESS Data Timeline



ESS Explosive Safety Siting

Web ESS Dataflow

Scenario 2- Multiple User Edit



ESS Data Timeline

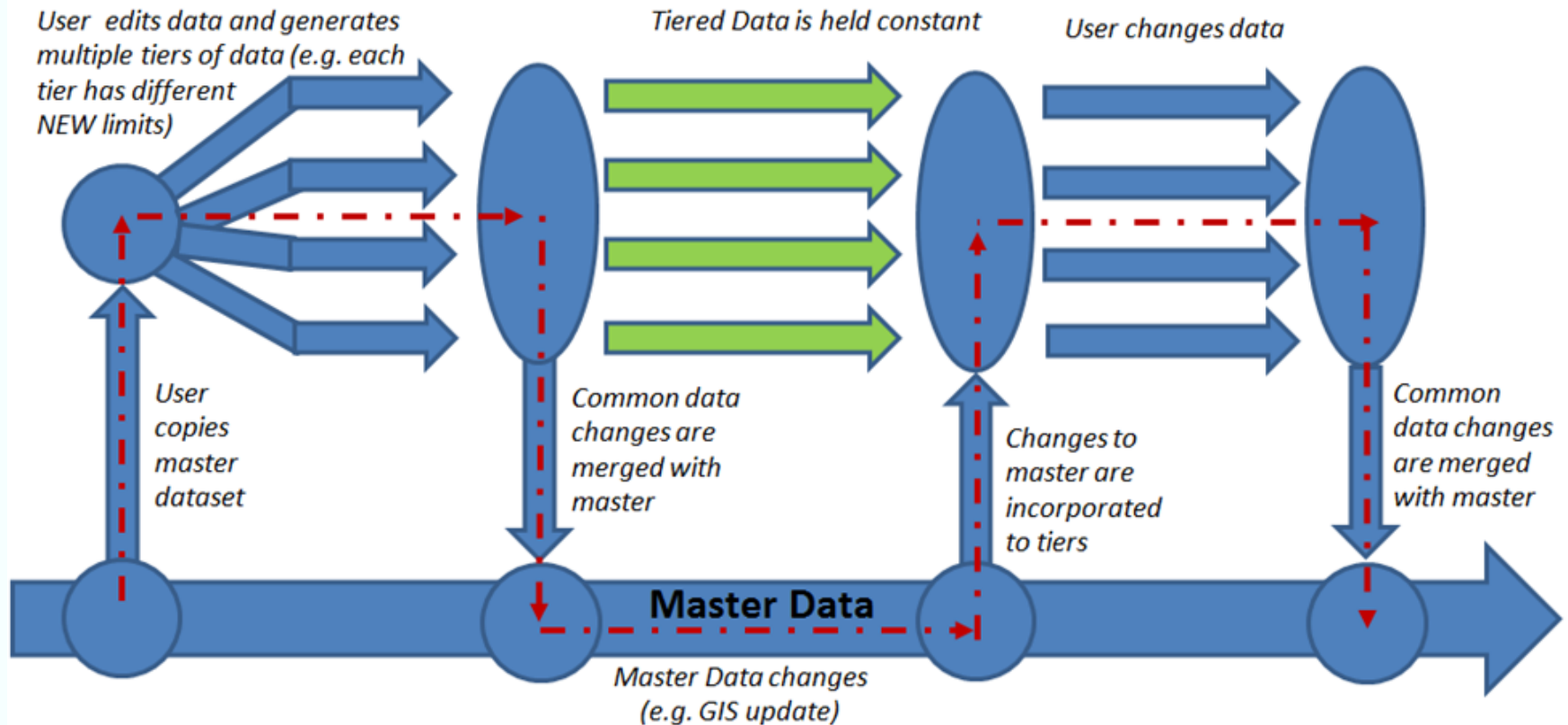


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Web ESS Dataflow

Scenario 3- Tiered Analysis



ESS Data Timeline



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ESS Web

Search:

Facility Number: 1036
 Facility Name: OPR LOC
 Facility Description:
 Typecode: AGM
 Last Modified: 6 / 14 / 18

ID	Name	Installation
1019	New Dataset	Alameda
1020	With 2 services	Alameda
1023	New Dataset	Alameda
1024	Renamed Dataset	Alameda
1027	New Dataset	Indian Head
1028	China Lake Dataset	NAWCL
1029	Copy of Renamed Dataset	Alameda
1030	New Dataset	Indian Head
1033	Don't use	Alameda
1035	Spiral 3 - Alameda	Alameda
1037	Test 12	Alameda
1039	Copy of Test 12	Alameda
1043		Alameda
1044		Alameda
1046	New Dataset	NAWCL
1047	New Dataset	Indian Head

Welcome Back!
 Pick an installation above to work on, or navigate the map to locate one.

Map navigation buttons: Select, Identify, Legend, Analyze



ESS Explosive Safety Siting



172.16.20.59:8043/ess/dataset-details?id=1073/dataset-map

ESS Web Admin Tools Admin

DASHBOARD

PES SUMMARY

TOTAL NEW (LBS)	1,859,000
EXPLOSIVE SITES	640
BARRICADED	60
PES-ES RELATED	45
VIOLATIONS	250
MITIGATED	12
TOTAL FACILITIES	1230

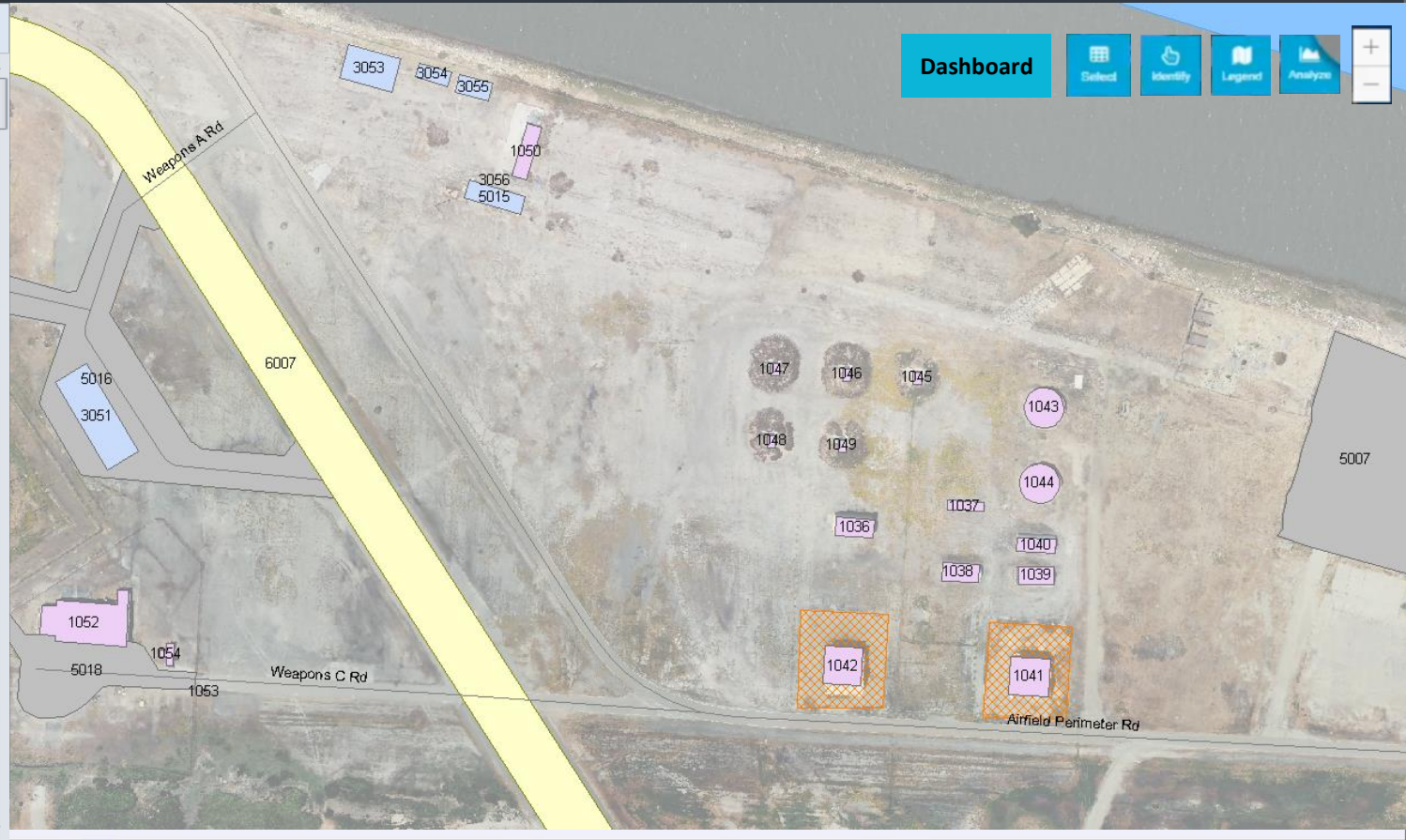
SITE PLAN ANALYSIS

MITIGATION MEASURES	96
SITE PLANS CREATED	30
SITE PLANS APPROVED	12
SITE PLANS WAITING TO BE APPROVED	6
SITE PLANS NOT APPROVED	4

SITE PLAN ANALYSIS

MITIGATION MEASURES	96
SITE PLANS APPROVED	12
SP WAITING TO BE APPROVED	6
SITE PLANS NOT APPROVED	4

DATASET: Alameda, CA



Dashboard

Select Identify Legend Analyze



ESS Explosive Safety Siting

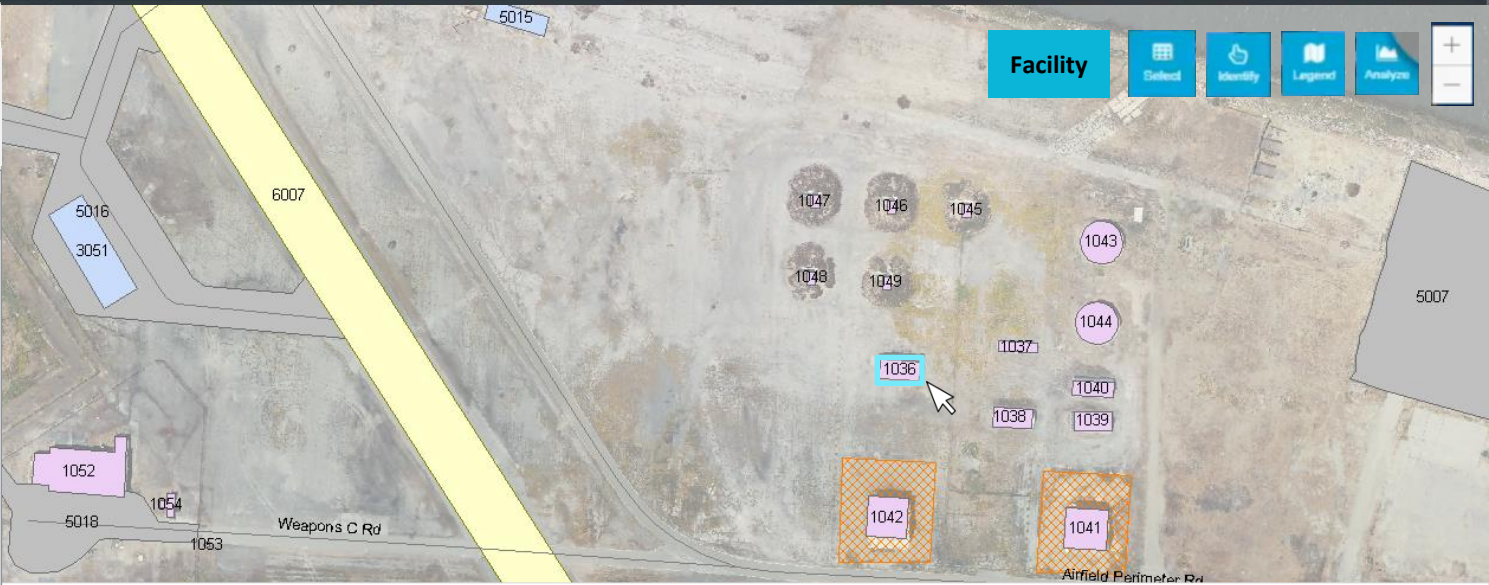


ESS Web Admin Tools

Search:

Facility Number: 1036
Facility Name: OPR LOC
Facility Description:
Typecode: AGM
Last Modified: 6 / 14 / 18

- DETAILS
- NOTES
- EXPLOSIVES
- RELATED PES: 3
- RELATED ES: 5
- BARRICADES: 2
- QD ANALYSIS RESULTS
- DISPLAY ARC RESULTS
- VIOLATIONS: 12
- MITIGATIONS: 3
- SUBMITTAL PACKAGE ITEMS: 6
- ADMIN
- ATTACHMENTS: 4



Facility

Type Code: AGM	Open Location:	Remote Operation:
Construction Type: Aboveground site: Heavy Wall and Roof	Reinforced Openings:	Door Open:
Weapons Configuration:	Combustible Construction:	
Fragments Contained: No	Aircraft Group:	



ESS Explosive Safety Siting

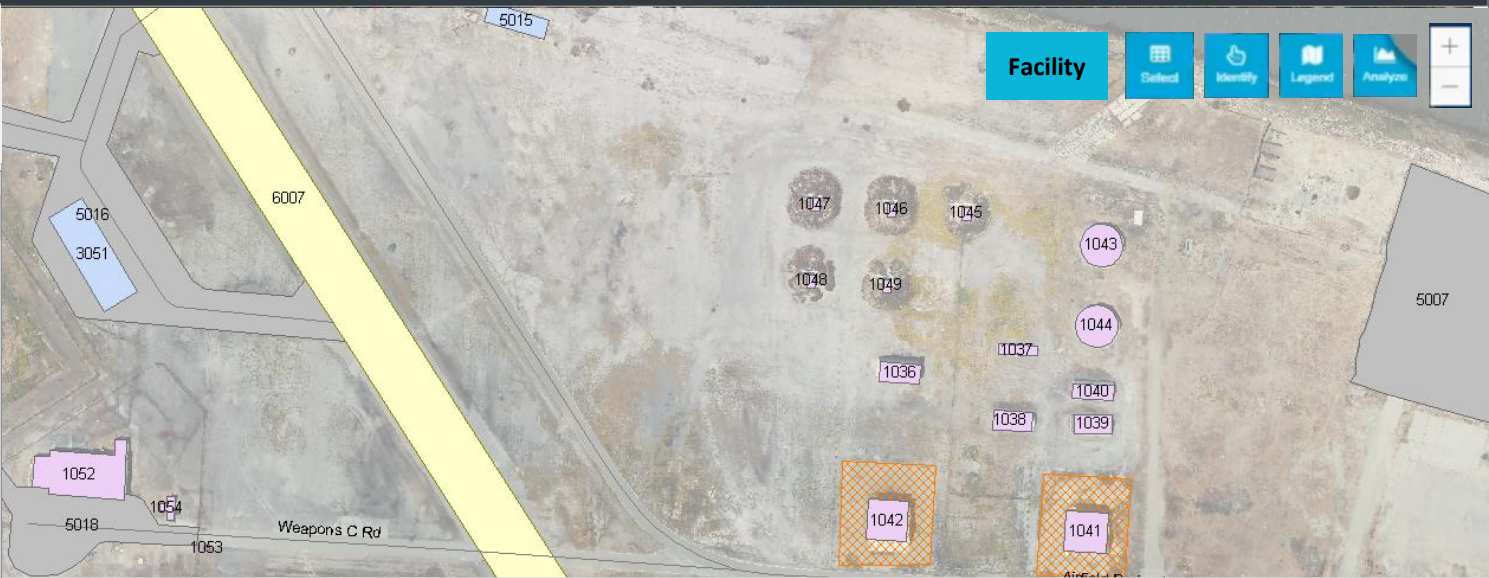


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Facility

HC/D	Quantity (Sited)	Quantity (Operational)	DQ Result
1.1	41,000.0		
1.2.1	40,000.0		
1.2.2	30,000.0		
1.2.3	30,000.0		
1.3	250,000.0		
1.4	500,000.0		

MCE: pounds

HFD xx: feet

Fragmenting Item:



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ESS Web Admin Tools Admin

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Save Report | Print | Columns | Search: 1036 | Add Facilities:

PES Facility Number	PES Type Code	ES Facility Number	ES Type Code	Related Code	Notes
1038	AGM	1038	EOL	H - ES is related to PES and Barricaded IL distance is applicable for ES. (C9.4.1.1.1 and C9.4.1.1.2)	
1036	AGM	1037	EOL	X - PES and ES are Related, no separation distance is required	
1036	AGM	1039	IHB	X - PES and ES are Related, no separation distance is required	
1036	AGM	1044	AGT	X - PES and ES are Related, no separation distance is required	
1036	AGM	1043	AGT	X - PES and ES are Related, no separation distance is required	



ESS Explosive Safety Siting



172.16.20.59:8043/ess/dataset-details?id=1073/dataset-map

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EXPLOSIVES SAFETY SITE PLAN									
SECTION I - GENERAL INFORMATION									
INSTALLATION: Alameda	LOCATION:	DATE: 31 May 2018	QD Engine: NAVY2016JUN02 ESS: 6.1.4.20.2.a						
SECTION II - DATA ON FACILITY TO BE SITED									
FAC # & OWNER	FACILITY DESC	RQD IBD	RQD PTR	1.1 (xx)	1.2.1 MCE	1.2.2	1.2.3 MCE (xx)	1.3	1.4
1036 Alameda	EOL HIGH EXPLOSIVE MAGAZINE	1379 ft	828 ft	41000 lbs = 26' X 60'	40000 lbs	30000 lbs	30000 lbs	250000 lbs	500000 lbs
SECTION III - PES-ES QD PAIRED RELATIONSHIPS WITH FACILITIES BEING SITED									
FAC # & OWNER	FACILITY DESC	ACT & RQD DIST	ORIEN-TATION	1.1 (xx)	1.2.1 MCE	1.2.2	1.2.3 MCE (xx)	1.3	1.4
1037 Alameda IL	GENERAL STORAGE SHED (Demolished)	Actual: 102.1 ft Required: 828 ft	As ES Retired: H	928 ft *9.3.1	469 ft T7-16 ILD	175 ft T7-17 ILD	74 ft T7-20 IBD	283 ft T7-20 ILD	100 ft T7-22 IBD>3000
		Actual: 102.1 ft Required: 480 ft	AU PES (reverse) Retired: H	8000 lbs 480 ft *9.3.1	7800 lbs 276 ft T7-16 ILD	7500 lbs 134 ft T7-17 ILD	6540 lbs 46 ft T7-20 IBD	10000 lbs 98 ft T7-20 ILD	12000 lbs 100 ft T7-22 IBD>3000
1038 Alameda IB	GENERAL STORAGE SHED	Actual: 102.94 ft Required: 1379 ft	As ES	1379 ft T7-7 OtherPES:IBD	1202 ft T7-16 IBD	487 ft T7-17 IBD	284 ft T7-20 IBD	421 ft T7-20 IBD	100 ft T7-22 IBD>3000
1039 Alameda IB	GENERAL STORAGE SHED	Actual: 205.94 ft Required: 1379 ft	As ES	1379 ft T7-7 OtherPES:IBD	1202 ft T7-16 IBD	487 ft T7-17 IBD	284 ft T7-20 IBD	421 ft T7-20 IBD	100 ft T7-22 IBD>3000
1040 Alameda IB	GENERAL STORAGE SHED	Actual: 206.58 ft Required: 1379 ft	As ES	1379 ft T7-7 OtherPES:IBD	1202 ft T7-16 IBD	487 ft T7-17 IBD	284 ft T7-20 IBD	421 ft T7-20 IBD	100 ft T7-22 IBD>3000
1041 Alameda DM	AGM HIGH	Actual: 253.66 ft Required:	As ES	379 ft T7-13 AGM(UB) AGM(UB)	200 ft T7-18 AGS-L AGS(L)	100 ft T7-18 AGS-L AGS(L)	0 ft T7-18 AGS-L AGS(L)	283 ft T7-20 IBD	100 ft T7-22 AGS(L)>3000

Content	Description	Submitted
1036_20180531_131117 submittal form.pdf	Submittal Form	Submitted
1036_20180531_131119 Submittal Drawing.pdf	Submittal Drawing Form	Submitted
1036_20180531_131127 explosives storage li...	Explosives Storage License (Army)	Submitted
1036_20180531_131132 Limiting ES Report.pdf	Limiting ES Report (Army)	Submitted
darad		
mitigation		



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Explosive Safety Siting



Web ESS Status

- Notable achievements:
 - Host site at Amazon Secure GovCloud established through DISDI Portal
 - GIS mapping and editing developed
 - Facility editor developed
 - Spatial and QDE analysis near completion
- Web-Based ESS v1.2 planned for June-September 2019
 - Capability to generate and submit site plans
- Web-Based ESS v1.3 and beyond
 - RBESS- Tier 1, 2a, and 2b
 - Automation of GIS, RPI, and PES data updates
 - Electronic site approval process

Questions?

ESS Support Points of Contact:

Mike Oesterle	Project Manager	michael.oesterle@navy.mil	805-982-3398
Dave Bianchi	GIS Team Lead	david.bianchi@navy.mil	805-982-1607
Jeremy Franklin	GIS Team	Jeremy.franklin1@navy.mil	805-982-3723
Michael Matissek	GIS Team	michael.matissek@navy.mil	805-982-1221
Shea Broussard	GIS Team	Shea.Broussard@navy.mil	805-982-3416
Ruby Domingo	GIS Team	ruby.domingo@navy.mil	805-982-4826
Steven Willis	GIS Team	steven.willis1@navy.mil	805-982-1452

