

UXO FORUM

WAIKOLOA MANUEVER AREA

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U.S. Army Corps of Engineers

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FUDS PROGRAM

Goal. “To reduce, in a timely and cost effective manner, the risk to human health and the environment resulting from past Department of Defense activities at formerly used DoD properties.”

Definition. A real property formerly owned/leased/possessed by, and under the jurisdiction of the Secretary of Defense within the 50 states, territories, commonwealths, and possessions over which the U. S. has jurisdiction.



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DERP/FUDS

- The Formerly Used Defense Sites (FUDS) Program cleans up environmental contamination at properties that have been under the jurisdiction of the Secretary and formerly owned, leased, possessed, or used by the military services (Army, Navy, Air Force, or other Defense agencies) and transferred from DoD control prior to October 17, 1986.
- The Army oversees the program for DoD and the U.S. Army Corps of Engineers manages the cleanup at these properties.
- The program is executed in accordance with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- U.S. Army Corps of Engineers does not have ownership of FUDS property
- We do not certify that the property is clean

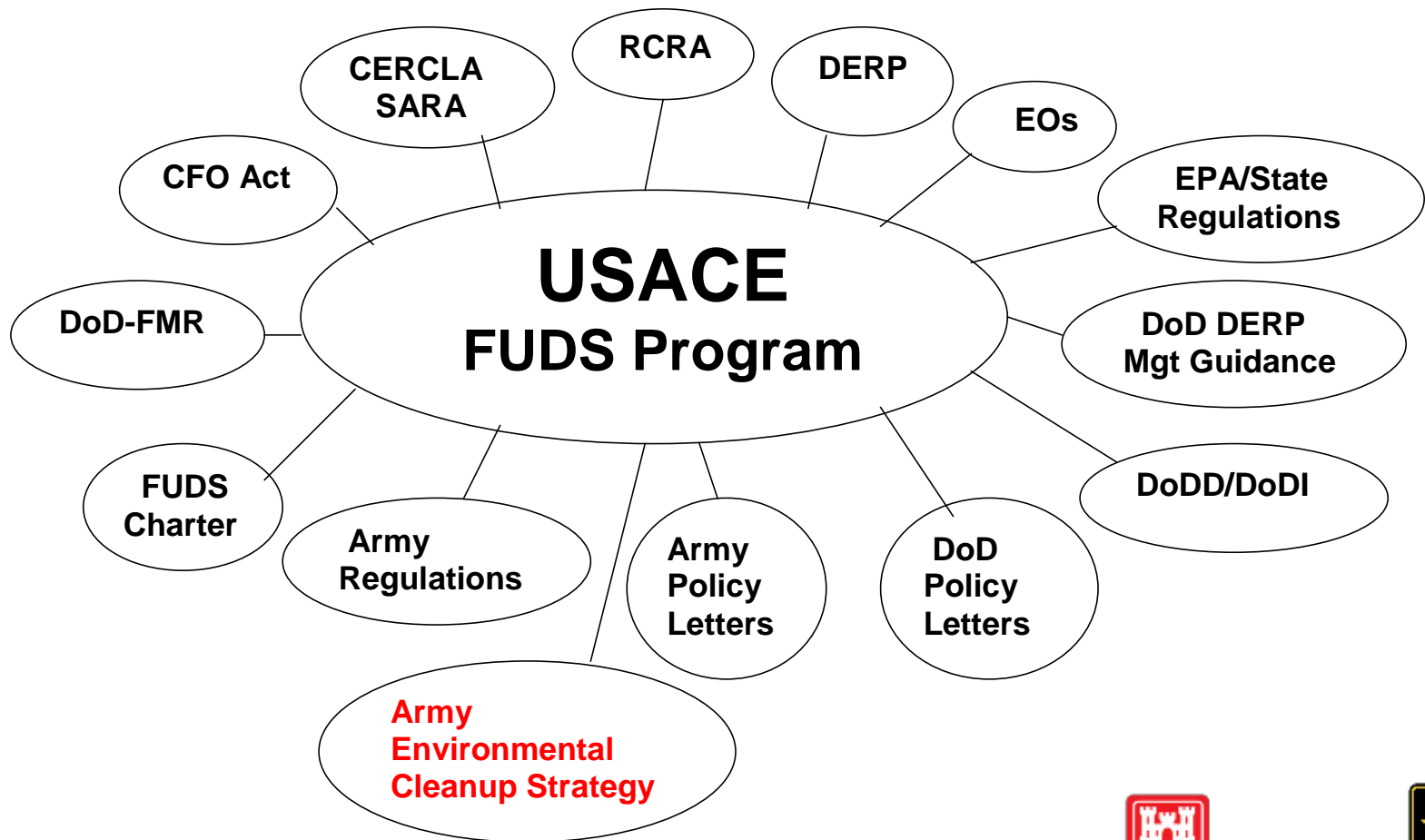


FUDS is a Different Animal

- The FUDS Program is not the EPA Superfund Program
- The FUDS Program cleans up only **DoD generated pollution** which occurred before transfer of property to private owners, or federal, state or local government owners
- The Department of Defense does not own the property that FUDS is cleaning up
- We do not certify that the property is clean
- We rarely have a project office on site
- We work hand in hand with current property owners and regulators on cleanup efforts



MANY REGULATIONS AND POLICIES GOVERN FUDS

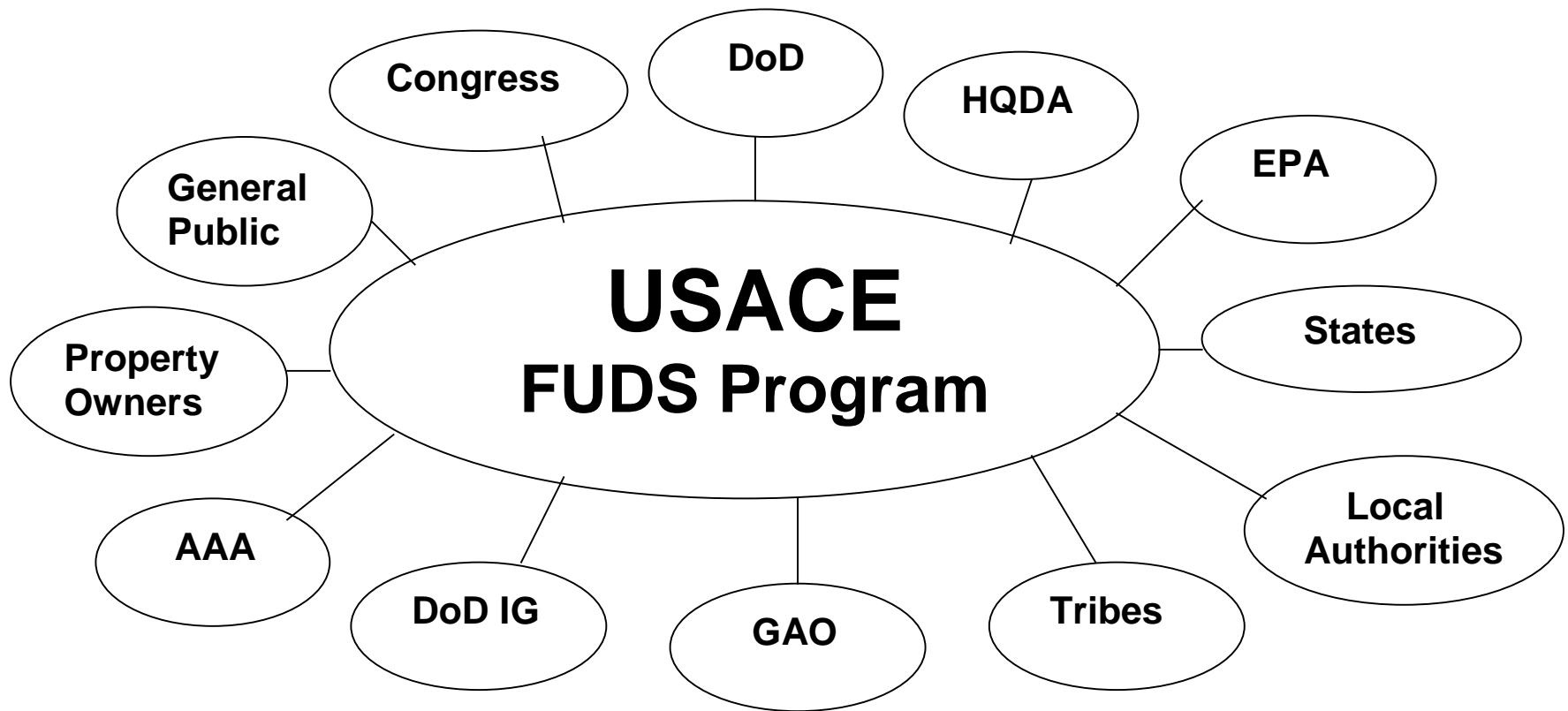


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FUDS STAKEHOLDERS

FUDS SERVES MANY MASTERS



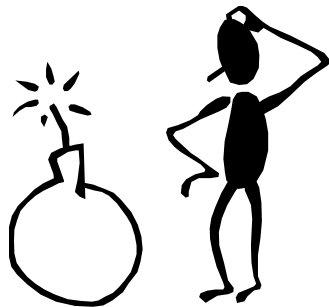
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DERP-FUDS MISSIONS



**Identification, Investigation,
and Cleanup of Hazardous
Toxic and Radioactive
Waste (HTRW)**



- **Correction of other
Environmental
Damage - Military
Munitions Response
Program (MMRP)**



**Building Demolition and
Debris Removal (BD/DR)**



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FORMERLY USED DEFENSE SITE

The FUDS Program uses a three-phased process:

Phase I Inventory



Determine if the property was formerly used by DoD and if contamination is present that resulted from DoD activity. (PA/INPR phase)

Phase II Investigation



Conduct an investigation to determine the nature and extent of the contamination. (RI/FS, PP, and DD)

Phase III Cleanup



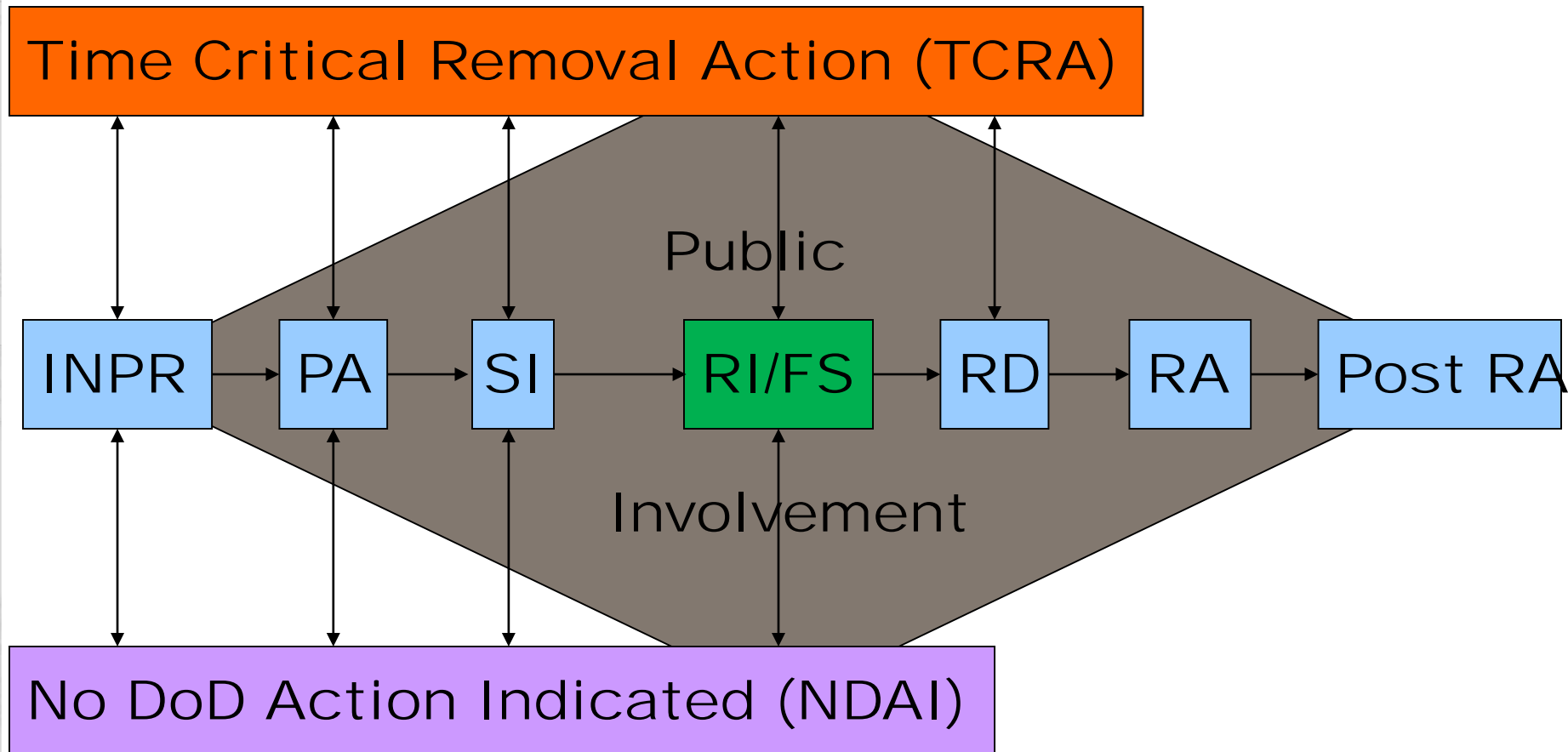
Clean up the property to reduce risk to human health and the environment and to improve public safety.



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CERCLA Process Flow



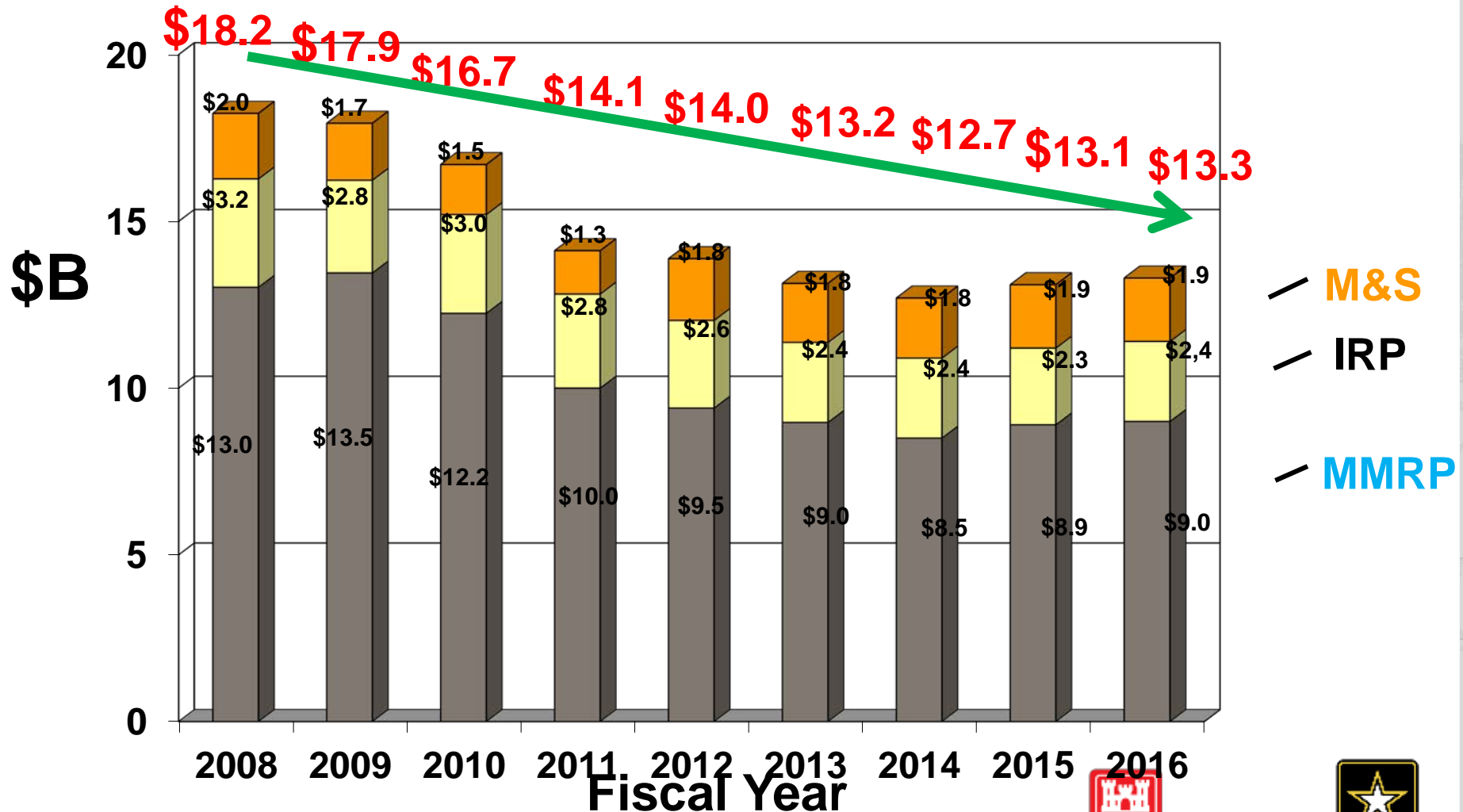
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FUDS Program

(FY* and Beyond)

(IRP = HTRW + CON/HTRW + BD/DR)



DERP-FUDS in the Pacific

DERP Funding

POH cost to complete for FUDS from FY2016 and beyond is \$1.3 billion with about 101 projects needing response

POH program goes to year 2115

FUDS program is under-funded to meet current commitments and stakeholder expectations



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POH FUDS in the Pacific

Honolulu District

American Samoa	31 properties
CNMI	32 properties
Guam	48 properties
State of Hawaii	380 properties
Republic of Palau*	14 properties
Total	505 Properties

*prior to Oct. 1, 1994



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POH FUDS PROGRAM

505 FUDS Properties in the Honolulu District

116 properties require action

- Guam, CNMI, American Samoa, Republic of Palau*, and Hawaii

Cost to complete is approx \$1.3B

Annual funding averaged about \$16M/yr

- FY11 plus up \$23.3M
- FY12 plus up \$10.7M
- FY13 plus up \$6.8M
- FY14 plus up \$9.6M
- FY15 plus up \$21.9M
- FY16 no plus up
- FY17 \$12.3 M plus up ??

*FUDS no longer eligible in Palau since 1994



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POH FUDS in the Pacific

DERP- FUDS progress

101 projects underway or future action

Categories of Projects Remaining

BD/DR	11 projects
CON/HTRW	3 projects
HTRW	8 projects
MMRP	79 projects



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FUDS FUTURE COSTS TO COMPLETE POH (2016- 2115)

Project Categories

BD/DR	\$	2,967,200
CON/HTRW	\$	6,474,400
HTRW	\$	20,733,700
MMRP	\$	1,303,550,200

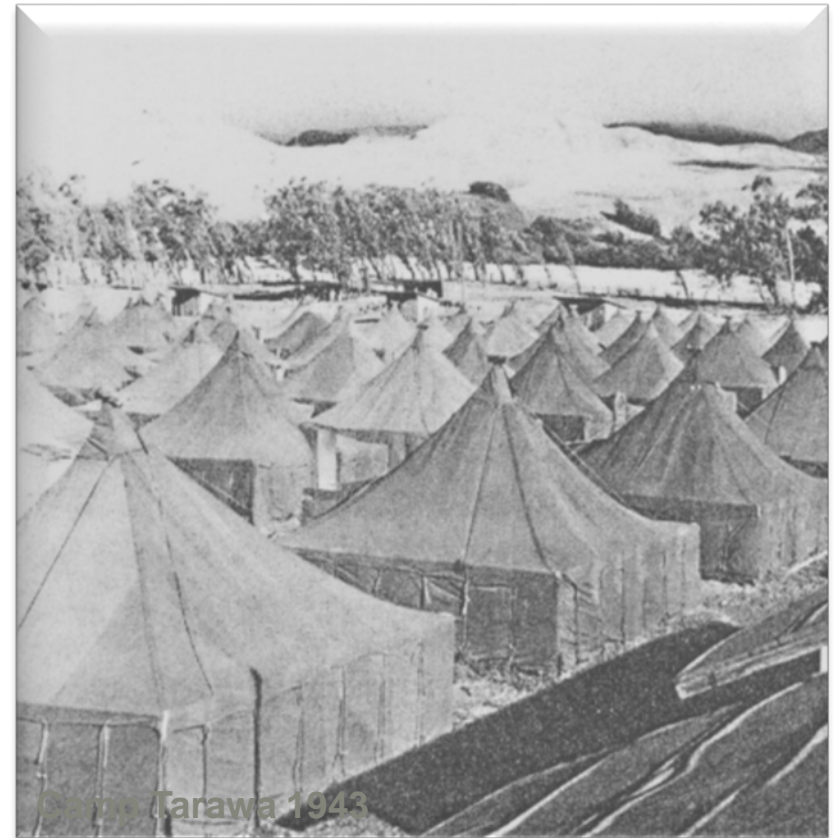


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WAIKOLOA MANEUVER AREA

- The U.S. Navy acquired use of the area in 1943 for use as a military training camp and artillery range
- The training camp was used by 50,000 troops from 1943 to 1945
 - Over 100 different types of munitions used
- Covers most of the District of South Kohala (~100,000 acres)
- Two Previous clean-up activities
 - The first in 1946
 - A second in 1954
- Over the years Munitions and Explosive of Concern (MEC) contamination has resulted in three deaths and five serious injuries

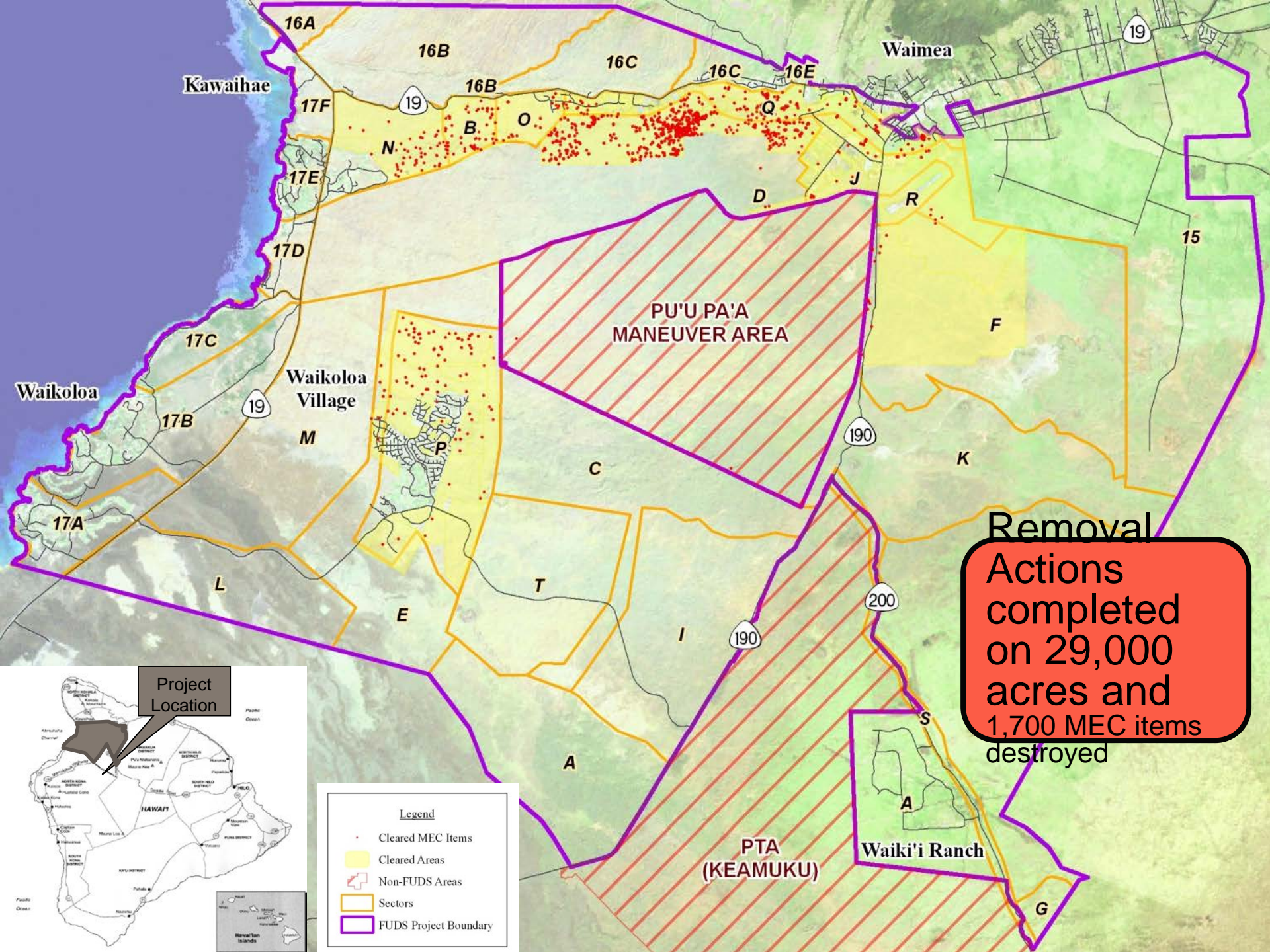


Camp Tarawa 1943



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TYPES OF MUNITIONS AND EXPLOSIVES OF CONCERN FOUND



Grenades / 520'
Small Arms / NA
Japanese Ordnance / 1,500'



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WAIKOLOA MANEUVER AREA (WMA)

19

- Expenditure to Date - \$217.7M
- Funding for the next 5 Years
 - FY 17 - \$10.1M
 - FY 18 - \$7.4M
 - FY 19 - \$7.7M
 - FY 20 - \$15.0M
 - FY 21 - \$10.1M



- Cost to complete - \$793M
- Project size - 101,055 acres



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ACCOMPLISHMENTS

Acres completed to date

- 29,000 acres

Acres to be done

- 71,000 acres

Cost per acre - \$7,501 per acre



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INNOVATIVE TECHNOLOGIES

Metal Mapper/TEMTADS

- Maneuver Area (Metal Mapper and TEMTADS)

MPV (Man Portable Vector)

- Waikoloa Maneuver Area

PDM8

- To be used



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METAL MAPPER

12/19/20

16



MPV



PDM8 TOOL

- Parsons Digital Mapper Model 8 (PDM8)
- Only requires a single operator
- Combines portability, geologic insensitivity, and permanent mapping in one hand-held tool
- Has been tested under very difficult conditions and delivers high quality performance and data
- Accepted by stakeholders for project currently being executed
- Reduced field time



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SURVEY



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SWEEP



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INVESTIGATION



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DISPOSAL OPERATIONS



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SANDBAG MITIGATION



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155MM DISPOSAL



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CHALLENGES

- Limited funding and many sites
- ROEs not easy to obtain
- Competition for funding
- Anxious regulators and community
- Many MMRP sites and funding is limited



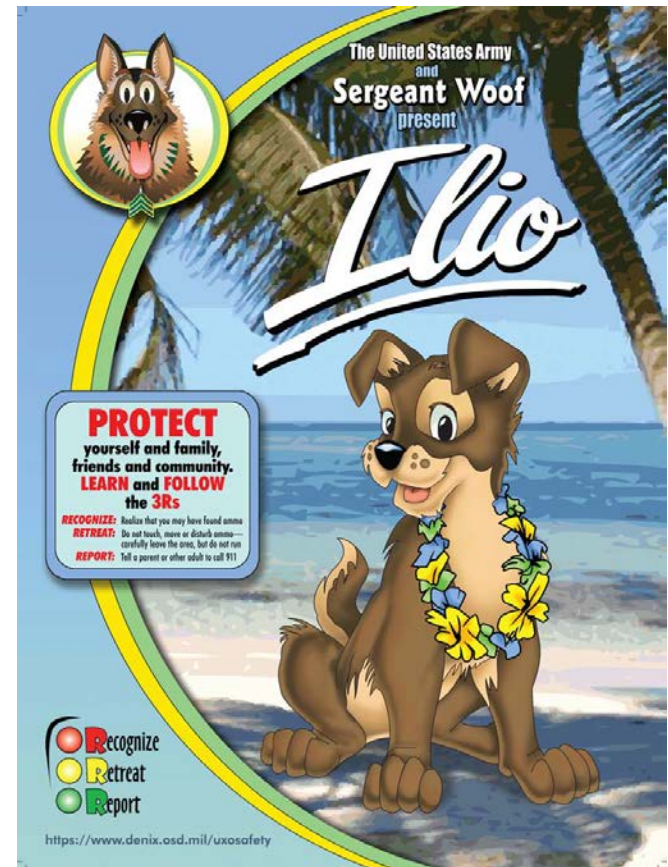
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Follow the 3Rs



www.denix.osd.mil/uxo/



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Recognize
Retreat
Report

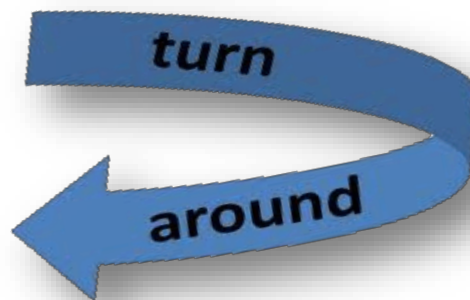
Recognize



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- If you see or come upon something that may be MEC:
 - Do not go near it
 - Do not touch, move or disturb it
- Carefully leave the area by the same path
- Be safe, if you do not know what it is, do not touch it



- Report what you saw and where you saw it to:
 - The police or local law enforcement
- Local authorities will clear the area.
- Specially trained personnel will dispose of the item.

Call 911



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IMPORTANT POINTS TO REMEMBER

3R's of Explosive Safety

- Recognize
- Retreat
- Report

Right-of-Entry

- U.S. Army Corps of Engineers does not have ownership of FUDS property

Investigation and Clean Up processes vary by situation

Technology is effective but guarantees are not possible



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Questions or Comments



BUILDING STRONG®