USACE PERSPECTIVES

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SAGEEP
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U.S.ARMY

US Army Corps of Engineers®

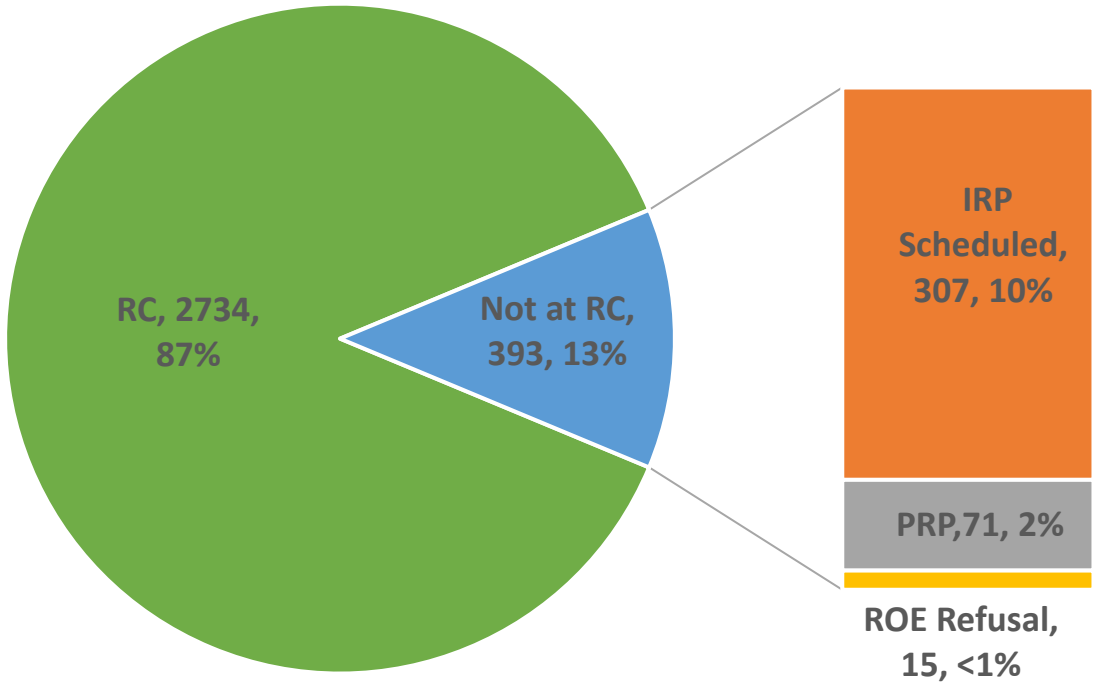
AGENDA

FUDS Program
AGC in the FUDS Program
Big Changes to EM 200-1-15

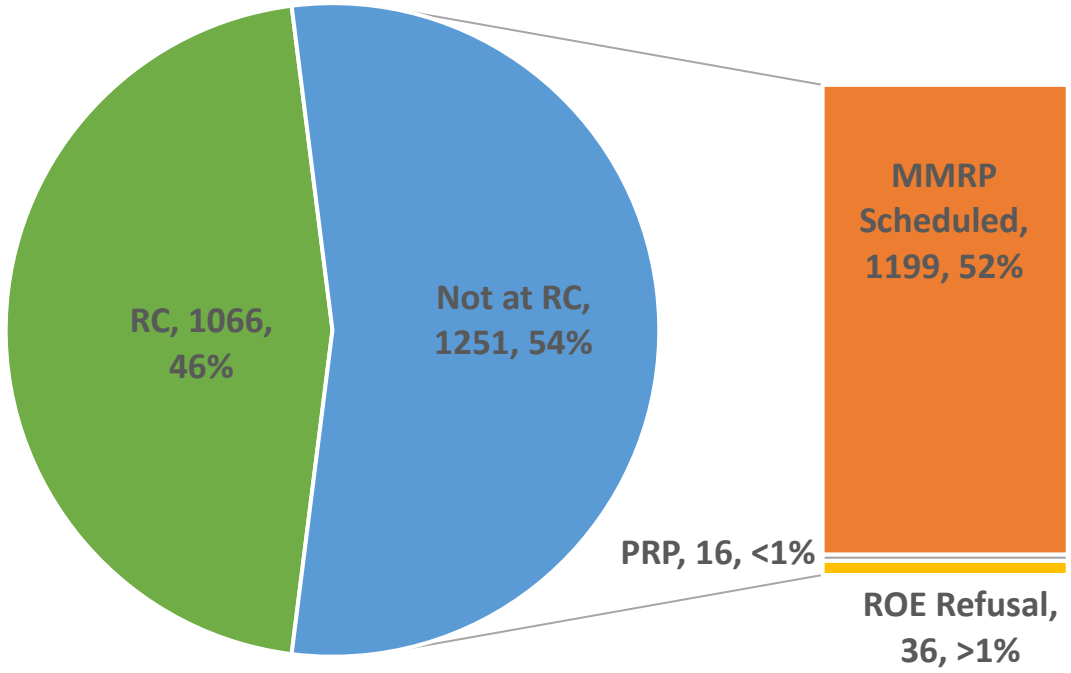
FUDS RESPONSE COMPLETE PROGRESS

Data as of 30-SEP-2022

IRP



MMRP



IRP: Installation Restoration Program (a.k.a. HTRW Program)
MMRP: Military Munitions Restoration Program
RC: Remedy Complete (CERCLA phase)
PRP: Principal Responsible Party (DoD + other entity responsible for clean-up
ROA: Right of Entry

FUDS GOALS
(RELEVANT TO PROGRAM EXECUTION)

LONG-TERM GOALS: Advance progress on complex sites, reduce risk at munitions sites, and improve auditability.

FY22 and Beyond: FUDS Long-Term Goals
As briefed to DASA(ESOH)

- **Goal #1: Achieve Remedy In Place at 40 more FUDS complex groundwater sites by end of FY29.**
  - → 110 remaining IRP complex groundwater sites representing half of the FUDS IRP Cost to Complete.
  - → 65 IRP complex groundwater sites have not yet achieved Remedy In Place which is a key milestone for risk management at each site.
  - → Estimated annual cost to achieve this goal is at least ***$50M per year from FY22 to FY29***.

- **Goal #2: Achieve Response Complete at 20% of remaining high priority FUDS munitions sites by FY28.**
  - → As of 30 SEP 2020: Only 45% of FUDS Military Munitions Response Program (MMRP) sites had achieved Response Complete.
  - → 497 MMRP sites with prioritization scores of 2, 3, and 4 have not yet achieved Response Complete *(1 = highest hazard potential to 8 = lowest)*.
  - → Estimated annual cost to achieve this goal is at least ***$100M per year for FUDS MMRP from FY22 to FY28***.

Remedy In Place:
Remedial action implemented.

Response Complete:
Remedial action objectives met.

THREE (3) YEAR PERFORMANCE TREND ANALYSIS (FY20-22)

FUDS METRICS

FUDS Metrics	LRD			NAD			NWD			POD			SAD			SPD			SWD			USACE		
	FY20	FY21	FY22	FY20	FY21	FY22	FY20	FY21	FY22	FY20	FY21	FY22	FY20	FY21	FY22	FY20	FY21	FY22	FY20	FY21	FY22	FY20	FY21	FY22
1) IRP RC	6	1	1	10	6	3	1	6		12	9	5	9	5	2	10	5		1	1		49	33	11
2) MMRP RC	0	1	3	2	3	8	1	2		1	1		9	4	5	2	6	5	1	2	4	16	19	25
3) IRP PC	12	4		14	7		6	7		19	16	1	13	5		7	5		1	2	1	72	46	2
4) MMRP PC	1	1	2	2	3	13	3	3		3	1		13	15	8	13	1	6	3	5	16	38	29	45
5) FYR	1	2	2	4	4	4	10	3	3	2	1	3		3	2	1	2	1	3	2	2	21	17	17
6) RABs	4	14	4	19	27	18	39	20	35	17	47	25	12	26	11	15	23	26	21	4	17	127	161	136
7) RODs	1	1	3	7	5	10	5	1	3	3	2		5	12	8	5	0		3	6	10	29	27	34
8) CT Awards	4	1	3	5	8	9	14	16	10	13	21	12	7	4	4	7	7	9	1	2	4	51	59	51
9) SCO	5	4	3	8	15	11	2	8		17	16	5	17	12	4	8	10			3	1	57	68	24
10) OBLG ($M)	$ 21.3	$ 12.5	$12.5	$ 33.6	$ 43.9	$ 37.7	$ 48.0	$ 47.0	$ 34.1	$ 60.0	$ 75.5	$ 66.6	$ 38.9	$ 24.6	$ 26.9	$ 35.6	$ 47.1	$ 37.0	$ 10.0	$ 11.4	$ 21.3	$ 275.1	$ 283.8	$ 272.6
Total	**85%**	**82%**	**103%**	**112%**	**121%**	**110%**	**106%**	**108%**	**94%**	**108%**	**101%**	**100%**	**202%**	**102%**	**130%**	**109%**	**106%**	**104%**	**83%**	**105%**	**101%**	**123%**	**107%**	**102%**

IRP – Installation Restoration Program
MMRP – Military Munitions Response Program
RC – Response Complete
PC – Phase Complete

FYR – Five Year Reviews
RABs – Restoration Advisory Board Assessments
DDs – Decision Documents

CT Awards – Contract Awards > $1M
SCO – Site Closeouts
OBLG – Obligations ($ Millions)

FY23 FUDS PERFORMANCE METRICS

4Q Goals/Annual Totals									
PLANNED	**LRD**	**NAD**	**NWD**	**POD**	**SAD**	**SPD**	**SWD**	**Total**	
IRP RC	0	4	2	4	1	2	0	13	
MMRP RC	0	3	0	0	1	0	5	9	
IRP RIP	0	3	1	0	1	0	0	5	
MMRP PC	0	4	0	4	10	1	13	32	
FYR	5	6	6	1	5	2	2	27	
RABs	13	21	22	20	22	14	3	115	
RODs	1	3	2	1	11	0	7	25	
Contract Awards	1	2	3	6	1	3	2	18	
Site Closeout	1	5	2	3	1	2	1	15	
Obligations ($M)	$10.95	$41.24	$24.41	$39.93	$19.74	$37.24	$11.01	$227.26	Control Number
								$25.00	Transfer Acct.
								$252.26	Total

IRP = Installation Response Program
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FYR = Five Year Reviews
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DDs = Decision Documents

FUDS PROGRAM

Regulation No. 200-3-1
01 September 2020
Environmental Quality, FORMERLY USED DEFENSE SITES (FUDS) PROGRAM REGULATION

Available here:
https://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER%20200-3-1.pdf?ver=TZHUe54TaNaUrJeY43PEcA%3d%3d

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CEMP-CED

FUDS Handbook

FUDS Handbook
Supplement to ER 200-3-1

2 December 2022

FORMERLY USED DEFENSE SITES (FUDS) PROGRAM
IMPLEMENTING GUIDANCE

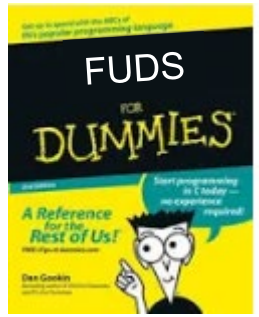
1. Purpose. This Handbook provides specific requirements for management and execution of the Formerly Used Defense Sites (FUDS) Program in accordance with the Defense Environmental Restoration Program (DERP) statute ((10 United States Code (USC) 2700 et seq.). This Handbook is to be used in conjunction with ER 200-3-1.

The ER: Establishes the program

- "Specific requirements for management and execution of the Formerly Used Defense Sites (FUDS) Program in accordance with the Defense Environmental Restoration Program (DERP)"
- Roles & Responsibilities
- Planning, Budgeting, execution, management & reporting
- Points to the handbook to execute the program

The Handbook

- "Specific requirements for management and execution of the Formerly Used Defense Sites (FUDS) Program in accordance with the Defense Environmental Restoration Program (DERP)"
- The FUDS For Dummies book for all things management & budget



QUALITY IN THE FUDS PROGRAM

USACE requires advanced sensors to support decision points in all phases of work.

- Where this is determined to be unfeasible, or impractical
  - Must comply with DoD and USACE policies for notification and documenting use of ***analog and/or non-AGC methods*** on MMRP projects

DoD & USACE Polices

- DoD Manual (DoDM) 4715.20 – Defense Environmental Restoration Program (DERP) Management (Enclosure 3, paragraph 7.a.(1)(a).3.c)
- DoD-EPA Memorandum of Understanding (MOU) (7 MAR 2000)
- MR-QAPP implementation instructions from OSD (DEC 2018)
- AGC Implementation at FUDS MMRP Projects (24 APR 2017). When published EM 200-1-15 supersedes and incorporates intent of this memorandum
- DOD Information Quality Guidelines, Feb. 2003
  - With regard to analysis of risks to health, safety or the environment that DOD Components disseminate, DOD Components will adopt or adapt as appropriate to the analysis in question, the quality principles of the Safe Water Drinking Act of 1996
    - For us, these are primarily the requirements at 42 U.S.C. 300g-1(b)(3)(A)&(B)

NON-AGC TECHNOLOGIES IN THE RI

Waivers are possible:

- RI non-AGC DGM:
  - Waiver required (PDT memo→EM CX & Lead Regulator →Division signature)
- RI non-digital:
  - Notification will be provided to the HQUSACE National Program Manager (or FUDS MMRP and Regional HQ Action Officer) for record, signature by the general officer, and report to the Lead Agent Secretariat, in accordance with the DERP Manual

Exceptions to notification & waiver:

- Surface sweeps
- Anomaly reduction
- Intrusive investigations
- Anomaly avoidance activities
- Limited data gap fill-in, when extrapolation of surrounding data is supported.

	MR-QAPP Signed	Memo	AGC Waiver
Whole Site Analog	Yes	Yes	Yes
AGC most of site, analog rest	Yes	Yes	No
Digital non-AGC whole site	No	Yes	Yes

NON-AGC TECHNOLOGIES IN THE RA

The expectation is that the PWS will require AGC IAW FUDS policy

RA based on a current/future FS/PP/ROD: rely on our existing FS→PP→ROD processes

- PDT will specify use of analog or non-AGC sensors
- Expectation is that the RI & FS data and reports support the proposal
- EM CX ITR will focus on
  - Protectiveness and effectiveness
  - Non-implementability of AGC
  - Cost reasonableness
- Hopefully at the FS stage but could be at the PP or ROD

- ROD documents the technical approach and anticipated variables and limitations of the selected remedy

NON-AGC TECHNOLOGIES IN THE RA

The expectation is that the PWS will require AGC IAW FUDS policy

Old/signed DDs (aka ROD) with analog described as a remedy component

- EM-CX ITR will focus on
  - Non-AGC remedy components substantively meet RAO requirements (protectiveness and effectiveness)
  - Specific acreage (quantities and locations) of the non-AGC work
  - Why AGC is not being required IAW USACE policy
  - IGE accounts for all QA and QC seeding

Old/signed DDs (aka ROD) where analog is not described as a remedy component

- PDT wants to allow/include it in the RA
  - Must follow the RI process for general officer/SES signature

EM CX ITR

- Focus on maximizing AGC IAW USACE policy
- Non-implementability of AGC

MAKING IT ALL HAPPEN

Talked about

- Program
- Budgeting & Scheduling
- Funding
- Quality

The way forward

- MR QAPP Toolkit
- EM 200-1-15
  - Includes some specific references DoD & EPA guidance on RI, FS, ROD
- RMM
- Engineer Pamphlet on Institutional Analysis & Land Use Controls

Still to come

- Staffing/Recruitment
- Qualifications & abilities

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BIG CHANGES TO EM 200-1-15

- Planning, Decision & Progress Meetings(Chapter 2)
  - There are many (more than 2!)
- AGC is the required technology (Ch. 2)
  - (refer to previous slides & talks by other EM CX geophysicists)
- MEC Risk Assessment (Chapter 10)
  - In lock-step with RMM OSD version (anticipated in 2023)
- FS Process (Chapter 11)
  - Aligns with EPA guidance
  - Starting with the risk scenarios in the risk assessment:

    →Remedial Action Objective

    → General Response Actions (there are 7)

    → Technology Types & Process Options

    → Build Alternatives
- Root Cause Analysis (Chapters 6, 8, 14)
- Data Usability Analysis (Chapters 2, 6, 8, 12, 14)

Chapter

1. Introduction
2. Systematic Planning Process
3. Site Visits
4. Project Documents
5. Geospatial Data and Systems
6. Geophysical Investigation Considerations
7. Munitions Constituents Characteristics, Analytical Methodologies, and Data Reporting
8. Strategies for RI Characterization of MEC
9. Munitions Constituents Site Characterization
10. Baseline Risk Assessment for MEC and MC
11. Feasibility Study (FS) for Munitions Response, MEC and MC
12. Planning Strategies to Search and Recover MEC for Remedial or Removal Actions
13. Munitions Constituents Planning Considerations for Remedial or Removal Activities
14. Quality Control and Quality Assurance for Munitions Response

QUESTIONS?

Quick-view timeline of the munitions response program & advances in technologies and quality