**US Army Corps
of Engineers®**
Engineer Research and
Development Center

Environmental Quality Requirements Model Program Objective Memorandum Fiscal Years 2021–2025

Heather M. Knotek-Smith and Jeffrey A. Gerald

December 2020

The US Army Engineer Research and Development Center (ERDC) solves the nation's toughest engineering and environmental challenges. ERDC develops innovative solutions in civil and military engineering, geospatial sciences, water resources, and environmental sciences for the Army, the Department of Defense, civilian agencies, and our nation's public good. Find out more at www.erdclibrary.on.worldcat.org/discovery.

To search for other technical reports published by ERDC, visit the ERDC online library at www.erdclibrary.on.worldcat.org/discovery.

Prepared for DEPARTMENT OF THE ARMY,
DEPUTY CHIEF OF STAFF - G9 INSTALLATIONS

Environmental Quality Requirements Model Program Objective Memorandum Fiscal Years 2021–2025

Heather M. Knotek-Smith and Jeffrey A. Gerald

*Environmental Laboratory
U.S. Army Engineer Research and Development Center
3909 Halls Ferry Road
Vicksburg, MS 39180-6199*

Final report

Approved for public release; distribution is unlimited.

Prepared for Headquarters, Department of the Army
DCS, G9 - ATTN: DAIM-ISE
600 Army Pentagon
Washington, DC 20310-0600

Under Project A1000-FY20, “Environmental Quality Requirements Model”

Abstract

This document describes the methodology used to evaluate the costs incurred by organizations involved in planning, programming, budgeting, and execution of the Army's environmental programs and estimating those costs for future year planning cycles, this model is referred to as the Environmental Quality Requirements Model (EQRM). The EQRM is used to develop the budget positions as presented to Congress to obtain the Operations and Maintenance appropriations. These appropriations fund the Environmental Quality Program which includes Compliance, Conservation and Pollution Prevention requirements.

The model encompasses the commands under the funding structure of the Deputy Chief of Staff – G9 Installations which includes the following: Installation Management Command, the Army National Guard, the Army Reserve Command, and the Army Materiel Command.

DISCLAIMER: The contents of this report are not to be used for advertising, publication, or promotional purposes. Citation of trade names does not constitute an official endorsement or approval of the use of such commercial products. All product names and trademarks cited are the property of their respective owners. The findings of this report are not to be construed as an official Department of the Army position unless so designated by other authorized documents.

DESTROY THIS REPORT WHEN NO LONGER NEEDED. DO NOT RETURN IT TO THE ORIGINATOR.

Contents

Abstract.....	ii
List of Tables.....	viii
Preface	xii
1 Introduction	1
1.1 Background.....	1
1.2 Objective.....	1
1.3 Approach	1
1.4 Engineered activity costs	1
1.4.1 Units of measure.....	2
1.4.2 Cost adjustment factors	2
1.4.3 Inflation index.....	4
1.4.4 Environmental categories.....	4
1.5 General assumptions	8
1.6 Basis of calculations	8
1.7 Validation of model.....	9
2 Environmental Quality Requirements Model Environmental Categories and Activities	10
2.1 Personnel	10
2.1.1 Department of the Army Civilian/Federally Reimbursed State Employees (DAC/FRSE) Labor (1A).....	11
2.1.2 Local National (LN) Labor (2A).....	13
2.1.3 Travel; Training, Equipment, and Supplies; and Information Technology Life Cycle Replacement (3A).....	14
2.1.4 Personnel references.....	15
2.2 Air.....	16
2.2.1 Air category drivers	16
2.2.2 Title V Operating Permit (1A).....	17
2.2.3 Synthetic Minor Permit (2A)	18
2.2.4 Minor Source Permits (3A)	19
2.2.5 Risk Management Plans (4A).....	20
2.2.6 Air Pollutant Emissions Inventory (5A).....	21
2.2.7 Emission Fees (6A)	22
2.2.8 Monitoring, Recordkeeping, and Reporting (7A).....	23
2.2.9 Fugitive Dust Control (8A).....	24
2.2.10 New Source Review (NSR) (Testing Installations) (9A).....	25
2.2.11 Ozone Depleting Substance (ODS) Management Plan (10A).....	26
2.2.12 Green House Gas (GHG) Reporting (11A)	27
2.2.13 Stack Testing (12A).....	28
2.2.14 Air category references.....	29
2.3 Cultural resources	30

2.3.1	Cultural resources drivers	31
2.3.2	Management Plans: Integrated Cultural Resources Management Plan (ICRMP) Updates (1A)	32
2.3.3	Management Plans: Maintenance and Treatment Plans (1B)	33
2.3.4	National Historic Preservation Act (NHPA): Architectural Inventories and Evaluation (2A)	34
2.3.5	National Historic Preservation Act (NHPA): Architectural Mitigation (2B)	35
2.3.6	National Historic Preservation Act (NHPA): Archaeological Inventory (2C)	36
2.3.7	National Historic Preservation Act (NHPA): Archaeological Evaluation (2D)	37
2.3.8	National Historic Preservation Act (NHPA): Archaeological Mitigation (2E)	38
2.3.9	Archaeological Monitoring (3A)	39
2.3.10	Native American, Alaskan, and Hawaiian Consultation (4A)	40
2.3.11	Maintenance of Artifacts and Records (5A)	41
2.3.12	Rehabilitation of Artifacts and Records (5B)	42
2.3.13	Native American Graves Protection and Repatriation Act (NAGPRA): Repatriation (6A) NAGPRA of 1990	43
2.3.14	Native American Graves Protection and Repatriation Act (NAGPRA): Management (6B)	44
2.3.15	Agreement Documents (7A)	45
2.3.16	Cultural resources reference documents	46
2.4	Installation programs and initiatives	47
2.4.1	Installation programs and initiatives drivers	47
2.4.2	Regional Initiatives (1A)	48
2.4.3	Environmental Geographic Information System Layers (GIS) – Compliance (2A)	48
2.4.4	Environmental Geographic Information System (GIS) Layers – Conservation (2B)	49
2.4.5	Environmental Awareness Training – Compliance (3A)	49
2.4.6	Environmental Awareness Training – Conservation (3B)	50
2.4.7	Environmental Awareness Training – Pollution Prevention (3C)	50
2.4.8	Installation Compatible Use Zone (ICUZ) Studies (4A)	51
2.4.9	Compliance Corrective Actions (5A)	51
2.4.10	Installation program initiatives category references	52
2.5	Natural resources	53
2.5.1	Natural Resources Drivers	54
2.5.2	Planning Level Surveys (PLS) (1A)	55
2.5.3	Threatened and Endangered Species (TES) Planning Level Surveys (2A)	56
2.5.4	Integrated Natural Resources Management Plan (INRMP) Revision (3A)	57
2.5.5	Integrated Natural Resources Management Plan (INRMP) Implementation (4A)	58
2.5.6	Threatened and Endangered Species (TES) Management (5A)	59
2.5.7	Threatened and Endangered Species (TES) Management – Overseas (5B)	60
2.5.8	Species at Risk/Candidate Species Management (6A)	61
2.5.9	Migratory Bird Treaty Act (MBTA) (7A)	62
2.5.10	Bald and Golden Eagle Protection Act (BGEPA) (8A)	63
2.5.11	Wetlands: Delineations (9A)	64

2.5.12	Wetlands: Monitoring (9B).....	65
2.5.13	Wetlands: Planning Level Surveys (PLS) (9C).....	65
2.5.14	Natural resources reference documents.....	66
2.6	Pollution Prevention (P2).....	67
2.6.1	P2 drivers	67
2.6.2	Pollution Prevention (P2) Plan Updates (1A).....	68
2.6.3	Pollution Prevention (P2) Opportunity Assessments (2A).....	69
2.6.4	P2 Reference documents.....	70
2.7	Storage tanks.....	71
2.7.1	Storage tank drivers.....	71
2.7.2	Permits and Fees (includes registration) (1A).....	72
2.7.3	Operator Training (2A)	73
2.7.4	Storage tanks reference documents	73
2.8	Toxic substances.....	74
2.8.1	Toxic substances drivers	74
2.8.2	Asbestos and Lead Awareness Training (1A).....	75
2.8.3	Emergency Planning and Community Right-to-Know Act (EPCRA) Sections 302, 311, and 312 Analysis and Reporting (2A).....	76
2.8.4	Emergency Planning and Community Right-to-Know Act (EPCRA) Section 313 Analysis and Reporting (3A)	77
2.8.5	Toxic substances reference documents	78
2.9	Waste.....	79
2.9.1	Solid waste	79
2.9.2	Hazardous waste.....	80
2.9.3	Waste drivers.....	81
2.9.4	Solid Waste: Permit Applications/Renewals (1A)	82
2.9.5	Solid Waste: Fees (2A).....	83
2.9.6	Solid Waste: Landfill Monitoring (3A).....	84
2.9.7	Hazardous Waste: Petroleum Oil and Lubricants (POL) - Contaminated Waste (4A).....	85
2.9.8	Hazardous Waste: Permit Applications/Renewals (5A).....	86
2.9.9	Hazardous Waste: Fees (6A)	87
2.9.10	Hazardous Waste: Sampling and Monitoring (7A)	88
2.9.11	Hazardous Waste: Disposal (8A).....	89
2.9.12	Hazardous Waste: Management Supplies and Equipment (9A).....	90
2.9.13	Hazardous Waste: Management Plans (HWMPs) (10A).....	91
2.9.14	Hazardous Waste: Groundwater Monitoring at Subpart X Permitted Facilities (11A)	92
2.9.15	Hazardous Waste: Incidental Spill Response (12A).....	93
2.9.16	Hazardous Waste: Training (13A)	94
2.9.17	Waste reference documents	95
2.10	Water.....	97
2.10.1	Storm water.....	97
2.10.2	OP2	98
2.10.3	Wastewater.....	98
2.10.4	Drinking water	99

2.10.5	Water drivers	100
2.10.6	Storm Water: Monitoring and Sampling (1A)	102
2.10.7	Storm Water: Monitoring and Sampling – Laboratory Analyses (1B)	103
2.10.8	Storm Water: Permit Applications (2A)	104
2.10.9	Storm Water: Permit Applications – Laboratory Analysis (2B)	105
2.10.10	Storm Water: Permit Fees – National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System and Industrial (3A)	106
2.10.11	Storm Water: Storm Water Pollution Prevention Plan Update (4A)	107
2.10.12	Storm Water: Municipal Separate Storm Sewer System Plan Update (5A)	108
2.10.13	Storm Water: Inspections (6A)	109
2.10.14	Storm Water: Non-Point Source (7A)	110
2.10.15	Storm Water: Total Maximum Daily Load (TMDL) Implementation (8A)	111
2.10.16	Storm Water: Regional Watershed Initiatives (9A)	112
2.10.17	Oil Pollution Prevention (OP2): Supplies and Equipment (10A)	113
2.10.18	Oil Pollution Prevention (OP2): Spill Prevention Control Countermeasures Plan Updates (11A)	114
2.10.19	Oil Pollution Prevention (OP2): Facility Response Plans (12A)	115
2.10.20	Wastewater: Sampling and Monitoring (13A)	116
2.10.21	Wastewater: Sampling and Monitoring – Laboratory Analyses (13B)	117
2.10.22	Wastewater: Permit Applications (14A)	118
2.10.23	Wastewater: Permit Applications – Laboratory Analysis (14B)	119
2.10.24	Wastewater: Permit Fees (15A)	120
2.10.25	Wastewater: Pretreatment Sampling and Analysis (16A)	121
2.10.26	Wastewater: Sludge Management Plan (17A)	122
2.10.27	Drinking Water: Sampling and Monitoring (18A)	123
2.10.28	Drinking Water: Sampling and Monitoring – Laboratory Analysis (18B)	124
2.10.29	Drinking Water: Sampling and Monitoring Overseas (19A)	125
2.10.30	Drinking Water: Sampling and Monitoring Overseas– Laboratory Analyses (19B)	126
2.10.31	Drinking Water: Sanitary Surveys or Fees (20A)	127
2.10.32	SUB-Drinking Water: Consumer Confidence Reports (21A)	128
2.10.33	Drinking Water: Sampling Plan (22A)	129
2.10.34	Drinking Water: Wellhead Protection Plan (23A)	130
2.10.35	Water reference documents	131
3	Size Factor Execution Analysis.....	134
4	Category Factor Execution Analysis.....	138
5	DASA-CE Validation Review Memo	143
6	Summary	145
	Bibliography.....	146
	Appendix A: Environmental Quality Requirements Model (EQRM) Installations List	152

Appendix B: Data Sources Used in EQRM	155
Appendix C: Installation Category and Size Designations	166
Appendix D: Competing and Critical Requirement Levels.....	171
Appendix E: Authoritative Data	175
Acronyms and Abbreviations.....	339
Report Documentation Page	

List of Tables

Table 1. Installation size designation definitions.	3
Table 2. Inflation index for out year calculations – weighted indices base year FY18.	4
Table 3. Personnel environmental category activities.	10
Table 4. Air environmental category activities.	16
Table 5. New source review testing installations.	25
Table 6. Cultural resources environmental category activities.	30
Table 7. Installation programs and initiatives environmental category activities.	47
Table 8. Natural resources environmental category activities.	53
Table 9. Pollution prevention environmental category activities.	67
Table 10. Storage tanks environmental category activities.	71
Table 11. Toxic substances environmental category activities.	74
Table 12. Solid waste environmental category activities.	79
Table 13. Hazardous waste environmental category activities.	80
Table 14. Storm water category activities.	97
Table 15. Oil pollution prevention category activities.	98
Table 16. Wastewater environmental category activities.	98
Table 17. Drinking water environmental category activities.	99
Table 18. Inflation indices.	134
Table 19. Army active environmental costs by installation size.	135
Table 20. ARNG environmental costs by installation size.	136
Table 21. USAR environmental costs by installation size.	137
Table 22. Inflation indices.	138
Table 23. Army active environmental costs by category (Base = Category 1).	139
Table 24. Army active environmental costs by category (Base = Category 3).	140
Table 25. ARNG environmental costs by category (Base = Category 3).	141
Table 26. USAR environmental costs by category (Base = Category 3).	142
Table 27. Data sources used in the EQRM sorted by data table order.	155
Table 28 Data sources used in the EQRM sorted by activity.	161
Table 29. IMCOM installation category and size designations.	166
Table 30. ARNG installation category and size designations.	168
Table 31. USAR installation category and size designations.	170
Table 32. AMC installation category and size designations.	170
Table 33. Competing and critical requirement funding levels.	171
Table 34. Total number of acres by command.	175
Table 35. Total number of acres by installation.	175
Table 36. Number of Title V operating permits by command.	180

Table 37. Number of Title V operating permits by installation.	180
Table 38. Number of synthetic minor permits by command.	184
Table 39. Number of synthetic minor permits by installation.	184
Table 40. Number of minor source permits by command.	189
Table 41. Number of minor source permits by installation.	189
Table 42. Installations subject to risk management plans by command.	193
Table 43. Installations subject to risk management plans.	193
Table 44. Tons of air emissions by command.	194
Table 45. Tons of air emissions by installation.	194
Table 46. Number of facilities reporting fugitive dust activities by command.	198
Table 47. Number of facilities reporting fugitive dust activities by installation.	198
Table 48. Count of installations subject to GHG reporting by command.	203
Table 49. Installations subject to GHG reporting.	203
Table 50. Installations with updated archaeological surveys by command.	204
Table 51. Installations with updated archaeological surveys.	204
Table 52. Number of tribes with whom commands consult.	206
Table 53. Number of tribes with whom installations consult.	206
Table 54. Number of eligible and ineligible archaeological sites by command.	211
Table 55. Number of eligible and ineligible archaeological sites by installation.	211
Table 56. Number of NRHP eligible structures by command.	216
Table 57. Number of NRHP eligible structures by installation.	216
Table 58. Number of archaeological sites by command.	221
Table 59. Number of archaeological sites by installation.	221
Table 60. NR eligible structures greater than 50 years old not evaluated by command.	225
Table 61. NR eligible structures greater than 50 years old not evaluated by installation.	225
Table 62. Acres accessible for archaeological inventory by command.	230
Table 63. Acres accessible for archaeological inventory by installation.	230
Table 64. Acres with completed archaeological inventory by command.	235
Table 65. Acres with completed archaeological inventory by installation.	235
Table 66. Command summary of installations with historic landmarks.	239
Table 67. Installations with historic landmarks.	239
Table 68. Installations with federal archaeological collections by command.	241
Table 69. Installations with federal archaeological collections.	241
Table 70. Cubic feet of archeological artifacts by command.	244
Table 71. Cubic feet of archeological artifacts by installation.	244
Table 72. INRMP by command.	249
Table 73. INRMP by installation.	249
Table 74. TES (excluding RCW and NLEB).	254

Table 75. TES (excluding RCW and NLEB) by installation.	254
Table 76. RCW counts by command.	259
Table 77. RCW counts by installation.	259
Table 78. NLEB by command.....	263
Table 79. NLEB by installation.	264
Table 80. Installations with Bald and Golden Eagles permits.	268
Table 81. Installations with Bald and Golden Eagles by command.....	268
Table 82. Installations with Bald and Golden Eagles by installation.	269
Table 83. Number of EPCRA Section 313 Form R reports by command.....	273
Table 84. Number of EPCRA Section 313 Form R reports by installation.	273
Table 85. Storage tanks by command.....	278
Table 86. Storage tanks by installation.	278
Table 87. Summary by command of buildings built before 1978 and 1981.....	283
Table 88. Buildings built before 1978 and 1981.	283
Table 89. Number of installations with a solid waste permit by command.....	288
Table 90. Number of solid waste permits by installation.	288
Table 91. Summary by command of the number of solid waste landfills.....	293
Table 92. The number of solid waste landfills by installation.....	293
Table 93. Number of installations with hazardous waste permits by command.....	298
Table 94. Hazardous waste permits by installation.	298
Table 95. Installations with subpart x permitted facilities by command.....	303
Table 96. Installations with subpart x permitted facilities.	303
Table 97. Storm water permits by command.	304
Table 98. Storm water permits by installation.	304
Table 99. Summary by command total maneuver acres.	309
Table 100. The number of maneuver area acres by installation.	309
Table 101. Summary by command facility response plan.	314
Table 102. Installations with facility response plans.	314
Table 103. Summary by command number of federally owned wastewater treatment plants.	316
Table 104. Number of federally owned wastewater treatment plants.	316
Table 105. Summary by command number of federally owned potable water treatment systems.	321
Table 106. Summary by command number of federally owned potable water systems by type.....	322
Table 107. Number of federally owned potable water treatment systems.	322
Table 108. Types of drinking water systems by installation.....	326
Table 109. IMCOM DAC personnel summary for FY21–25.	331
Table 110. IMCOM DAC personnel authorizations for FY21–25.....	331
Table 111. IMCOM local nationals personnel summary for FY21–25.....	334

Table 112. IMCOM local nationals personnel authorizations for fy21–25.....	334
Table 113. FRSE personnel summary for FY21–25.....	335
Table 114. ARNG personnel authorizations for FY21–25.....	335
Table 115. USAR DAC Personnel Summary for FY21–25.....	337
Table 116. USAR personnel authorizations for FY21–25.	337
Table 117. AMC DAC personnel summary for FY21–25.....	338
Table 118. AMC personnel authorizations for FY21–25.....	338

Preface

This study was conducted for the Deputy Chief of Staff – G9 Installations (formerly Office of the Assistant Chief of Staff for Installation Management’s [OACSIM]) Management Decision Package for Environmental Quality (MDEP VENQ) program under Project A1000-FY20, “Environmental Quality Requirements Model.”

The work was performed by the Environmental Processes Engineering Branch (EPE) and the Water Quality and Contaminant Modeling Branch (WQCMB) of the Environmental Processes and Engineering Division (EPED), U.S. Army Engineer Research and Development Center, Environmental Laboratory (ERDC-EL). At the time of publication of this report, Mrs. Brooke Petery-Kohutka and Dr. Todd Steisburg were chiefs of EPE and WQCMB, respectively; Mr. Mark Noel was Division Chief; and Dr. Patrick N. Deliman was the Technical Director for Modeling. The Deputy Director was Dr. Brandon Lafferty, and the Director was Dr. Edmond Russo.

COL Teresa A. Schlosser was the Commander of ERDC, and the Director was Dr. David W. Pittman.

1 Introduction

1.1 Background

The Environmental Quality Requirements Model (EQRM) is used to develop budget positions as presented to Congress by the Deputy Chief of Staff for Installations to obtain the Operations and Maintenance appropriations. These appropriations fund the Environmental Quality (EQ) Program, which includes Compliance, Conservation, and Pollution Prevention requirements.

1.2 Objective

This document describes the methodology used to evaluate the costs incurred by organizations involved in planning, programming, budgeting, and execution of the Army's environmental programs and estimating those costs for future year planning cycles.

1.3 Approach

The EQRM is used to estimate the costs associated with Compliance, Conservation, and Pollution Prevention activities for Installation Management Command (IMCOM), Army National Guard (ARNG), U.S. Army Reserve (USAR), and Army Materiel Command (AMC). The EQRM calculates future year costs for specific recurring activities; however, these costs are summed on an aggregate basis and should not be viewed as exact estimates. Final distribution and funding allocation are determined by the individual commands.

1.4 Engineered activity costs

Section 2 contains the engineered activity costs (EAC) for each environmental activity as well as all drivers, assumptions, and references used to derive the activity costs. All EAC relied on subject matter experts (SME) as well as best engineering judgment in addition to referenced data points. These EAC were evaluated on a per installation basis or scaled based on various scaling factors.

1.4.1 Units of measure

The units of measure, many of which are shown in Appendix E, are updated periodically from the data sources discussed below. Some of the data sources, such as the Army Environmental Database – Environmental Quality (AEDB-EQ), are no longer functional and are being phased out through data source replacement. This will require several years to complete.

1.4.1.1 Headquarters Installation Information System (HQIIS)

The HQIIS database is a secured site containing physical property owned by the Department of Defense. The data used in this report are downloaded through the “physical legal” reports and sorted based on date, category code, or measurement unit.

1.4.1.2 Data calls

Data calls are conducted by Headquarters, Department of Army, Installation Services Directorate, Environmental Division (DAIM-ISE) annually. Each command reports information associated with the clean air act, drinking water, clean water act, cultural resources, and other permits per Department of Defense Instruction (DoDI) 4715.03, 4715.05, 4715.06, and 4716.16. These data were not updated for this Program Objective Memorandum (POM) cycle.

1.4.1.3 AEDB-EQ

AEDB-EQ is no longer functional. The data formerly collected and retrieved from this database are being primarily gathered through data calls. AEDB-EQ data were not updated for this POM cycle.

1.4.1.4 Open source

Open source data include data available through data.gov, epa.gov, and other state databases. Sources are referenced as appropriate.

1.4.2 Cost adjustment factors

The coefficients associated with the size and category adjustment factors are a result of regression analyses on historic execution data at Army installations from Fiscal Year (FY) 2015 to FY 2017 as reported through the General Fund Enterprise Business System (GFEBS). Therefore,

requirement costs dependent on installation size and category are scaled from the engineered activity cost upward or downward to estimate the requirement costs at each Army installation. This analysis is shown in Sections 8 and 9 of this document.

1.4.2.1 *Installation size*

Installation size can affect the cost of certain EQ activities. Each command uses a different size designation methodology, which may include the number of employees, acres, sites, and/or facilities as shown in Table 1. Size designations can be found in Appendix C: Installation Category and Size Designations.

Table 1. Installation size designation definitions.

Command	Size Definition
IMCOM AMC	The estimated workload driven by total land acreage, total Garrison population, number of regulatory inspections, Clean Water Act (CWA) permits, and active range acreage determine the size designations of A (extra-large), B (large), C (medium), and D (small).
ARNG	The number of sites within each ARNG installation (state or territory) determines the size designation of small (fewer than 41 sites), medium (fewer than 73 sites), large (fewer than 129 sites), and extra-large (more than 129 sites).
USAR	The number of facilities within each Regional Support Command (RSC) determines the size designation of small (fewer than 10 sites), medium (fewer than 170 sites), large (fewer than 250 sites), and extra-large (more than 250 sites).
	Some USAR installations fall within the command and control of IMCOM and are treated as IMCOM installations for size determination. They include Fort Buchanan, Fort Devens, Fort Hunter Liggett (including Camp Parks), and Fort McCoy

1.4.2.2 *Installation category*

In general, an installation's category reflects the relative level of training intensity and operational value of the installation. There are six installation category designations, which include a variety of criteria, derived from the Army G-3 Sustainable Range Program. Appendix C: Installation Category and Size Designations presents the installation category designations.

1.4.3 Inflation index

The inflation index used in the model was determined by the Deputy Assistant Secretary of the Army for Cost and Economics (DASA-CE) through the Joint Inflation Calculator updated January 2018. The out-year costs were calculated using the Weighted Indices function on the “Army Multiple Appropriation Sheet,” Weighted Index, and base year FY18. As shown in Table 2, current year (FY18) was set to 1.0 to maintain continuity with past model versions; this number is not consistent with the Weighted Indices.

Table 2. Inflation index for out year calculations – weighted indices base year FY18.

Command	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
IMCOM	1.0	1.0358	1.0562	1.0773	1.0988	1.1208	1.1432	1.1661
ARNG	1.0	1.0341	1.0544	1.0755	1.0970	1.1190	1.1413	1.1642
USAR	1.0	1.0324	1.0526	1.0737	1.0952	1.1171	1.1394	1.1622
AMC	1.0	1.0358	1.0562	1.0773	1.0988	1.1208	1.1432	1.1661

1.4.4 Environmental categories

EQRm calculates engineered activity costs for the following environmental categories and activities:

Personnel

- Department of the Army Civilian (DAC)/ Federally Reimbursable State Employee (FRSE) Labor (1A)
- Local National (LN) Labor (2A)
- Travel; Training, Equipment, and Supplies; and Information Technology (IT) Life Cycle Replacement (3A)

Air

- Title V Operating Permit (1A)
- Synthetic Minor Permit (2A)
- Minor Source Permits (3A)
- Risk Management Plans (4A)
- Air Pollutant Emissions Inventory (5A)
- Emission Fees (6A)
- Monitoring, Recordkeeping, and Reporting (7A)
- Fugitive Dust Control (8A)

- New Source Review (NSR) (Testing Installations) (9A)
- Ozone-depleting Substances (ODS) Management Plan (10A)
- Green house gas (GHG) Reporting (11A)
- Stack Testing (12A)

Cultural Resources

- Management Plans: Integrated Cultural Resources Management Plan (ICRMP) Updates (1A)
- Management Plans: Maintenance and Treatment Plans (1B)
- National Historic Preservation Act (NHPA): Architectural Inventories and Evaluation (2A)
- NHPA: Architectural Mitigation (2B)
- NHPA: Archaeological Inventory (2C)
- NHPA: Archaeological Evaluation (2D)
- NHPA: Archaeological Mitigation (2E)
- Archaeological Monitoring (3A)
- Native American, Alaskan, and Hawaiian Consultation (4A)
- Maintenance of Artifacts and Records (5A)
- Rehabilitation of Artifacts and Records (5B)
- Native American Graves Protection and Repatriation Act (NAGPRA): Repatriation (6A) NAGPRA of 1990
- NAGPRA: Management (6B)
- Agreement Documents (7A)

Installation Programs and Initiatives (IP&I)

- Regional Initiatives (1A)
- Environmental Geographic Information System (GIS) Layers – Compliance (2A)
- Environmental GIS Layers – Conservation (2B)
- Environmental Awareness Training – Compliance (3A)
- Environmental Awareness Training – Conservation (3B)
- Environmental Awareness Training – Pollution Prevention (P2) (3C)
- Installation Compatible Use Zone (ICUZ) Studies (4A)
- Compliance Corrective Actions (5A)
- Integrated Pest Management Plan (6A)

Natural Resources

- Planning Level Surveys (PLS) (1A)
- Threatened and Endangered Species (TES) PLS (2A)
- Integrated Natural Resources Management Plan (INRMP) Revision (3A)
- INRMP Implementation (4A)
- TES Management (5A)
- TES Management – Overseas (5B)
- Species at Risk (SAR)/Candidate Species Management (6A)
- Migratory Bird Treaty Act (MBTA) (7A)
- Bald and Golden Eagle Protection Act (BGEPA) (8A)
- Wetlands
 - Delineations (9A)
 - Monitoring (9B)
 - PLS (9C)

Pollution Prevention (P2)

- P2 Plan Updates (1A)
- P2 Opportunity Assessments (2A)

Storage Tanks

- Permits and Fees (includes registration) (1A)
- Operator Training (2A)

Toxic Substances

- Asbestos and Lead Awareness Training (1A)
- Emergency Planning and Community Right-to-Know Act (EPCRA) Sections 302, 311, and 312 Analysis and Reporting (2A)
- EPCRA Section 313 Analysis and Reporting (3A)

Waste

- Solid Waste
 - Permit Applications/Renewals (1A)
 - Fees (2A)
 - Landfill Monitoring (3A)

- Hazardous Waste
 - Petroleum-oil-lubricants (POL)-contaminated Waste (4A)
 - Permit Applications/Renewals (5A)
 - Fees (6A)
 - Sampling and Monitoring (7A)
 - Disposal (8A)
 - Management Supplies and Equipment (9A)
 - Management Plans (10A)
 - Groundwater Monitoring at Subpart X Permitted Facilities (11A)
 - Incidental Spill Response (12A)
 - Training (13A)

Water

- Storm Water
 - Monitoring and Sampling (1A)
 - Monitoring and Sampling – Laboratory Analyses (1B)
 - Permit Applications (2A)
 - Permit Applications – Laboratory Analysis (2B)
 - Permit Fees – National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) and Industrial (3A)
 - Storm Water Pollution Prevention Plan (SWPPP) Update (4A)
 - MS4 Plan Update (5A)
 - Inspections (6A)
 - Non-Point Source (7A)
 - Total Maximum Daily Load (TMDL) Implementation (8A)
 - Regional Watershed Initiatives (9A)
- Oil Pollution Prevention (OP2)
 - Supplies and Equipment (10A)
 - Spill prevention control countermeasures (SPCC) Plan Updates (11A)
 - Facility Response Plans (12A)
- Wastewater
 - Sampling and Monitoring (13A)
 - Sampling and Monitoring – Laboratory Analyses (13B)
 - Permit Applications (14A)
 - Permit Applications – Laboratory Analysis (14B)
 - Permit Fees (15A)
 - Pretreatment Sampling and Analysis (16A)
 - Sludge Management Plan (17A)

- Drinking Water
 - Sampling and Monitoring (18A)
 - Sampling and Monitoring – Laboratory Analysis (18B)
 - Sampling and Monitoring Overseas (19A)
 - Sampling and Monitoring Overseas– Laboratory Analyses (19B)
 - Sanitary Surveys or Fees (20A)
 - Consumer Confidence Reports (21A)
 - Sampling Plan (22A)
 - Wellhead Protection Plan (23A)

1.5 General assumptions

The Army developed the EQRM under the assumption that the Army will fund EQ programs sufficiently to address critical environmental requirements. Critical requirements are activities identified as Class 0 (costs associated with environmental programs that are necessary to meet applicable compliance requirements), Class 1 (projects and activities needed that are currently out of compliance [have received an enforcement action from a duly authorized federal, state, or local authority]), and Class 2 (projects and activities needed that are not currently out of compliance but shall be if projects or activities are not implemented in time to meet an established deadline beyond the current program year) as described in Appendix C: Environmental Quality Classes of the Army environmental Funding Guidance Document FY2015–20. This funding level is referred to as Amber level funding. Green level funding also includes Class 3 (not explicitly required by law but are needed to address overall environmental goals and objectives) projects.

1.6 Basis of calculations

The basis section will include the variables considered when deriving the EAC. In addition to those variables, the following were also applied to the development of the EAC as appropriate:

- Professional experience and best engineering judgment derived from assisting various Department of Defense (DoD) installations with similar activities.
- Consultation with Headquarters, Department of the Army (HQDA), and other Army SME and technical work groups.
- Labor hours, labor categories, and supplies are based on best engineering judgment and experience.

1.7 Validation of model

The model must be validated by assessing the funds enacted through the appropriations compared to the funds expended and requested. The funds expended and requested are determined through EQ data calls, interviews with the commands, model analysis (IMCOM Environmental Funding Analysis Model), and thorough review of the Army's databases (Headquarters Installation Information System [HQIIS], Real Property Planning and Analysis System, Structure and Manpower Allocation System, Army Stationing and Installation Plan, General Fund Enterprise Business Systems [GFEBS], Planning, Programming and Budgeting Business Operating System Data Warehouse, Garrison Environmental Requirements Build, etc.) The validation is then assessed by the DASA-CE. A copy of the validation memo appears in Section 5 "DASA-CE Validation Review Memo."

2 Environmental Quality Requirements Model Environmental Categories and Activities

This section contains detailed descriptions of each of the engineered activity costs within EQRM, as well as the assumptions and references used. Environmental subject matter experts developed cost estimates for conducting specific environmental activities based on best engineering judgment and experience conducting similar activities at Army and DoD installations. These cost estimates include labor hours and rates, supplies, and other direct and administrative costs. In other instances, costs for particular activities are mathematical means calculated based on research into standard costs of laboratory fees, permits, or other consistently priced cost elements.

Currently, EQRM includes calculations associated with the following environmental categories:

- Personnel
- Air
- Cultural Resources
- Installation Programs and Initiatives
- Natural Resources
- P2
- Storage Tanks
- Toxic Substances
- Waste
- Water

2.1 Personnel

EQRM calculates environmental personnel labor, training, travel, equipment, supplies, and IT life cycle replacement costs by installation. Table 3 lists the personnel-related activities captured in EQRM.

Table 3. Personnel environmental category activities.

ID	EQRM Activity
1A	DAC/FRSE Labor
2A	LN Labor
3A	Travel; Training, Equipment and Supplies; IT Life Cycle Replacement

2.1.1 Department of the Army Civilian/Federally Reimbursed State Employees (DAC/FRSE) Labor (1A)

Category	Personnel		Date Updated	Inflation		2018		
ID	1A			EAC		2018		
Activity	DAC/FRSE Labor			Unit of Measure		2019		
Cross-Ref	Appendix E, Sections JJ-MM		Unit of Measure Source				DAIM-ISE	
Data Req.	Manpower authorizations, costs per civilian type (CTYPE)							
Definition	The EQ DAC labor costs for IMCOM, USAR, and AMC personnel, and the FRSE labor costs for ARNG personnel. Dependent upon the environmental category as well as the CTYPE. (WG = Federal Employee, GS = Graded Employee)							
EAC	Units		Total cost per DAC				\$FY	18
		CTYPE	2021	2022	2023	2024	2025	
	IMCOM							
	DAC Labor - Compliance	WG	81,429	83,143	84,857	86,714	88,141	
		GS	116,250	118,688	121,190	123,736	125,833	
	DAC Labor - Conservation	WG	81,333	83,000	85,000	86,667	88,038	
		GS	116,246	118,686	121,187	123,731	125,829	
	DAC Labor – P2	WG	-	-	-	-	-	
		GS	116,250	118,688	121,188	123,729	125,833	
	ARNG							
	DAC Labor - Compliance	WG	-	-	-	-	-	
		GS	78,363	79,773	81,407	83,157	84,821	
	DAC Labor - Conservation	WG	-	-	-	-	-	
		GS	78,363	79,773	81,407	83,157	84,821	
	DAC Labor – P2	WG	-	-	-	-	-	
		GS	78,363	79,773	81,407	83,157	84,821	
	USAR							
	DAC Labor - Compliance	WG	76,000	77,000	79,000	80,000	82,265	
		GS	60,053	108,319	110,474	112,842	114,795	
	DAC Labor - Conservation	WG	-	-	-	-	-	
		GS	106,000	108,231	110,615	112,846	114,738	
	DAC Labor – P2	WG	-	-	-	-	-	
		GS	96,286	98,429	100,429	102,571	104,223	

2.1.2 Local National (LN) Labor (2A)

Category	Personnel		Date Updated		Inflation		2018
ID	2A				EAC		2018
Activity	LN Labor				Unit of Measure		2019
Cross-Ref	Appendix E, Sections JJ-MM		Unit of Measure Source			DAIM-ISE	
Data Req.	Manpower authorizations, costs per category/CTYPE						
Definition	The EQ LN labor costs for IMCOM personnel. Dependent upon the environmental category as well as the CTYPE						
EAC	Units	per EQ LN personnel authorization by installation				\$FY	18
		2021	2022	2023	2024	2025	
	LN Labor - Compliance						
	German Nationals	68,037	69,481	70,963	72,444	73,645	
	Koreans (Direct Hire)	15,857	16,214	16,571	16,929	17,164	
	Other Direct Hire FNs	64,000	65,000	66,667	68,000	69,276	
	Other Indirect Hire FN	106,000	108,500	110,500	113,000	114,738	
	LN Labor - Conservation						
	German Nationals	68,071	69,500	70,929	72,500	73,683	
	Koreans (Direct Hire)	15,875	16,250	16,500	16,875	17,184	
	Other Direct Hire FNs	64,000	65,500	66,500	68,000	69,276	
	Other Indirect Hire FN	106,000	108,000	111,000	113,000	114,738	
	LN Labor - Pollution Prevention						
	German Nationals	68,000	69,500	71,000	72,500	73,605	
	Koreans (Direct Hire)	16,000	16,000	16,500	17,000	17,319	
	Other Direct Hire FNs	-	-	-	-	-	
	Other Indirect Hire FN	-	-	-	-	-	
Calculation	IMCOM	Cost = Average Salary by environmental category and CTYPE * Number of authorized EQ DAC personnel by installation, environmental category and CTYPE					
	ARNG AMC USAR	N/A					
Basis	The calculation of LN salaries uses salary rates provided by DASA-CE, FY20 – 25 POM 20 (#3229).						
Assumptions	None						

2.1.3 Travel; Training, Equipment, and Supplies; and Information Technology Life Cycle Replacement (3A)

Category	Personnel		Date Updated		Inflation	2018
ID	3A				EAC	2018
Activity	Travel; Training, Equipment and Supplies; IT Life Cycle Replacement				Unit of Measure	2019
Cross-Ref	Appendix E, Sections JJ-MM		Unit of Measure Source			DAIM-ISE
Data Req.	Manpower authorizations, costs per authorization					
Definition	This activity reflects costs associated with travel; training; equipment and supplies; and IT life cycle replacement.					
EAC	Units	per EQ DAC/FRSE personnel authorization			\$FY	18
	Activity	2021	2022	2023	2024	2025
	DAC Equipment and Supplies					
	Compliance	342	349	356	363	371
	Conservation	342	349	356	363	371
	P2	342	349	356	363	371
	DAC IT Life Cycle Replacement					
	Compliance	367	374	382	389	397
	Conservation	367	374	382	389	397
	P2	367	374	382	389	397
	DAC Training					
	Compliance	328	334	341	348	355
	Conservation	328	334	341	348	355
	P2	328	334	341	348	355
	DAC Travel					
	Compliance	2,110	2,153	2,196	2,242	2,287
	Conservation	2,110	2,153	2,196	2,242	2,287
	P2	2,110	2,153	2,196	2,242	2,287
Calculation	Cost (Compliance) = (Compliance training + Compliance equipment and supplies + Compliance travel + Compliance IT life cycle replacement) * Number of authorized EQ DAC Compliance personnel by installation Cost (Conservation) = (Conservation training + Conservation equipment and supplies + Conservation travel + Conservation IT life cycle replacement) * Number of authorized EQ DAC Conservation personnel by installation Cost (P2) = (P2 training + P2 equipment and supplies + P2 travel + P2 IT life cycle replacement) * Number of authorized EQ DAC P2 personnel by installation					
Basis	Prescribed costs are per Office of the Assistant Chief of Staff for Installation Management (OACSIM)-RDR Installations Program Evaluation Group (II PEG) cost factors.					

2.1.4 Personnel references

1. ARNG, October 2015.
 - a. Personnel 1A
2. ASA (FM&C), OA 2A, APPN Operations and Maintenance Army (OMA), CTYPE 101 and 102 (IMCOM); OA 6A, APPN OMA, CTYPE 101 and 102 (AMC); and OA 2A, APPN OMAR, CTYPE 101 and 102 (USAR).
 - a. Personnel 1A
3. ASA (FM&C), OA 2A, APPN OMA, CTYPE 105 (Korea), CTYPE 110 (Other Direct), CTYPE 206 (Other – Indirect), CTYPE 202 (Germany).
 - a. Personnel 2A
4. OACSIM-RDR: II PEG Travel, Training, Supply and Equipment (TTSE) cost factors, 7DEC2016.
 - a. Personnel 3A
5. OACSIM-RDR: POM 19-23 IT Life Cycle Replacement Costs for Desktop and Laptop, 7Dec 2016.
 - a. Personnel 3A

2.2 Air

Table 4 lists the 12 EQRM activities that constitute the air category. Each of these activities will be discussed in the following sections.

Table 4. Air environmental category activities.

ID	Air Activity
1A	Title V Operating Permit
2A	Synthetic Minor Permit
3A	Minor Source Permit
4A	Risk Management Plans
5A	Air Pollutant Emissions Inventory
6A	Emission Fees
7A	Monitoring, Recordkeeping, and Reporting
8A	Fugitive Dust Control
9A	NSR (Testing Installations)
10A	ODS Management Plan
11A	GHG Reporting
12A	Stack Testing

2.2.1 Air category drivers

This environmental category is driven by compliance with the Clean Air Act (CAA). The CAA is the comprehensive federal law that regulates air emissions from stationary and mobile sources. The CAA of 1970 and CAA Amendments of 1990 are guided by the following:

- Regulation: 40 Code of Federal Regulations (CFR) 50-99
- Statute: 42 United States Code (USC) 7401 et. seq.

2.2.2 Title V Operating Permit (1A)

Category	Air	Date Updated	Inflation	2018
ID	1A		EAC	2017
Activity	Title V Operating Permit		Unit of Measure	2016
Cross-Ref	Appendix E, Section B	Unit of Measure Source		AEDB-EQ
Definition	Title V Operating Permit (Title V) is the federal operating permit program normally adopted and implemented by a state for major sources under Title V of the CAA. A major source submits a permit application to the state or regional air quality control district environmental regulatory agency and the regulatory agency issues a permit for 5 years. Renewal applications are due 1 year before permit expiration. Costs for this activity capture compliance activities associated with Title V requirements, permit, and applications.			
EAC	\$57,600	Units	per Title V permit	
		\$FY	17	
Calculation	Cost = EAC * Number of Title V permits			
Basis	The engineered activity cost for a Title V permit includes labor, travel, and other direct costs (ODC) to conduct analysis, fieldwork, and reporting.			
Assumptions	This activity only applies to installations with Title V permits A draft and final copy of each document will be submitted to the installation.			

2.2.3 Synthetic Minor Permit (2A)

Category	Air		Date Updated	Inflation	2018
ID	2A		Date Updated	EAC	2017
Activity	Synthetic Minor Permit			Unit of Measure	2016
Cross-Ref	Appendix E, Section C		Unit of Measure Source		AEDB-EQ
Definition	A Synthetic Minor Permit is a state/local permit for a facility that is a major source under Title V or III of the CAA, but the facility has chosen to limit the amount of regulated pollutant emissions allowed from the facility in order not to have to obtain a Title V Operating Permit. These permits normally have additional compliance requirements included in their state/local permit.				
EAC	IMCOM ARNG AMC	\$ 52,300	Units	per Synthetic Minor permit	
	USAR	\$ 14,700	\$FY	17	
Calculation	Cost = EAC * Number of synthetic minor permits				
Basis	The EAC for a synthetic minor permit includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting.				
Assumptions	<p>This activity only applies to installations with Synthetic Minor permits. A draft and final copy of each document will be submitted to the installation.</p> <p>Army installations located outside the United States and its territories have analogous Synthetic Minor Permit requirements outlined in country-specific Final Governing Standards (FGS).</p>				

2.2.4 Minor Source Permits (3A)

Category	Air	Date Updated	Inflation	2018	
ID	3A		EAC	2017	
Activity	Minor Source Permit		Unit of Measure	2016	
Cross-Ref	Appendix E, Section D		Unit of Measure Source		AEDB-EQ
Definition	A state/local permit is considered a minor source permit issued to a stationary source of air pollution granting permission to construct, modify, or operate as directed by state or local regulation. A state/local permit includes any permit or registration obligation that is not a federal permit obligation (i.e., Title V operating permit, NSR permit, Prevention of Significant Deterioration permit). State/local permits may include information on which air pollutants are being released, how much the source is allowed to release, operating conditions, pollution control, monitoring, recordkeeping, and reporting requirements.				
EAC	\$631	Units	per Minor Source permit		
		\$FY	17		
Calculation	Cost = EAC * Number of minor source permits				
Basis	The EAC for a minor source permit includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting.				
Assumptions	<p>This activity only applies to installations that are a minor source</p> <p>Support includes completing the permit applications, coordinating with the regulators, participating in project meetings and negotiations as needed, conducting Best Available Control Technology determinations, and quantifying emissions of all regulated pollutants.</p> <p>The project proponent will obtain permits for non-stationary sources (e.g., fugitive dust control during a site-grading project).</p> <p>A contractor will provide new source permitting support for any minor new sources requiring NSR construction and operating permits.</p> <p>A draft and final copy of each document will be submitted to the installation.</p>				

2.2.5 Risk Management Plans (4A)

Category	Air		Date Updated	Inflation	2018
ID	4A		Date Updated	EAC	2017
Activity	Risk Management Plans (RMP)			Unit of Measure	2016
Cross-Ref	Appendix E, Section E		Unit of Measure Source		AEDB-EQ
Definition	EPA requires facilities that store certain chemicals above an established threshold to develop a Risk Management Plan (RMP) [Section 112(r)(7)]. The plan includes a hazard assessment detailing potential effects of an accidental release, an accident history of the last 5 years, and an evaluation of worst-case and alternative accidental releases. The plan should also include a prevention program that includes safety precautions and maintenance, monitoring, and employee training measures, as well as an emergency response program that outlines emergency health care, employee training measures, and procedures for informing the public and response agencies should an accident occur.				
EAC	All Commands except ARNG	\$53,100	Units	Per installation meeting reporting threshold	
	ARNG	N/A	\$FY	17	
Calculation	All Commands except ARNG	Cost = EAC			
	ARNG	N/A			
Basis	The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting.				
Assumptions	This activity only applies to installations subject to an RMP. A draft and final copy of each document will be submitted to the installation. The installation has primary responsibility for data collection.				

2.2.6 Air Pollutant Emissions Inventory (5A)

Category	Air		Date Updated	Inflation	2018
ID	5A			EAC	2017
Activity	Air Pollutant Emissions Inventory			Unit of Measure	2016
Cross-Ref	Appendix E, Sections B,C,D			Size Adj. Fact	2018
Size Basis	Medium (Size C)		Unit of Measure Source		AEDB-EQ
Definition	An Air Pollutant Emission Inventory is a quantification of the type and amount of air pollution emitted by a piece of equipment or activity on a periodic basis. Air pollutants may include National Ambient Air Quality Standard (NAAQS) pollutants and their precursors, hazardous air pollutants, ODS, and/or GHG. Sources of air pollution may include stationary, mobile, or non-road engine sources. An Air Pollutant Emission Inventory may be needed to satisfy an annual reporting requirement to determine applicability of an air quality regulation or permit requirement; to pay fees; or may be explicitly mandated in an air quality regulation or policy.				
EAC	All Commands except ARNG	\$21,200	Units	per installation with Air permits	
	ARNG	\$10,600	\$FY	17	
Calculation	If installation has a Title V, Synthetic Minor, or Minor Permit, then Cost = EAC * Size adjustment factor				
Basis	The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. Labor rates are based on Department of Logistics (DOL) rates. Labor hours, labor categories, and material needs are based on best engineering judgment and experience. The EAC is based on a medium (Size C) installation.				
Assumptions	This activity only applies to installations with Title V, Synthetic Minor, and Minor permits. A draft and final report will be prepared. The installation does not have primary responsibility for data collection.				

2.2.7 Emission Fees (6A)

Category	Air	Date Updated	Inflation	2018
ID	6A		EAC	2018
Activity	Emission Fees		Unit of Measure	2016
Cross-Ref	Appendix E, Section F	Unit of Measure Source		AEDB-EQ
Definition	Emission fees are monetary charges assessed to the owner of an air pollution source by a regulatory entity. Fees may be assessed based on magnitude of air pollutant emissions or to reimburse regulatory efforts such as administrative inquiries; processing of notifications, reports, or permits; site inspections; and/or labor associated with managing an air quality regulatory program.			
EAC	\$51.56	Units	Per ton of emissions reported to regulatory agencies	
		\$FY	18	
Calculation	If installation reports emissions, then Cost = Fee per ton * Tons emitted per year. Else, Cost = \$500			
Basis	The cost per ton was derived from Environmental Protection Agency (EPA) rate tables.			
Assumptions	This activity applies to installations reporting emissions to regulatory agencies. This activity does not apply to Army installations located outside the United States and its territories. Installations not reporting emissions still require a nominal amount (\$50 to \$100) to cover emission fees.			

2.2.8 Monitoring, Recordkeeping, and Reporting (7A)

Category	Air		Date Updated	Inflation	2018
ID	7A			EAC	2017
Activity	Monitoring, Recordkeeping, and Reporting			Unit of Measure	2016
Cross-Ref	Appendix E, Sections B, C			Size Adj. Fact	2018
Size Basis	Medium (Size C)		Unit of Measure Source		AEDB-EQ
Definition	Providing demonstration of compliance with air quality regulations or permitting conditions to a regulatory authority or higher headquarters. Example tasks include visible emissions observations; monitoring of feed rates, material throughputs, or hours of operation; tracking of material acquisitions, application, recycle, disposal, and chemical content; notification and reporting to regulatory authorities; and periodic training or certification.				
EAC	All Commands except ARNG	\$21,300	Units	Per installation with a Title V or Synthetic Minor Permit	
	ARNG	\$15,900	\$FY	17	
Calculation	Cost = EAC * Size adjustment factor				
Basis	The EAC for monitoring, recordkeeping, and reporting includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. The EAC is based on a medium (Size C) installation.				
Assumptions	This activity only applies to installations with either Title V or Synthetic Minor permits.				

2.2.9 Fugitive Dust Control (8A)

Category	Air		Date Updated	Inflation	2018
ID	8A			EAC	2017
Activity	Fugitive Dust Control			Unit of Measure	2016
Cross-Ref	Appendix E, Section G		Unit of Measure Source		AEDB-EQ
Definition	Fugitive dust control is the suppression and management of fugitive dust emissions created from military training, construction, or management activities (i.e., fugitive emissions composed of particulate matter that could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening).				
EAC	All Commands except ARNG	\$208,000	Units	Per installation reporting fugitive dust activities	
	ARNG	\$41,700	\$FY	17	
Calculation	Cost = EAC				
Basis	The EAC is based on vendor cost estimates.				
Assumptions	<p>This activity only applies to installations that report fugitive dust requirements in AEDB-EQ.</p> <p>This activity does not apply to Army installations located outside the United States and its territories.</p> <p>A local contractor will perform the work.</p> <p>The miles of unpaved roads treated will vary annually due to usage patterns, amount of training, and drought conditions.</p> <p>Application will be limited to high priority unpaved roads (i.e., those in the cantonment area, boundary roads, and high traffic areas). Boundary roads are a high priority as regulators are most concerned with off-post transport of visible emissions.</p>				

2.2.10 New Source Review (NSR) (Testing Installations) (9A)

Category	Air		Date Updated	Inflation	2018
ID	9A			EAC	2017
Activity	NSR (Testing Installations)			Unit of Measure	2016
Cross-Ref	Table 5 Page 25			Size Adj. Fact	2018
Size Basis	Medium (Size C)		Unit of Measure Source		DAIM-ISE
Definition	The purpose of NSR permits is to prevent construction of sources that would interfere with attainment or maintenance of NAAQS or violate the control strategy of non-attainment areas.				
EAC	All Commands	\$26,100	Units	Per testing installation	
			\$FY	17	
Calculation	IMCOM, AMC	Cost = EAC * Size adjustment factor			
	ARNG, USAR	Not Applicable			
Basis	The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. The EAC is based on a medium (Size C) installation.				
Assumptions	This activity only applies to testing installations. A local contractor will perform the work. The installation has primary responsibility for data collection. This activity does not apply to Army installations located outside the United States and its territories.				

The installations requiring new source reviews are shown in Table 5.

Table 5. New source review testing installations.

Command	Installation
IMCOM	Aberdeen Proving Ground
IMCOM	Dugway
IMCOM	Kwajalein Atoll
IMCOM	Picatinny
IMCOM	Redstone Arsenal
IMCOM	Rock Island Arsenal
IMCOM	U.S. Army Garrison (USAG) Natick
IMCOM	White Sands
IMCOM	Yuma Proving Ground
AMC	Military Ocean Terminal (MOT) Concord
AMC	MOT Sunny Point

2.2.11 Ozone Depleting Substance (ODS) Management Plan (10A)

Category	Air		Date Updated	Inflation	2018
ID	10A			EAC	2017
Activity	ODS Management Plan			Size Adj. Fact	2018
Size Basis	Medium (Size C)				
Definition	An ODS Management Plan is a written document designed to facilitate (1) management of ODS and equipment containing ODS; (2) compliance with applicable DoD, Army, federal, state, and local regulation and policy; (3) mitigation of ODS releases; and (4) elimination of dependency on ODSs.				
EAC	IMCOM, AMC	\$10,700 amortized over 5 years = \$2,140 / year	Units	Per installation	
	ARNG, USAR	\$5,450 amortized over 5 years = \$1,090 / year	\$FY	17	
Calculation	Cost = EAC * Size adjustment factor				
Basis	The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. The EAC is based on a medium (Size C) installation.				
Assumptions	The installation has primary responsibility for data collection.				

2.2.12 Green House Gas (GHG) Reporting (11A)

Category	Air	Date Updated	Inflation	2018
ID	11A		EAC	2017
Activity	GHG Reporting		Unit of Measure	2016
Cross-Ref	Appendix E, Section H		Size Adj. Fact	2018
Size Basis	Medium (Size C)			
		Unit of Measure Source		AEDB-EQ
Definition	An annual report is required for certain sources that emit GHGs in excess of applicability thresholds. Affected activities at Army installations include stationary combustion sources (boilers, turbines, generators, engines, incinerators, process heaters) and active/closed municipal solid waste landfills. Affected activities must track and report annual material and fuel throughputs, associated GHG emissions and carbon dioxide equivalents, and prepare a monitoring plan.			
EAC	All Commands except ARNG	\$5,360	Units	Per reporting installation
	ARNG	N/A	\$FY	17
Calculation	IMCOM USAR AMC	Cost = EAC * Size adjustment factor		
Basis	The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. The EAC is based on a medium (Size C) installation.			
Assumptions	The installation has primary responsibility for data collection. This activity only applies to installations reporting GHG requirements in AEDB-EQ.			

2.2.13 Stack Testing (12A)

Category	Air		Date Updated	Inflation	2018
ID	12A		Date Updated	EAC	2017
Activity	Stack Testing			Unit of Measure	2016
Cross-Ref	Appendix E, Sections B, C		Unit of Measure Source		AEDB-EQ
Definition	A stack test, also referred to in EPA regulations as a performance or source test, measures the amount of a specific regulated pollutant, pollutants, or surrogates being emitted; demonstrates the capture efficiency of a capture system; or determines the destruction or removal efficiency of a control device used to reduce emissions at facilities subject to the requirements of the CAA. Stack testing is an important tool used to determine a facility's compliance with emission limits or capture or control efficiencies established pursuant to the CAA.				
EAC	IMCOM USAR AMC	\$26,000	Units	Per installation with a Title V or Synthetic Minor Permit	
	ARNG	\$13,300	\$FY	17	
Calculation	Cost = EAC				
Basis	The EAC for this activity includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting.				
Assumptions	The installation has primary responsibility for data collection. This activity only applies to installations with either Title V or Synthetic Minor permits.				

2.2.14 Air category references

1. AEDB-EQ, Air Pollutant Emissions, CY2016.
 - a. Air 4A, 6A
2. AEDB-EQ, Clean Air Permits, CY2016.
 - a. Air 1A, 2A, 3A, 5A, 7A, 12A
3. AEDB-EQ, Fugitive Dust, CY2016.
 - a. Air 8A
4. AEDB-EQ, GHG Reporting, CY2016.
 - a. Air 11A
5. Applicable country-specific FGS.
 - a. Air 2A, 10A
6. Department of the Army (DA) 2007. Environmental Quality: Environmental Protection and Enhancement. Army Regulation (AR) 200-1. 13 December.
 - a. Air 10A
7. DoD 2017. Overseas Environmental Baseline Guidance Document. DoD 4715.05-G. 5 Oct.
 - a. Air 2A, 10A
8. DOL 2017. "May 2017 National Occupational Employment and Wage Estimates," Bureau of Labor Statistics, May.
 - a. Air 1A, 2A, 3A, 4A, 5A, 7A, 9A, 10A, 11A, 12A
9. <https://www.epa.gov/title-v-operating-permits/historical-permit-fee-rates>
 - a. Air 6A

2.3 Cultural resources

The Army is steward to tens of thousands of historic buildings, archaeological sites, and Native American sacred sites. The breadth of historic building management for the Army is enormous. The Army now has over 9,000 structures that are 50 years old or older and therefore subject to the requirements of the NHPA. Army lands contain over 75,000 archaeological sites. These sites range from those representing the rich and varied Native American past to early pioneer settlements to more contemporary sites related to the history of the Army itself.

Table 6 lists the 14 cultural resources activities in EQRM.

Table 6. Cultural resources environmental category activities.

ID	EQRM Activity
1A	Management Plans: ICRMP Updates
1B	Management Plans: Maintenance and Treatment Plans
2A	NHPA: Architectural Inventories and Evaluation
2B	NHPA: Architectural Mitigation
2C	NHPA: Archaeological Inventory
2D	NHPA: Archaeological Evaluation
2E	NHPA: Archaeological Mitigation
3A	Archaeological Monitoring
4A	Native American, Alaskan, and Hawaiian Consultation
5A	Maintenance of Artifacts and Records
5B	Rehabilitation of Artifacts and Records
6A	NAGPRA: Repatriation
6B	NAGPRA: Management
7A	Agreement Documents

2.3.1 Cultural resources drivers

1. 16 USC 469–469c: Archeological Resources Protection Act (ARPA)
 - a. Cultural Resources 3A
2. 16 USC 470: National Historic Preservation Act
 - a. Cultural Resources 1B 2A 2B 2C 2D 2E 3A 4A 5A 5B 7A
3. 25 USC 3001–3013, 104 Stat. 3048–3058: NAGPRA of 1990 Statute
 - a. Cultural Resources 3A 4A 6A 6B 7A
4. 36 CFR 79: Child Development
 - a. Cultural Resources 5A 5B 7A
5. 36 CFR 800: Protection of Historic Properties
 - a. Cultural Resources 1B 2A 2B 2C 2D 2E 3A 4A 7A
6. 40 CFR 1500–1518 NEPA
 - a. Cultural Resources 4A
7. 42 USC 4321 et seq. NEPA
 - a. Cultural Resources 4A
8. 43 CFR 10 NAGPRA
 - a. Cultural Resources 3A 4A 6A 6B 7A
9. 43 CFR 7 Protection of Archeological Resources
 - a. Cultural Resources 3A
10. AR 200-1 (Army Regulation 200-1): Environmental Protection and Enhancement
 - a. Cultural Resources 1A
11. DoDI 4715.16: Cultural Resource Management
 - a. Cultural Resources 1A

2.3.2 Management Plans: Integrated Cultural Resources Management Plan (ICRMP) Updates (1A)

Category	Cultural Resources		Date Updated	Inflation	2018
ID	1A			EAC	2017
Activity	Management Plans: ICRMP Updates			Unit of Measure	2015
Cross-Ref	Appendix E, Section U		Unit of Measure Source		AEDB-EQ
Definition	An ICRMP is a plan developed and implemented by a Garrison Commander to provide for the management of cultural resources in a way that maximizes beneficial effects on such resources and minimizes adverse effects and impacts without impeding the mission. An ICRMP is required to be updated every 5 years or sooner with significant changes to mission.				
EAC	IMCOM and AMC	\$13,000	Units	Per Installation	
	ARNG	\$6,550	\$FY	17	
	USAR	\$6,552			
Calculation	USAR		Cost=EAC*Number of RSC States		
	Commands except USAR		Cost=EAC		
Basis	The for ICRMP updates includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting.				
Assumptions	All Army installations will prepare ICRMP in accordance with AR 200-1 (installations with waivers are not excluded from calculations). Army installations located outside the United States and its territories have analogous ICRMP requirements outlined in country-specific FGS.				

2.3.3 Management Plans: Maintenance and Treatment Plans (1B)

Category	Cultural Resources		Date Updated	Inflation	2018
ID	1B			EAC	2017
Activity	Management Plans: Maintenance and Treatment Plans			Unit of Measure	2018
Cross-Ref	Appendix E, Sections L, Q		Unit of Measure Source		HQIIS
Definition	NHPA maintenance, repair, and rehabilitation plans develop condition assessments of historic properties, historic structures, and plans and specifications for such actions that are in accordance with the Secretary of the Interior’s Standards and Guidelines. This activity includes the preparation of maintenance and treatment plan updates.				
EAC	\$26,800	Units	Per National Register of Historic Places (NRHP) eligible structure		
		\$FY	17		
Calculation	Cost=EAC * Number of structures				
Basis	The EAC per NRHP eligible structure for maintenance and treatment plans is based on best professional and engineering judgment.				
Assumptions	One NRHP eligible structure per installation per year will be evaluated. Army installations located outside the United States and its territories have analogous maintenance and treatment plan requirements outlined in country-specific FGS.				

2.3.4 National Historic Preservation Act (NHPA): Architectural Inventories and Evaluation (2A)

Category	Cultural Resources	Date Updated	Inflation	2018
ID	2A		EAC	2017
Activity	NHPA: Architectural Inventories and Evaluation		Unit of Measure	2018
Cross-Ref	Appendix E, Section N	Unit of Measure Source		HQIIS
Definition	This activity includes NHPA architectural inventories and evaluations of installations in accordance with NHPA for non-Military Construction (MILCON) projects.			
EAC	\$2,120	Units	Per structure not evaluated > 50 years old	
		\$FY	17	
Calculation	If number of non-evaluated facilities >50 years old >8, then Cost = EAC * 8. Else, Cost = EAC * Number of non-evaluated facilities >50 years old			
Basis	The EAC per potential NRHP eligible facility includes labor and ODC for structure inventories at the reconnaissance level. The number of structures not evaluated per installation was obtained from HQIIS, Historic Facilities Profile, Not Evaluated (NEV). Data on “Not Evaluated” structures refers to structures that may potentially be considered eligible for listing on the NRHP and have not been previously evaluated. The EAC per structure not evaluated includes labor, travel, and ODC where one report is produced. Methods employed in this sample project are those that pertain to standard DoD buildings.			
Assumptions	All Army installations will undertake cultural resource investigations (including inventories, evaluations, and mitigation) in compliance with NHPA Sections 106 and 110. No installations have completed their inventories and evaluations of architectural resources because new structures are approaching the 50-year standard for evaluation on an annual basis. This activity does not apply to Army installations located outside the United States and its territories.			

2.3.5 National Historic Preservation Act (NHPA): Architectural Mitigation (2B)

Category	Cultural Resources	Date	Inflation	2018
ID	2B	Updated	EAC	2017
Activity	NHPA: Architectural Mitigation		Unit of Measure	2018
Cross-Ref	Appendix E, Section L	Unit of Measure Source		HQIS
Definition	This activity includes NHPA architectural mitigations of historic structures in accordance with NHPA Section 106 for non-MILCON and range MILCON projects.			
EAC	\$53,100	Units	Per NRHP eligible structure	
		\$FY	17	
Calculation	If number of NRHP eligible structures >2, then Cost = EAC * (Number of NRHP eligible structures = 2). Else, Cost = EAC * Number of NRHP eligible structures.			
Basis	The EAC for architectural mitigation includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. The number of NRHP eligible structures per installation was obtained from HQIS, Historic Facilities Profile, Eligible, Total National Register Eligible/Listed Structures (NRE). encompasses all structures that are identified as historic properties.			
Assumptions	A maximum of two NRHP eligible structures can be mitigated per year. This activity does not apply to Army installations located outside the United States and its territories. Individual structures will be mitigated. Historic American Building Survey/Historic American Engineering Record Level 2 documentation will be used. Contractors will conduct mitigation.			

2.3.6 National Historic Preservation Act (NHPA): Archaeological Inventory (2C)

Category	Cultural Resources		Date Updated	Inflation	2018
ID	2C			EAC	2017
Activity	NHPA: Archaeological Inventory			Unit of Measure	2015
Cross-Ref	Appendix E, Sections I,O,P		Unit of Measure Source		AEDB-EQ
Definition	This activity includes NHPA archaeological inventories of installations in accordance with NHPA Section 106.				
EAC	\$160		Units	Per installation acre	
			\$FY	17	
Calculation	IMCOM USAR AMC	If (Number of installation acres accessible for archaeological inventory – Number of acres inventoried) >750 acres, then Cost = EAC * 750. Else, Cost = EAC * (Number of installation acres accessible for archaeological inventory – Number of acres inventoried)			
	ARNG	If (Number of installation acres accessible for archaeological inventory – Number of acres inventoried) >250 acres, then Cost = EAC * 250. Else, Cost = EAC * (Number of installation acres accessible for archaeological inventory – Number of acres inventoried)			
Basis	The EAC includes submission of all technical reports and supporting documentation. The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. The installation archaeological inventory status was obtained from the AEDB-EQ "Number of Acres Accessible for Archaeological Inventory" and "Number of Acres Having Been Inventoried for Archaeological Resources."				
Assumptions	Installations that have completed their archaeological inventories do not require funding for this activity. Contractors will conduct archaeological inventories. This activity does not apply to Army installations located outside the United States and its territories.				

2.3.7 National Historic Preservation Act (NHPA): Archaeological Evaluation (2D)

Category	Cultural Resources	Date Updated	Inflation	2018
ID	2D		EAC	2017
Activity	NHPA: Archaeological Evaluation		Unit of Measure	2015
Labor	Contractors	Unit of Measure Source		AEDB-EQ
Definition	This activity includes evaluation of archaeological sites in accordance with NHPA Sections 106 and 110.			
EAC	\$21,300	Units	Per unevaluated archaeological site	
		\$FY	17	
Calculation	If (Number of archaeological sites -Number of eligible sites – Number of ineligible sites) >10, then Cost = EAC * 10. Else, Cost = (Number of archaeological sites -Number of eligible sites – Number of ineligible sites) * EAC.			
Basis	The EAC for archaeological evaluation is based on best professional and engineering judgment. The total number of installation archaeological sites, number of eligible sites, and number of ineligible sites were obtained from AEDB-EQ.			
Assumptions	Contractors will conduct archaeological evaluations. Army installations located outside the United States and its territories have analogous NHPA requirements outlined in country-specific FGS.			

2.3.8 National Historic Preservation Act (NHPA): Archaeological Mitigation (2E)

Category	Cultural Resources		Date Updated	Inflation	2018
ID	2E			EAC	2017
Activity	NHPA: Archaeological Mitigation			Unit of Measure	2015
Cross-Ref	Appendix E, Section K			Cat Adj. Factor	2018
Category	IMCOM AMC ARNG USAR	1 3	Unit of Measure Source		AEDB-EQ
Definition	This activity includes mitigation of archaeological sites in accordance with NHPA Section 106.				
EAC	\$86,500	Units	Per archaeological site		
		\$FY	17		
Calculation	Cost = EAC * Category adjustment factor				
Basis	The EAC for archaeological mitigation includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. The for archaeological mitigation is based on a Category 1 installation for IMCOM and AMC installations and Category 3 installation for ARNG and USAR installations. The number of installation eligible sites was obtained from AEDB-EQ.				
Assumptions	Contractors will conduct archaeological mitigation. This activity does not apply to Army installations located outside the United States and its territories. One archaeological mitigation will be conducted per year.				

2.3.9 Archaeological Monitoring (3A)

Category	Cultural Resources		Date Updated	Inflation	2018
ID	3A			EAC	2017
Activity	Archaeological Monitoring			Unit of Measure	2015
Cross-Ref	Appendix E, Section M			Cat. Adj. Factor	2018
Category	IMCOM AMC ARNG USAR	1 3	Unit of Measure Source		AEDB-EQ
Definition	This activity includes monitoring of archaeological sites in accordance with NHPA, Archeological Resources Protection Act, and NAGPRA.				
EAC	\$100		Units	Per archaeological site	
			\$FY	17	
Calculation	If (EAC* Number of archaeological sites) >\$100,000, then Cost = \$100,000 * Category adjustment factor. Else, Cost = EAC * Number of archaeological sites * Category adjustment factor.				
Basis	The EAC per archaeological site is based on best professional or engineering judgment. The for archaeological monitoring is based on a Category 1 installation for IMCOM and AMC and a Category 3 installation for ARNG and USAR installations.				
Assumptions	Contractors will conduct archaeological monitoring. This activity does not apply to Army installations located outside the United States and its territories.				

2.3.10 Native American, Alaskan, and Hawaiian Consultation (4A)

Category	Cultural Resources	Date Updated	Inflation	2018
ID	4A		EAC	2017
Activity	Native American, Alaskan, and Hawaiian Consultation (4A)		Unit of Measure	2015
Cross-Ref	Appendix E, Section J	Unit of Measure Source		AEDB-EQ
Definition	Army installations located within the United States and its territories are required to consult with Native Americans, Native Alaskans, and Native Hawaiians in accordance with various requirements in NHPA, National Environmental Policy Act (NEPA), and NAGPRA.			
EAC	\$2,140	Units	Per tribe consulted	
		\$FY	17	
Calculation	If number of recognized tribes consulted >20, then Cost = EAC * 20. Else, Cost = EAC * Number of recognized tribes consulted			
Basis	The EAC for Native American, Alaskan, and Hawaiian consultation includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. The number of recognized tribes per state was obtained from AEDB-EQ.			
Assumptions	Contractors will support consultation activities. Costs for consultation with more than 20 recognized tribes will not exceed the costs for consultation with 20 recognized tribes. This activity does not apply to Army installations located outside the United States and its territories.			

2.3.11 Maintenance of Artifacts and Records (5A)

Category	Cultural Resources	Date Updated	Inflation	2018
ID	5A		EAC	2017
Activity	Maintenance of Artifacts and Records		Unit of Measure	2015
Cross-Ref	Appendix E, Section S	Unit of Measure Source		AEDB-EQ
Definition	This activity includes maintenance and preservation of collections and associated records in compliance with the standards specified in 36 CFR 79.			
EAC	\$60	Units	Per cubic foot of artifact	
		\$FY	17	
Calculation	Cost = EAC * Cubic feet of artifacts			
Basis	The EAC was obtained from HQDA.			
Assumptions	This activity only applies to installations that have artifacts. This activity does not apply to Army installations located outside the United States and its territories. Installations maintain collections for curation in accordance with 36 CFR 79.			

2.3.12 Rehabilitation of Artifacts and Records (5B)

Category	Cultural Resources	Date Updated	Inflation	2018
ID	5B		EAC	2017
Activity	Rehabilitation of Artifacts and Records		Unit of Measure	2015
Cross-Ref	Appendix E, Section S	Unit of Measure Source		AEDB-EQ
Definition	This activity includes rehabilitation of collections and associated records in compliance with the standards specified in 36 CFR 79.			
EAC	\$1,000	Units	Per cubic foot of artifacts	
		\$FY	17	
Calculation	Cost = EAC * (0.05 * cubic feet of artifacts)			
Basis	The EAC was obtained from HQDA.			
Assumptions	This activity only applies to installations that have artifacts. This activity does not apply to Army installations located outside the United States and its territories. Installations rehabilitate a portion (5%) of their collections for curation each year in accordance with 36 CFR 79.			

2.3.13 Native American Graves Protection and Repatriation Act (NAGPRA): Repatriation (6A) NAGPRA of 1990

Category	Cultural Resources	Date	Inflation	2018
ID	6A	Updated	EAC	2017
Activity	NAGPRA: Repatriation NAGPRA of 1990		Unit of Measure	HQIIS -2018
				AEDB-EQ 2015
Cross-Ref	Appendix E, Sections A,R	Unit of Measure Source		AEDB-EQ and HQIIS
Definition	This activity includes a NAGPRA-required inventory for repatriation.			
EAC	\$50,000	Units	Per installation acre	
		\$FY	17	
Calculation	If (EAC * Number of installation acres * 0.003) < \$1,000; then cost = \$1,000 Else If (EAC * Number of installation acres * 0.003) > \$50,000; then cost = \$50,000 Else, Cost = (EAC * Number of installation acres * 0.003)			
Basis	The EAC for NAGPRA repatriation includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. This cost takes into account the differing volume of material that may require NAGPRA repatriation.			
Assumptions	This activity applies to installations with a federal archaeological collection and active Native American cemetery. This activity does not apply to Army installations located outside the United States and its territories. Installations will conduct analysis on their archaeological collections to identify objects that may need to be repatriated to Native American tribes. Installation acreage (0.3%) correlates with the number of artifacts that may be found and require NAGPRA repatriation. This equates to installations requiring a maximum of \$50,000 per year per installation to conduct repatriation. Contractors will conduct the repatriation inventory.			

2.3.14 Native American Graves Protection and Repatriation Act (NAGPRA): Management (6B)

Category	Cultural Resources		Date Updated	Inflation	2018
ID	6B			EAC	2017
Activity	NAGPRA: Management			Unit of Measure	2017
Cross-Ref	Appendix E, Section R		Unit of Measure Source		Data Call
Definition	This activity includes management of NAGPRA sites.				
EAC	ARNG and USAR	\$13,400	Units	Per installation	
	IMCOM and AMC	\$21,400	\$FY	17	
Calculation	Cost = EAC				
Basis	The EAC for NAGPRA management includes labor, travel, and ODC. Labor rates are based on DOL rates.				
Assumptions	This activity only applies to installations with a federal archaeological collection. Contractors will conduct management activities. This activity does not apply to Army installations located outside the United States and its territories.				

2.3.15 Agreement Documents (7A)

Category	Cultural Resources		Date Updated	Inflation	2018
ID	7A			EAC	2017
Activity	Agreement Documents			Unit of Measure	AEDB 2015 HQIIS 2018
Cross-Ref	Appendix E, Sections K,L			Cat. Adj. Fact.	2018
Category	IMCOM AMC	1	Unit of Measure Source	AEDB-EQ and HQIIS	
	ARNG USAR	3			
Data Req.	Number Eligible sites Number Eligible structures				
Definition	This activity includes preparation of agreement documents (Memoranda of Agreement, Programmatic Agreements, and Comprehensive Agreements) with various parties (State Historic Preservation Offices, Native Groups, curation facilities) in accordance with various requirements in NHPA and NAGPRA.				
EAC	\$1,600	Units	Per eligible historic property		
		\$FY	17		
Calculation	If (EAC * [Number of NRHP eligible archaeological sites + Number of NRHP eligible structures] * Category adjustment factor * 4%) ≤\$15,000, then Cost = \$15,000 Else, If (EAC * [Number of NRHP eligible archaeological sites + Number of NRHP eligible structures] * Category adjustment factor * 4%) ≥\$50,000, then Cost = \$50,000. Else, Cost = EAC * (Number of NRHP eligible archaeological sites + Number of NRHP eligible structures) * Category adjustment factor * 4%				
Basis	The EAC for agreement documents includes labor, travel, and ODCs to conduct analysis, fieldwork, and reporting. The EAC for agreement documents is based on a Category 1 installation for IMCOM and AMC and a Category 3 installation for ARNG and USAR installations. The number of NRHP eligible structures per installation was obtained from HQIIS, Historic Facilities Profile, Eligible Total (NRE). “National Register Eligible/Listed Structures” encompasses all structures that are identified as historic properties, within the Contiguous United States.				
Assumptions	Ten percent of historic properties require documents prepared in a given year. Installations require a minimum of \$15,000 and a maximum of \$50,000 per year per historic property to develop agreement documents. Historic properties are defined as listed archaeological sites or NRHP eligible architectural structures.				

2.3.16 Cultural resources reference documents

1. AEDB-EQ, Cultural Resources Survey, FY15, Part II, Q34.
 - a. Cultural Resources 7A
2. AEDB-EQ, FY15, Part II, Q1.
 - a. Cultural Resources 6A, 6B
3. AEDB-EQ, FY15, Part II, Q2.
 - a. Cultural Resources 5A, 5B
4. AEDB-EQ, FY15, Part II, Q23, Q33, and Q34.
 - a. Cultural Resources 2D
5. AEDB-EQ, FY15, Part II, Q23.
 - a. Cultural Resources 3A
6. AEDB-EQ, FY15, Part II, Q3.4
 - a. Cultural Resources 2E
7. AEDB-EQ, FY15, Part II, Q39 and Q40.
 - a. Cultural Resources 2C
8. AEDB-EQ, FY15, Part II, Q48.
 - a. Cultural Resources 1A
9. AEDB-EQ, FY15, Part II, Q59.
 - a. Cultural Resources 4A
10. Applicable country-specific FGS.
 - a. Cultural Resources 1A, 1B, 2D
11. DA 2007. Environmental Quality: Environmental Protection and Enhancement. AR 200-1. 13 December.
 - a. Cultural Resources 1A
12. DoD 2008. Cultural Resources Management. DoDI 4715.16. 18 September.
 - a. Cultural Resources 1A
13. DoD 2017. Overseas Environmental Baseline Guidance Document. DoD 4715.05-G. 5 Oct.
 - a. Cultural Resources 1A, 1B, 2D
14. DOL 2017. "May 2017 National Occupational Employment and Wage Estimates," Bureau of Labor Statistics, May.
 - a. Cultural Resources 1A, 1B, 2A, 2B, 2C, 2D, 2E, 4A, 6A, 6B, 7A
15. HQIIS, February 2018.
 - a. Cultural Resources 1B, 2A, 2B, 6A, 7A

2.4 Installation programs and initiatives

Installation programs and initiatives are activities required by installations to manage their environmental programs. Table 7 lists the installation programs and initiatives in EQRM.

Table 7. Installation programs and initiatives environmental category activities.

ID	EQRM Activity
1A	Regional Initiatives
2A	Environmental GIS Layers – Compliance
2B	Environmental GIS Layers – Conservation
3A	Environmental Awareness Training – Compliance
3B	Environmental Awareness Training – Conservation
3C	Environmental Awareness Training – P2
4A	ICUZ Studies
5A	Compliance Corrective Actions
6A	Integrated Pest Management Plan

2.4.1 Installation programs and initiatives drivers

1. 40 CFR 152–180 Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)
 - a. IP&I 6A
2. 7 USC 136 FIFRA
 - a. IP&I 6A
3. AR 200-1: Environmental Protection and Enhancement
 - a. IP&I 1A 3A, 3B, 3C, 4A, 5A
4. OACSIM (Assistant Chief of Staff for Installation Management) 2008. U.S. Army Installation Geospatial information and Services (IG&S) Data Proponency, Common Installation Picture, and Quality Assurance Plans (QAPs). 15 August 2008.
 - a. IP&I 2A, 2B

2.4.2 Regional Initiatives (1A)

Category	IP&I		Date Updated	Inflation	2018
ID	1A			EAC	2017
Activity	Regional Initiatives				
Definition	This activity includes costs to achieve compliance with requirements cited in DoD-executed agreements such as the Chesapeake Bay Agreement Action Plan, North Carolina Sandhills, Puget Sound Initiative, and Mojave Desert Ecosystem. The activity includes regional partnerships with EPA and other federal and host nation agencies.				
EAC	ARNG	\$10,600	Units	Per installation	
	IMCOM, AMC and USAR	\$26,600	\$FY	17	
Calculation	Cost = EAC				
Basis	The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting.				
Assumptions	All installations should participate in regional partnerships with federal and host nation agencies. Army installations located outside the United States and its territories have analogous requirements outlined in country-specific FGS.				

2.4.3 Environmental Geographic Information System Layers (GIS) – Compliance (2A)

Category	IP&I	Date Updated	Inflation	2018
ID	2A		EAC	2017
Activity	Environmental GIS Layers – Compliance		Size Adj. Factor	2018
		Size Basis	Extra Large (Size A)	
Definition	This activity includes costs for the development and update of GIS layers.			
EAC	\$2,270	Units	Per GIS layer	
		\$FY	17	
Calculation	Cost = EAC * 24 * Size adjustment factor			
Basis	The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. The EAC is based on an extra-large (Size A) installation.			
Assumptions	Installations develop or update 24 environmental compliance data layers per year. GIS software is in place at the installation.			

2.4.4 Environmental Geographic Information System (GIS) Layers – Conservation (2B)

Category	IP&I	Date Updated	Inflation	2018
ID	2B		EAC	2017
Activity	Environmental GIS Layers – Conservation		Size Adj. Fact	2018
		Size Basis	Extra Large (Size A)	
Definition	This activity includes costs for the development and update of GIS layers.			
EAC	\$2,270	Units	Per GIS layer	
		\$FY	17	
Calculation	Cost = EAC * 41 * Size adjustment factor			
Basis	The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. The EAC is based on an extra-large (Size A) installation.			
Assumptions	Installations develop or update 41 environmental conservation data layers per year. GIS software is in place at the installation			

2.4.5 Environmental Awareness Training – Compliance (3A)

Category	IP&I		Date Updated	Inflation	2018
ID	3A			EAC	2017
Activity	Environmental Awareness Training – Compliance				
Definition	This activity includes costs associated with conducting installation-specific environmental compliance awareness training.				
EAC	ARNG	\$37,100	Units	Per installation	
	IMCOM, AMC, USAR	\$79,600	\$FY	17	
Calculation	Cost = EAC				
Basis	The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting.				
Assumptions	Each installation will conduct environmental awareness training. Army installations located outside the United States and its territories have analogous requirements outlined in country-specific FGS.				

2.4.6 Environmental Awareness Training – Conservation (3B)

Category	IP&I	Date Updated	Inflation	2018
ID	3B		EAC	2017
Activity	Environmental Awareness Training – Conservation			
Definition	This activity includes costs associated with conducting installation-specific environmental conservation awareness training.			
EAC	\$26,500	Units	Per installation	
		\$FY	17	
Calculation	Cost = EAC			
Basis	The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting.			
Assumptions	Each installation will conduct environmental awareness training. Army installations located outside the United States and its territories have analogous requirements outlined in country-specific FGS.			

2.4.7 Environmental Awareness Training – Pollution Prevention (3C)

Category	IP&I		Date Updated	Inflation	2018
ID	3C			EAC	2017
Activity	Environmental Awareness Training – P2				
Definition	This activity includes costs associated with conducting installation specific P2 awareness training.				
EAC	USAR	N/A	Units	Per installation	
	ARNG	\$5,630	\$FY	14	
	IMCOM, AMC	\$26,600		17	
Calculation	IMCOM, ARNG, AMC	Cost = EAC			
	USAR	N/A			
Basis	The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting.				
Assumptions	Each installation will conduct environmental awareness training. Army installations located outside the United States and its territories have analogous requirements outlined in country-specific FGS.				

2.4.8 Installation Compatible Use Zone (ICUZ) Studies (4A)

Category	IP&I	Date Updated	Inflation	2018
ID	4A		EAC	2017
Activity	ICUZ Studies		Size Adj. Fact	2018
Size Basis	Extra Large (Size A)			
Definition	This activity includes costs to perform operational noise management studies to document the installation noise contour maps. This study allows the installation and interested public to work together to employ guidelines and land use planning techniques to ensure current and future land uses and noise from the related activities are compatible.			
EAC	\$15,800 amortized over 5 years (\$3,160 per year)	Units	Per installation	
		\$FY	17	
Calculation	Commands except IMCOM	Cost = EAC * Size adjustment factor		
	IMCOM	N/A		
Basis	The EAC is based on an extra-large (Size A) installation.			
Assumptions	Each installation will conduct operational noise studies for new installation activities. IMCOM does not receive funding via EQRM because the program is centrally funded by HQDA directly to Public Health Command.			

2.4.9 Compliance Corrective Actions (5A)

Category	IP&I		Date Updated	Inflation	2018
ID	5A			EAC	2017
Activity	Compliance Corrective Actions			Size Adj. Factor	2018
Size Basis	Extra Large (Size A)				
Definition	This activity includes costs to implement corrective actions at installations identified in the Environmental Program Assessment System. This activity provides Army installations and facilities with resources to achieve compliance with applicable federal, state, and local environmental laws and regulations; Presidential executive orders; and equivalent country-specific FGS.				
EAC	Air	\$5,620	Units	Per installation	
	Drinking Water (DW)	\$5,620	\$FY	17	
	Hazardous Waste (HW)	\$22,420			
	Wastewater (WW)	\$22,420			
Calculation	Cost = (EAC _{Air} + EAC _{DW} + EAC _{HW} + EAC _{WW}) * Size adjustment factor				
Basis	The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. The EAC is based on an extra-large (Size A) installation.				
Assumptions	Army installations located outside the United States and its territories have analogous requirements outlined in country-specific FGS.				

Integrated Pest Management Plan (IPMP) (6A)

Category	IP&I	Date Updated	Inflation	2018
ID	6A		EAC	2017
Activity	Integrated Pest Management Plan (IPMP)		Size Adjustment Factor	2018
Size Basis	Large (Size B)			
Definition	This activity includes annual reviews and periodic revisions to the installation IPMP. The IPMP establishes a protocol to maintain safe, effective, and environmentally sound integrated pest management programs to prevent or control pests and disease vectors that may adversely affect readiness or military operations by affecting the health of personnel or damaging structures, material, or property.			
EAC	\$30,450 amortized over 5 years (\$6,090 per year)	Units	Per installation	
		\$FY	17	
Calculation	Cost = EAC * Size adjustment factor			
Basis	The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. The EAC for IPMP is based on a large (Size B) installation.			
Assumptions	All Army installations require an IPMP. Army installations located outside the United States and its territories have analogous IPMP requirements outlined in country-specific FGS.			

2.4.10 Installation program initiatives category references

1. Applicable country-specific FGS.
 - a. IP&I 1A, 3A, 3B, 3C, 5A, 6A
2. DA 2007. Environmental Quality: Environmental Protection and Enhancement. AR 200-1. 13 December.
 - a. IP&I 1A, 3A, 3B, 3C, 4A, 5A
3. DoD 2008. DoD Pest Management Program. DoDI 4150.07. 29 May.
 - a. IP&I 6A
4. DoD 2017. Overseas Environmental Baseline Guidance Document. DoD 4715.05-G. 5 Oct.
 - a. IP&I 1A, 3A, 3B, 3C, 5A, 6A
5. DOL 2017. "May 2017 National Occupational Employment and Wage Estimates," Bureau of Labor Statistics, May.
 - a. IP&I 1A, 2A, 2B, 3A, 3B, 3C, 5A, 6A
6. OACSIM 2008. U.S. Army Installation Geospatial information and Services (IG&S) Data Proponency, Common Installation Picture, and Quality Assurance Plans (QAPs). 15 August.
 - a. IP&I 2A, 2B

2.5 Natural resources

The Army needs land to train troops and to build, test, and store equipment. The Army maintains the land to ensure availability and suitability for mission activities, while balancing responsible management of natural resources. The Army's conservation objectives are to accomplish the following:

- Ensure land remains available and suitable
- Maintain land conditions for realistic training and to preserve ecosystems
- Minimize land-related restrictions on training through good stewardship.

Table 8 lists the 12 natural resources activities in EQRM.

Table 8. Natural resources environmental category activities.

ID	EQRM Activity
1A	Planning Level Surveys (PLS)
2A	TES PLS
3A	INRMP Revision
4A	INRMP Implementation
5A	TES Management
5B	TES Management -Overseas
6A	SAR/Candidate Species Management
7A	MBTA
8A	BGEPA
9A	Wetlands: Delineations
9B	Wetlands: Monitoring
9C	Wetlands: PLS

2.5.1 Natural Resources Drivers

1. 16 USC 1361–1423h: Marine Mammal Protection Act of 1972
 - a. Natural Resources 2A
2. 16 USC 1531–1544: Endangered Species Act (ESA) (1973)
 - a. Natural Resources 2A
3. 16 USC 460 et seq.: Acquisition National Parks
 - a. Natural Resources 5A
4. 16 USC 668–668d: BEGPA
 - a. Natural Resources 8A
5. 16 USC 670a–670o, Sikes Act
 - a. Natural Resources 1A, 2A, 3A, 4A
6. 16 USC 703 et seq., MBTA
 - a. Natural Resources 2A, 6A, 7A
7. 32 CFR 190 Natural Resources Management Program
 - a. Natural Resources 1A, 2A, 3A, 4A
8. 33 USC 1251 et seq.: Clean Water Act
 - a. Natural Resources 9A, 9B, 9C
9. 40 CFR 122.21 Application for a permit (State)
 - a. Natural Resources 9A, 9B, 9C
10. 50 CFR 13 Permit Procedures
 - a. Natural Resources 2A, 7A
11. 50 CFR 216 Reg. Govern. Taking and Importing of Marine Mammals
 - a. Natural Resources 2A
12. 50 CFR 22 Eagle Permits
 - a. Natural Resources 8A
13. 50 CFR 402 Endangered Species Act
 - a. Natural Resources 2A, 5A
14. 7 USC 136: Environmental Pesticide Control
 - a. Natural Resources 5A
15. DoDI 4715.03: Natural Resources Conservation Program
 - a. Natural Resources 1A, 2A, 3A, 4A, 5B, 7A, 9C
16. Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds
 - a. Natural Resources 7A
17. U.S. Fish and Wildlife Service (USFWS) Litigation Settlement, 10 September 2011
 - a. Natural Resources 6A

2.5.2 Planning Level Surveys (PLS) (1A)

Category	Natural Resources	Date Updated	Inflation	2018
ID	1A		EAC	2017
Activity	Planning Level Surveys (PLS)			
Definition	This activity includes surveys or inventories to determine the presence/absence of natural resources subject to installation management. Installation-wide surveys and inventories are conducted to characterize and classify ecological units (i.e., flora, vegetation community, fauna, soil, topography, and surface waters) as necessary to inform INRMP updates, applicable country-specific FGS requirements, or other planning documents.			
EAC	\$51,300	Units	Per installation	
		\$FY	17	
Calculation	Cost=EAC			
Basis	The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting.			
Assumptions	<p>Costs were estimated to conduct six PLS:</p> <p>Flora. Activities necessary to develop and/or update a list of sensitive plant species occurring on an installation. Includes the identification of invasive species and noxious weeds.</p> <p>Fauna. Activities necessary to develop and/or update a list of sensitive fauna species occurring on an installation. Includes identification of invasive species.</p> <p>Vegetation Community. Activities necessary to produce and/or update a map of the kinds and distribution of plant communities (alliances) on an installation. At a minimum, this survey describes and maps the distribution and extent of plant alliances.</p> <p>Soil. Activities necessary to produce and/or update a map of the kinds and distribution of soil series on an installation.</p> <p>Topography. Activities necessary to produce and/or update a topographic map of the installation. At a minimum, this map shows elevation, elevation contours, and associated data consistent with U.S. Geological Survey standards and topographic maps.</p> <p>Surface Water. Activities necessary to produce and/or update a map of the surface waters on an installation.</p> <p>Applicable country-specific FGS.</p>			

2.5.3 Threatened and Endangered Species (TES) Planning Level Surveys (2A)

Category	Natural Resources	Date Updated	Inflation	2018
ID	2A		EAC	2017
Activity	TES PLS		Unit of Measure	2018
Cross-Ref	Appendix E, Section U	Unit of Measure Source		Data Call
Definition	This activity consists of a survey that maps and shows the occurrence, habitat distribution, and habitat management areas of federally endangered, threatened, proposed, and candidate species and SAR occurring on the installation.			
EAC	\$25,700	Units	Per installation with TES	
		\$FY	17	
Calculation	Cost=EAC			
Basis	The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting.			
Assumptions	Army installations located outside the United States and its territories have analogous PLS requirements outlined in country-specific FGS.			

2.5.4 Integrated Natural Resources Management Plan (INRMP) Revision (3A)

Category	Natural Resources	Date Updated	Inflation	2018
ID	3A		EAC	2017
Activity	INRMP Revision		Unit of Measure	2015
Cross-Ref	Appendix E, Section T	Unit of Measure Source		AEDB-EQ
Definition	This activity includes annual updates (i.e., pen and ink changes), a 5-year review for operational effect, and revisions required as a result of mission change or acquisition of new property. Tasks include coordination with the Directorate of Plans, Training, Mobilization and Security and Integrate Training Area Management (ITAM), consultation with USFWS and State Fish and Game (or analogous host nation agencies), meetings, public involvement, briefings (according to best management practices [BMP] for INRMP), and NEPA documentation for INRMP updates and revisions for Army installations located within the United States and its territories.			
EAC	\$20,700	Units	Per INRMP	
		\$FY	17	
Calculation	Cost = EAC * Number of INRMPs			
Basis	INRMP revisions were calculated as a fixed cost per plan. The EAC includes labor, travel, and ODCs to conduct analysis, fieldwork, and reporting.			
Assumptions	All installations requiring an INRMP have one. INRMPs will be prepared and maintained for the entire installation, including ranges, training lands and maneuver areas. Each INRMP will: Ensure no net loss to the training and testing capability of the installation and enhance these capabilities to the maximum extent practicable. Incorporate the principles of ecosystem-based management. Contain information needed to make appropriate decisions about natural resources management and training. Maintain a relevant and updated baseline list of plant and animal species located at each installation for all pertinent taxonomic and regionally important groups. Ensure that biologically or geographically significant or sensitive natural resources, such as ecosystems or species, are monitored and managed for their protection and long-term sustainability. Ensure that biologically or geographically significant or sensitive natural resources, such as ecosystems or species, are monitored and managed for their protection and long-term sustainability. Army installations located outside the United States and its territories have analogous INRMP requirements outlined in country-specific FGS.			

2.5.5 Integrated Natural Resources Management Plan (INRMP) Implementation (4A)

Category	Natural Resources		Date Updated	Inflation	2018
ID	4A			EAC	2017
Activity	INRMP Implementation			Unit of Measure	2018
Cross-Ref	Appendix E, Section A		Unit of Measure Source		HQIIS
Definition	This activity enables installation personnel to implement natural resources management activities as described in the installation's INRMP.				
EAC	\$10,100		Units	Per installation acre	
			\$FY	17	
Calculation	IMCOM AMC ARNG	If (EAC * Number of acres * 0.001) >\$500,000, then Cost = \$500,000. Else, Cost = EAC * Number of acres * 0.001			
	USAR	If (EAC * Number of acres * 0.0002) >\$500,000, then Cost = \$500,000. Else, Cost = EAC * Number of acres * 0.0002			
Basis	The EAC includes labor, travel, and ODCs to conduct analysis, fieldwork, and reporting. The number of installation acres was obtained from HQIIS.				
Assumptions	0.10% of the installation acreage will be subject to INRMP projects each year for IMCOM, ARNG, and AMC and 0.02% for USAR. This activity will not exceed \$500,000 per installation per year. Applicable country-specific FGS.				

2.5.6 Threatened and Endangered Species (TES) Management (5A)

Category	Natural Resources		Date Updated	Inflation	2018
ID	5A			EAC	2017
Activity	TES Management			Unit of Measure	2018
Cross-Ref	Appendix E, Section U		Unit of Measure Source		Data Call
Definition	This activity includes actions required to comply with the ESA, particularly Sections 4, 7, 9, and 10. Actions include informal and formal consultation requirements included in Biological Assessments/Evaluations and Biological Opinions with USFWS and National Marine Fisheries Service (NMFS). It also includes, but is not limited to, the implementation of habitat restoration and improvements and monitoring measures.				
EAC	IMCOM	\$65,310	Units	Per non-Red-Cockaded Woodpecker (non-RCW) occurrence	
	ARNG	\$17,083	\$FY		
	USAR	\$12,113			
	AMC	\$1,381		15-16	
	IMCOM	\$1,256,924	Units	Per RCW installation	
	ARNG	\$57,722	\$FY	15-16	
	USAR	NA			
	AMC	\$200,760			
	IMCOM	\$500,000	Units	Per NLEB installation	
	ARNG	\$81,000	\$FY	15-16	
	USAR	\$500,000			
	AMC	\$500,000			
Calculation	Cost = (EAC _{Non-RCW} * Number of occurrences) + (EAC _{RCW} * Number of occurrences) + (EAC _{NLEB} * Number of occurrences)				
Basis	Each TES was identified by Command and cost. The average cost was derived using 3 years of execution data for RCW and non-RCW species to determine a per-species cost. The non-RCW species includes management of future listed species. The NLEB cost was derived using cost data from affected installations.				
Assumptions	Installations without TES do not have a TES requirement. The RCW only applies to installations with active RCW clusters. Solely using execution data is a lagging indicator and does not allow for the management of future listed species. This activity does not apply to Army installations located outside the United States and its territories.				

2.5.7 Threatened and Endangered Species (TES) Management – Overseas (5B)

Category	Natural Resources	Date Updated	Inflation	2018
ID	5B		EAC	2017
Activity	TES Management – Overseas		Unit of Measure	2018
			Size Adjustment Factor	2018
Size Basis	Large (Size B)	Unit of Measure Source		HQIIS
Definition	This activity includes actions required to comply with analogous ESA requirements at Army installations located outside the United States and its territories.			
EAC	\$154,000	Units	Per installation	
		\$FY	17	
Calculation	Cost = EAC * Size adjustment factor			
Basis	The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. The EAC for overseas TES management is based on a large (Size B) installation.			
Assumptions	This activity only applies to non-US installations. Army installations located outside the United States and its territories have analogous species protection and ecosystem management requirements outlined in country-specific FGS.			

2.5.8 Species at Risk/Candidate Species Management (6A)

Category	Natural Resources		Date	Inflation	2018
ID	6A		Updated	EAC	2017
Activity	SAR/Candidate Species Management			Unit of Measure	2018
			Unit of Measure Source		HQIS
Definition	The U.S. District Court for the District of Columbia approved a settlement of litigation brought against the USFWS by the Center for Biological Diversity and Wild Earth Guardians as plaintiffs. In part, the settlement required the USFWS to establish a 6-year schedule for final listing decisions on 251 species on the candidate species list. Activity includes management activities for candidate species and other identified SAR that support Candidate Conservation Agreements, other agreements to prevent listings or critical habitat designation for specific species, and military training requirements.				
EAC	IMCOM	\$ 54,382	Units	Per installation	
	ARNG	\$ 4,648			
	USAR	\$ 1,710	\$FY	15	
	AMC	\$ 1,800			
Calculation	Cost = EAC				
Basis	The EAC was derived using previously calculated values used per HQDA guidance.				
Assumptions	Solely using execution data is a lagging indicator and does not allow for the management of future listed species.				

2.5.9 Migratory Bird Treaty Act (MBTA) (7A)

Category	Natural Resources		Date Updated	Inflation	2018
ID	7A			EAC	2017
Activity	MBTA			Unit of Measure	2018
				Unit of Measure Source	HQIIS
Definition	This activity includes all actions required to comply with the MBTA and Executive Order 13186. Actions include permitting, coordinating with regulatory agencies, implementing measures to avoid and/or minimize the taking of listed migratory birds, and collecting monitoring data to determine impacts on populations.				
EAC	IMCOM AMC	\$25,600		Units	Per installation
	ARNG	\$6,700		\$FY	17
	USAR	\$2,590			
Calculation	Cost = EAC				
Basis	The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting.				
Assumptions	This activity does not apply to Army installations located outside the United States and its territories.				

2.5.10 Bald and Golden Eagle Protection Act (BGEPA) (8A)

Category	Natural Resources	Date Updated	Inflation	2018
ID	8A		EAC	2017
Activity	Bald and Golden Eagle Protection Act (BGEPA)		Unit of Measure	2018
Cross-Ref	Appendix E, Section V	Unit of Measure Source		Data Call
Definition	This activity includes protecting and managing bald and golden eagles and their habitat. Actions include requesting and complying with permits, coordinating with regulatory agencies, implementing measures to avoid and minimize the taking of eagles, and collecting monitoring data to make determinations about impacts on populations.			
EAC	\$5,250 per installation reporting bald or golden eagle populations \$205,000 per installation with BGEPA permit	Units	Per installation (reporting/with permit)	
		\$FY	17	
Calculation	Cost = Reporting installations EAC + BGEPA permit EAC			
Basis	The EAC includes labor, travel, and ODCs to conduct analysis, fieldwork, and reporting.			
Assumptions	Cost per installation is weighted depending on the known management activities required for existing eagle populations. This activity only applies to installations reporting eagle populations. This activity does not apply to Army installations located outside the United States and its territories. The BGEPA permit portion of cost only applies to installations with a BGEPA permit.			

2.5.11 Wetlands: Delineations (9A)

Category	Natural Resources	Date Updated	Inflation	2018
ID	9A	Date Updated	EAC	2017
Activity	Wetlands: Delineations		Unit of Measure	2018
Cross-Ref	Appendix E, Section A	Unit of Measure Source		HQIIS
Definition	CWA Section 404 requirements pertain to wetlands management. This activity includes costs to perform wetland delineation and jurisdictional determinations as required. Wetland delineations/jurisdictional determinations include field assessment, mapping, preparing a delineation report, and U.S. Army Corps of Engineers (USACE) District coordination for approved Army activities.			
EAC	\$3,070	Units	Per installation acre	
		\$FY	17	
Calculation	Cost = EAC * (Number of installation acres * 0.0001)			
Basis	The EAC includes labor, travel, and ODCs to conduct desktop literature review, fieldwork, and reporting. Delineations will be conducted in accordance with the USACE Wetlands Delineation Manual.			
Assumptions	Delineation will occur on 0.01% of the installation acres each year. This activity does not apply to Army installations located outside the United States and its territories.			

2.5.12 Wetlands: Monitoring (9B)

Category	Natural Resources	Date Updated	Inflation	2018
ID	9B		EAC	2017
Activity	Wetlands: Monitoring		Unit of Measure	2018
		Unit of Measure Source		HQIS
Definition	This activity includes costs to comply with CWA Section 404 requirements pertaining to wetlands monitoring. This activity includes the actions required to collect data to quantify the changes to wetlands and wetland habitats required by agreements and conditions of permits.			
EAC	\$6,600	Units	Per installation	
		\$FY	17	
Calculation	Cost = EAC			
Basis	The EAC includes labor, travel, and ODC to conduct fieldwork, analyses, and reporting.			
Assumptions	This activity does not apply to Army installations located outside the United States and its territories.			

2.5.13 Wetlands: Planning Level Surveys (PLS) (9C)

Category	Natural Resources	Date Updated	Inflation	2018
ID	9C		EAC	2017
Activity	Wetlands: PLS		Unit of Measure	2018
Cross-Ref	Appendix E, Section A	Unit of Measure Source		HQIIS
Definition	This activity includes costs to update and produce a map of the approximate location, classification, and distribution of wetlands on the installation.			
EAC	\$51	Units	Per installation acre	
		\$FY	17	
Calculation	If EAC * (Number of installation acres * 0.0075) >\$100,000, then Cost = \$100,000. Else, Cost = EAC * (Number of installation acres * 0.0075).			
Basis	The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting.			
Assumptions	PLSs will be conducted on 0.75% of the installation acreage each year, up to a maximum of \$100,000. This activity will not exceed \$100,000 per installation per year.			

2.5.14 Natural resources reference documents

1. Applicable country-specific FGS.
 - a. Natural Resources 1A, 2A, 3A, 4A, 5B, 9C
2. DA 2007. Environmental Quality: Environmental Protection and Enhancement. AR 200-1. 13 December.
 - a. Natural Resources 1A, 2A
3. DAIM-ISE, August 2018.
 - a. Natural Resources 5A
4. DAIM-ISE, December 2018.
 - a. Natural Resources 8A
5. DoD 2013. Natural Resources Conservation Program. DoDI 4715.03. 25 November.
 - a. Natural Resources 1A, 3A, 4A, 5B, 7A
6. DoD 2017. Overseas Environmental Baseline Guidance Document. DoD 4715.05-G. 5 Oct.
 - a. Natural Resources 1A, 2A, 3A, 4A, 5B, 9C
7. DOL 2017. "May 2017 National Occupational Employment and Wage Estimates," Bureau of Labor Statistics, May.
 - a. Natural Resources 1A, 2A, 3A, 4A, 5B, 7A, 8A, 9A, 9B, 9C
8. HQIIS, February 2018.
 - a. Natural Resources 4A, 9A
9. USACE 1987. Corps of Engineers Wetlands Delineation Manual. Final Report. January.
 - a. Natural Resources 9A

2.6 Pollution Prevention (P2)

P2 is a comprehensive initiative to reduce and prevent pollution at the source. It focuses on conservation of resources, replacement of hazardous materials with less hazardous materials, waste reduction, recycling, and other preventive means to successfully and cost effectively avoid, prevent, or reduce the generation of pollutants. Table 9 lists the two P2 activities in EQRM.

Table 9. Pollution prevention environmental category activities.

ID	P2 EQRM Activity
1A	P2 Plan Updates
2A	P2 Opportunity Assessments

2.6.1 P2 drivers

1. AR 200-1: Environmental Protection and Enhancement
2. Pollution Prevention Act of 1990 Statute: 42 USC 133, Section 13106(a), Reporting Requirements (also known as Pollution Prevention Act, Title VI, Section 6607)
AR 200-1:

2.6.2 Pollution Prevention (P2) Plan Updates (1A)

Category	Pollution Prevention	Date Updated	Inflation	2018
ID	1A		EAC	2017
Activity	P2 Plan Updates		Unit of Measure	2018
Cross-Ref	RSC States		Size Adj. Factor	2018
Size Basis	Extra-large (Size A)	Unit of Measure Source		HQIIS
Definition	P2 is any practice that reduces, eliminates, or prevents pollution at its source. P2, also known as source reduction, is the ounce-of-prevention approach to waste management. Reducing the amount of pollution produced means less waste to control, treat, or dispose of. Less pollution means less hazards posed to public health and the environment. This activity includes reviewing and updating installation P2 Plans.			
EAC	\$15,600	Units	Per installation	
		\$FY	17	
Calculation	USAR	Cost = EAC * Size adjustment factor * Number of RSC states		
	IMCOM, AMC, ARNG	Cost = EAC * Size adjustment factor		
Basis	The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. The EAC is based on an extra-large (Size A) installation.			
Assumptions	Each installation has a P2 Plan. A contractor will prepare the plan. Army installations located outside the United States and its territories have analogous P2 Plan requirements outlined in country-specific FGS.			

2.6.3 Pollution Prevention (P2) Opportunity Assessments (2A)

Category	Pollution Prevention		Date Updated	Inflation	2018
ID	2A			EAC	2017
Activity	P2 Opportunity Assessments			Unit of Measure	2018
Cross-Ref	RSC States		Unit of Measure Source		HQIIS
Definition	This activity includes reviewing installation processes and activities to identify methods to reduce or eliminate the use of hazardous or toxic materials; reduce, reuse, or recycle generated waste; and increase energy efficiencies.				
EAC	IMCOM	\$21,800	Units	Per installation	
	AMC	\$21,800	\$FY	17	
	ARNG	\$7,250			
	USAR	\$7,250			
Calculation	IMCOM, AMC, ARNG		Cost = EAC		
	USAR		Cost = EAC* Number RSC states		
Basis	The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting.				
Assumptions	Each installation has P2 Opportunity Assessments A contractor will conduct the assessments. Army installations located outside the United States and its territories have analogous P2 Opportunity Assessment requirements outlined in country-specific FGS. Applicable country-specific FGS.				

2.6.4 P2 Reference documents

1. Applicable country-specific FGS.
 - a. Pollution Prevention 1A, 2A
2. DA 1995. Model Pollution Prevention Plan. U.S. Army Environmental Center, Aberdeen Proving Ground, MD. February 1995.
 - a. Pollution Prevention 1A
3. DA 2007. Environmental Quality: Environmental Protection and Enhancement. AR 200-1. 13 December.
 - a. Pollution Prevention 1A, 2A
4. DoD 2017. Overseas Environmental Baseline Guidance Document. DoD 4715.05-G. 5 Oct.
 - a. Pollution Prevention 1A, 2A
5. DOL 2017. "May 2017 National Occupational Employment and Wage Estimates," Bureau of Labor Statistics, May.
 - a. Pollution Prevention 1A, 2A
6. Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management. 24 January 2007.
 - a. Pollution Prevention 2A

2.7 Storage tanks

Resource Conservation and Recovery Act, Subtitle I (RCRA-I) and the Energy Policy Act of 2005 are the primary regulations governing underground storage tanks (UST).

The Army's UST program must comply with federal and state requirements and standards to protect public health and the environment.

Table 10 lists the two storage tank activities in EQRM.

Table 10. Storage tanks environmental category activities.

ID	Storage Tank EQRM Activity
1A	Permits and Fees (includes registration)
2A	Operator Training

2.7.1 Storage tank drivers

1. 40 CFR 280–282: General Requirements for UST
 - a. Storage Tanks 1A
2. 42 USC 82: Solid Waste Disposal
 - a. Storage Tanks 1A
3. Energy Policy Act of 2005 Sec. 1524. Operator training
 - a. Storage Tanks 2A
4. Energy Policy Act of 2005 Subtitle B--Underground Storage Tank Compliance
 - a. Storage Tanks 1A

2.7.2 Permits and Fees (includes registration) (1A)

Category	Storage Tanks	Date Updated	Inflation	2018
ID	1A		EAC	2017
Activity	Permits and Fees (includes registration)		Unit of Measure	2018
Cross-Ref	Appendix E, Section X	Unit of Measure Source		HQIS
Definition	<p>This activity includes fees charged to facilities by states and local jurisdictions for registering UST and/or aboveground storage tanks (AST) used for storage of petroleum products. Fees may also apply to obtaining tank permits. States and local jurisdictions have different methods for determining registration fees. Fees are typically based on quantity, capacity, chamber, chamber capacity of each tank at the facility, aggregate capacity of all tanks at the facility, or total annual throughput for all tanks at the facility.</p> <p>Some states and local jurisdictions do not charge fees for tanks less than a minimum capacity (e.g., less than 110 gal) and/or for tanks used for particular purposes (e.g., farm or residential motor fuel tanks used for non-commercial purposes, tanks storing heating oil for use on the premises, flow-through process tanks, emergency spill and overflow tanks).</p>			
EAC	\$127 Per UST	Units	Per storage tank	
	\$104 Per AST	\$FY	17	
Calculation	Cost = (UST EAC * Number of UST) + (AST EAC * Number of AST)			
Basis	The EAC includes recurring fees associated with tank permits for 50 states.			
Assumptions	<p>This activity only applies to installations with UST and/or AST.</p> <p>This activity does not apply to Army installations located outside the United States and its territories.</p> <p>All Army installations require permits for storage tanks.</p> <p>Fees must be paid annually.</p>			

2.7.3 Operator Training (2A)

Category	Storage Tanks	Date Updated	Inflation	2018
ID	2A		EAC	2017
Activity	Operator Training		Unit of Measure	2018
Cross-Ref	Appendix E, Section X	Unit of Measure Source		HQIIS
Definition	• Class A: have primary responsibility to operate and maintain the UST system and typically manage resources and personnel to achieve and maintain compliance • Class B: have daily responsibility for on-site operation and maintenance of UST systems • Class C: are daily on-site employees who are generally the first line of response to events indicating emergency conditions.			
EAC	\$154	Units	Per UST	
		\$FY	17	
Calculation	Cost = EAC * Number of UST			
Basis	The EAC is the average per training class (\$130 for Class A/B UST operator training; \$13 for Class C UST operator training) from multiple training providers.			
Assumptions	This activity only applies to installations with UST. This activity does not apply to Army installations located outside the United States and its territories. All Army installations require operator training for the management of their UST. Each UST requires training for one Class A/B operator and one Class C operator.			

2.7.4 Storage tanks reference documents

1. HQIIS, February 2018.
 - a. Storage Tanks 1A, 2A

2.8 Toxic substances

The Toxic Substances Control Act (TSCA) sets regulations to control the development, commerce, testing, and use of certain potentially hazardous chemicals. Under TSCA, EPA has the authority to regulate the entire life cycle of a chemical, from manufacture to disposal. In order to protect the public and the environment from toxic substances, the Army has a requirement to conduct annual awareness training.

EPCRA establishes reporting standards to increase public knowledge of emergency planning and the presence, release, and transfer of toxic chemicals throughout communities. EPCRA, a part of the Superfund Amendments and Reauthorization Act of 1986, requires manufacturing and federal facilities to report in four areas:

1. Emergency planning
2. Emergency notification
3. Community right-to-know
4. Toxic chemical release inventory.

Table 11 lists three toxic substances activities in EQRM.

Table 11. Toxic substances environmental category activities.

ID	EQRM Activity
1A	Asbestos and Lead Awareness Training
2A	EPCRA Sections 302, 311, and 312 Analysis and Reporting
3A	EPCRA Section 313 Analysis and Reporting

2.8.1 Toxic substances drivers

1. 15 USC 2601, TSCA
 - a. Toxic Substances 1A
2. 40 CFR 745 Lead
 - a. Toxic Substances 1A
3. 40 CFR 763 Asbestos
 - a. Toxic Substances 1A
4. AR 200-1: Environmental Protection and Enhancement
 - a. Toxic Substances 2A, 3A
5. EPCRA Section 313 Reporting Guidance
 - a. Toxic Substances 3A
6. EPCRA Sections 302, 311, and 312
 - a. Toxic Substances 2A

2.8.2 Asbestos and Lead Awareness Training (1A)

Category	Toxic Substances	Date Updated	Inflation	2018
ID	1A		EAC	2017
Activity	Asbestos and Lead Awareness Training		Unit of Measure	2018
Cross-Ref	Appendix E, Section Y	Unit of Measure Source		HQIIS
Definition	This activity involves awareness training for installation personnel who work in areas containing lead-based paint (LBP) and asbestos.			
EAC	\$65 amortized over 5 years for asbestos training (\$13 per year) \$60 amortized over 10 years for LBP training (\$6 per year)	Units	Per building built before 1981 (asbestos) Per building built before 1978 (LBP)	
		\$FY	17	
Calculation	Cost = (Asbestos training EAC * Number of buildings built prior to 1981) + (LBP training EAC * Number of buildings built prior to 1978)			
Basis	The EAC for conducting asbestos and LBP awareness training is based on average costs from commercial training providers. The average costs are based on the mathematical mean of 2-hour courses offered by commercial training companies. Training courses may be online or in person (local or on-site). The number of buildings built before 1981 (asbestos) and 1978 (LBP) were obtained from HQIIS.			
Assumptions	Asbestos and LBP awareness training will be conducted by a commercial provider either online or in person (local or on-site). One individual will be trained per building. Army installations located outside the United States and its territories have analogous asbestos and LBP awareness training requirements outlined in country-specific FGS.			

2.8.3 Emergency Planning and Community Right-to-Know Act (EPCRA) Sections 302, 311, and 312 Analysis and Reporting (2A)

Category	Toxic Substances	Date Updated	Inflation	2018
ID	2A		EAC	2017
Activity	EPCRA Sections 302, 311, and 312 Analysis and Reporting (2A)		Size Adj. Factor	2018
Size Basis	Extra-large (Size A)			
Definition	This activity includes EPCRA reporting, including preparation of plans/reports and conducting threshold determinations. EPCRA Sections 302, 311, and 312 are addressed together in the model. EPCRA Section 302 notification applies to any facility at which an amount of an extremely hazardous substance equal to or in excess of its threshold planning quantity is present. EPCRA Sections 311 and 312 reporting applies to any facility that is required to prepare or have available Safety Data Sheets (SDS) for a hazardous chemical under Occupational Safety and Health Administration regulations and that stores hazardous chemicals in excess of 10,000 lb (or 500 lb or the threshold planning quantity, whichever is less, of extremely hazardous substance) at any one time.			
EAC	\$35,100	Units	Per installation	
		\$FY	17	
Calculation	Cost = EAC * Size adjustment factor			
Basis	The EAC includes labor and ODCs to conduct analysis and reporting. The EAC is based on an extra-large (Size A) installation.			
Assumptions	EPCRA reporting is required every year. A contractor will conduct the threshold determination and prepare the reports. This activity does not apply to Army installations located outside the United States and its territories.			

2.8.4 Emergency Planning and Community Right-to-Know Act (EPCRA) Section 313 Analysis and Reporting (3A)

Category	Toxic Substances	Date Updated	Inflation	2018
ID	3A		EAC	2017
Activity	EPCRA Section 313 Analysis and Reporting		Unit of Measure	2018
Size Basis	Extra-large (Size A)		Size Adj. Factor	2018
Cross-Ref	Appendix E, Section W	Unit of Measure Source		EPA
Definition	This activity includes Toxics Release Inventory (TRI) (Form R) reporting, including preparation of plans/reports and conducting threshold determinations. EPCRA Section 313 reporting applies to any federal facility with 10 or more full-time employees that manufactures or processes in excess of 25,000 lb or otherwise uses in excess of 10,000 lb of a listed toxic chemical. A completed Form R report is prepared and submitted for each chemical manufactured, processed, or otherwise used per the requirements of EPCRA Section 313.			
EAC	\$26,000 per installation \$5,470 per Form R report	Units	Per Installation Per Form R Report	
		\$FY	17	
Calculation	Cost = [(EAC * Size adjustment factor) + (Form R report EAC * Number of Form R reports)]			
Basis	The EAC includes labor and ODC to calculate the volume of release and applicable reporting. The EAC is based on an extra-large (Size A) installation. EPCRA reporting is required every year. A contractor will conduct the threshold determination and prepare the reports. This activity does not apply to Army installations located outside the United States and its territories.			
Assumptions	none			

2.8.5 Toxic substances reference documents

1. Applicable country-specific FGS.
 - a. Toxic Substances 1A
2. Commercial training providers (fees for online courses used to estimate average): Access Safety, BAOS, Environmental Group Services Limited, Environmental Safety Training Center, Global Environmental Solutions, HazTrainer, Now Environmental Services Inc., Occupational Training & Supply, Inc., Pinnacle Environmental Consultants, Inc., Satori Group, SCS Engineers.
 - a. Toxic Substances 1A
3. DA 1997. Buildings and Structures. Chapter 3. AR 420-70. Headquarters Department of the Army, Washington, DC. 10 October 1997.
 - a. Toxic Substances 1A
4. DA 2007. Environmental Quality: Environmental Protection and Enhancement. AR 200-1. 13 December.
 - a. Toxic Substances 1A, 2A, 3A
5. DoD 2017. Overseas Environmental Baseline Guidance Document. DoD 4715.05-G. 5 Oct.
 - a. Toxic Substances 1A
6. DOL 2017. "May 2017 National Occupational Employment and Wage Estimates," Bureau of Labor Statistics, May.
 - a. Toxic Substances 2A, 3A
7. EPA Reporting Year 2015 TRI data. <https://www.epa.gov/toxics-release-inventory-tri-program/2015-tri-preliminary-dataset>.
 - a. Toxic Substances 3A
8. Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management. 24 January 2007.
 - a. Toxic Substances 2A, 3A
9. HQIIS, February 2018.
 - a. Toxic Substances 1A

2.9 Waste

RCRA is the nation's primary law governing disposal of solid and hazardous waste. Congress passed RCRA on 21 October 1976 to address increasing problems the nation faced from the growing volume of municipal and industrial waste. RCRA, which amended the Solid Waste Disposal Act of 1965, set national goals for the following:

- Protecting human health and the environment from the potential hazards of waste disposal
- Conserving energy and natural resources
- Reducing the amount of waste generated
- Ensuring that wastes are managed in an environmentally sound manner.

2.9.1 Solid waste

The solid waste program, under RCRA Subtitle D, encourages states to develop comprehensive plans to manage non-hazardous industrial solid waste and municipal solid waste, sets criteria for municipal solid waste landfills and other solid waste disposal facilities, and prohibits open dumping of solid waste. RCRA defines solid waste as garbage; refuse; sludge from waste treatment plants, water supply treatment plants, or pollution control facilities; industrial wastes; and other discarded materials. Table 12 lists the three solid waste activities in EQRM.

Table 12. Solid waste environmental category activities.

ID	EQRM Activity
1A	Solid Waste: Permit Applications/Renewals
2A	Solid Waste: Fees
3A	Solid Waste: Landfill Monitoring

2.9.2 Hazardous waste

The hazardous waste program, under RCRA Subtitle C, establishes a system for controlling hazardous waste from the time it is generated until its ultimate disposal – in effect, from “cradle to grave.” Hazardous waste is a waste with properties that make it dangerous or potentially harmful to human health or the environment. In regulatory terms, a RCRA hazardous waste is a waste that appears on one of the four hazardous waste lists (F-list, K-list, P-list, or U-list), or exhibits at least one of four characteristics – ignitability, corrosivity, reactivity, or toxicity. Table 13 lists the 10 hazardous waste activities in EQRM.

Table 13. Hazardous waste environmental category activities.

ID	EQRM Activity
4A	Hazardous Waste: POL-contaminated Waste
5A	Hazardous Waste: Permit Applications/Renewals
6A	Hazardous Waste: Fees
7A	Hazardous Waste: Sampling and Monitoring
8A	Hazardous Waste: Disposal
9A	Hazardous Waste: Management Supplies and Equipment
10A	Hazardous Waste: Management Plans
11A	Hazardous Waste: Groundwater Monitoring at Subpart X Permitted Facilities
12A	Hazardous Waste: Incidental Spill Response
13A	Hazardous Waste: Training

2.9.3 Waste drivers

1. 40 CFR 112 Oil Pollution Prevention and Response
 - a. Waste 12A
2. 40 CFR 257 Classification of Solid Waste Disposal Facilities and Practices
 - a. Waste 1A, 2A, 3A
3. 40 CFR 258 Municipal Solid Waste Landfills
 - a. Waste 1A, 2A, 3A
4. 40 CFR 260–279 Hazardous, Universal & Oil Wastes
 - a. Waste 4A, 6A, 8A, 9A, 10A
5. 40 CFR 262 Generators of Hazardous Waste
 - a. Waste 7A, 13A
6. 40 CFR 264 Hazardous Waste Treatment and Storage
 - a. Waste 5A, 11A, 13A
7. 40 CFR 265 Interim Standards for Hazardous Waste Treatment and Storage
 - a. Waste 5A, 13A
8. AR 200-1: Environmental Protection and Enhancement
 - a. Waste 10A
9. Authorized State Implementing Regulations
 - a. Waste 1A, 2A, 3A, 4A, 5A, 6A, 7A, 8A, 9A, 10A, 11A, 13A
10. CWA Section 311(j) Prevention of Oil Spills
 - a. Waste 12A

2.9.4 Solid Waste: Permit Applications/Renewals (1A)

Category	Solid Waste	Date Updated	Inflation	2018
ID	1A		EAC	2017
Activity	Solid Waste: Permit Applications / Renewals		Unit of Measure	2016
Cross-Ref	Appendix E, Section Z	Unit of Measure Source		AEDB-EQ
Definition	Permit applications/renewals include the state permitting fees and labor required to prepare renewal applications for solid waste permits. Permits from the state regulatory agency are required for the following solid waste facilities: sanitary landfills, industrial waste landfills, construction /demolition /debris landfills, transfer stations, composting facilities for other than yard waste, mass burn incinerators, materials recovery facilities, and waste storage piles. Facilities must typically conform to siting, design, operation, groundwater monitoring, closure, and post-closure requirements included in the permit. Permit renewal frequencies vary by state.			
EAC	\$1,430 for state permit renewal fee \$6,700 for permit application	Units	Per permit	
		\$FY	17	
Calculation	Cost = (State permit application fee EAC + Permit application EAC) * Number of solid waste permits			
Basis	The for solid waste permit applications includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. The EAC is based on a national average of state solid waste permit application fees. The national average is a mathematical mean of application fees calculated for the 22 states that charge a solid waste permit renewal fee.			
Assumptions	State solid waste renewal fee is only required at installations listed in AEDB-EQ as possessing an existing solid waste permit. This activity does not apply to Army installations located outside the United States and its territories.			

2.9.5 Solid Waste: Fees (2A)

Category	Solid Waste	Date Updated	Inflation	2018
ID	2A		EAC	2017
Activity	Solid Waste: Fees (2A)		Unit of Measure	2016
Cross-Ref	Appendix E, Section Z	Unit of Measure Source		AEDB-EQ
Definition	Annual fees are charged to solid waste facilities by states. The fees generally are used to conduct solid waste facility reviews, inspections, and monitoring. Solid waste fees vary by state.			
EAC	\$5,594	Units	Per permit	
		\$FY	18	
Calculation	Cost = EAC * Number of solid waste permits			
Basis	The EAC for the state annual solid waste fee is based on a national average of state annual waste fees. The national average is a mathematical mean of annual fees calculated from the 22 states that charge a fee for solid waste permits.			
Assumptions	State solid waste permit fee only applies to installations listed in AEDB-EQ as possessing an existing solid waste permit. This activity does not apply to Army installations located outside the United States and its territories.			

2.9.6 Solid Waste: Landfill Monitoring (3A)

Category	Solid Waste	Date Updated	Inflation	2018
ID	3A		EAC	2017
Activity	Solid Waste: Landfill Monitoring		Unit of Measure	2018
Cross-Ref	Appendix E, Section AA	Unit of Measure Source		HQIIS
Definition	Municipal solid waste landfills are required to monitor air, surface water, and groundwater. A small number of indicator parameters are monitored regularly to determine any difference between background and compliance concentrations. A groundwater detection monitoring system collects water samples from monitoring wells to detect a potential release from a landfill. The monitoring wells are strategically placed to compare unaffected, background water quality with the water quality determined from wells in the uppermost continuous aquifer, immediately downgradient from the landfill. Parameters are chosen based on the facility's leachate and background groundwater samples. Landfill emissions may include explosive gases, toxic or hazardous emissions, and odorous or nuisance emissions. Landfill air emissions that are typically monitored include nitrogen, carbon dioxide, and methane.			
EAC	\$45,000	Units	Per sanitary landfill	
		\$FY	17	
Calculation	Cost = EAC * Number of sanitary landfills			
Basis	<p>The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting.</p> <p>Air emissions (to include methane) monitoring will be conducted quarterly at 20 existing perimeter wells; analytical tests will be conducted on-site using an HNu photoionization detector and laboratory kits.</p> <p>Groundwater monitoring will be conducted semiannually for eight samples (including quality assurance [QA]/quality control [QC]) collected two times per year from upgradient and downgradient existing groundwater monitoring wells.</p> <p>The following analyses are determined for groundwater monitoring: chloride, organochlorine pesticides, pesticides, herbicides, cyanide (total), hardness, mercury (total and dissolved), polycyclic aromatic hydrocarbons, polychlorinated biphenyls, sulfate, inductively coupled plasma (ICP) trace metals (total and dissolved), ICP Fe and Mn, Base Neutral Acid organic compounds, and volatile organic compounds (VOC).</p> <p>An off-site commercial laboratory will be used for the groundwater analytical tests. The mathematical mean of costs from four commercial laboratories was used as the average groundwater analytical test cost.</p> <p>The number of sanitary landfills was obtained from HQIIS category code (CATCODE) 83410.</p>			
Assumptions	<p>All active and closed solid waste landfills will be subject to monitoring.</p> <p>Surface water discharge monitoring is covered under the facility's NPDES permit and is not addressed under this activity.</p> <p>A contractor will conduct the monitoring.</p> <p>Army installations located outside the United States and its territories have analogous landfill monitoring requirements outlined in country-specific FGS.</p>			

2.9.7 Hazardous Waste: Petroleum Oil and Lubricants (POL) - Contaminated Waste (4A)

Category	Hazardous Waste	Date Updated	Inflation	2018
ID	4A		EAC	2017
Activity	Hazardous Waste: POL-Contaminated Waste		Size Adj. Factor	2018
Size Basis	Small (Size D) or Medium (Size C)			
Definition	Absorbent material used for cleanup of POL is disposed of following vehicle maintenance. This activity includes costs for disposal of contaminated spill response supplies (e.g., sawdust, absorbent blankets).			
EAC	\$17,900	Units	Per installation	
		\$FY	17	
Calculation	Cost = EAC * Size adjustment factor			
Basis	The EAC for managing and disposing of POL-contaminated waste is based on professional experience and best engineering judgment. The EAC is based on a small (Size D) installation for IMCOM, ARNG, and AMC and a medium (Size C) installation for USAR. The EAC is based on the average fee for transportation and disposal off-site of 35 drums (ranging in size from 55 gal drums to 85 gal overpack drums) of POL-contaminated waste per year.			
Assumptions	A commercial company will transport and dispose of the POL-contaminated waste off site. This activity does not apply to Army installations located outside the United States and its territories.			

2.9.8 Hazardous Waste: Permit Applications/Renewals (5A)

Category	Hazardous Waste	Date Updated	Inflation	2018
ID	5A		EAC	2017
Activity	Hazardous Waste: Permit Applications/Renewals		Unit of Measure	2016
Cross-Ref	Appendix E, Section BB	Unit of Measure Source		AEDB-EQ
Definition	This activity includes state permitting fees and labor required to prepare renewal applications for hazardous waste permits. Permits from the state regulatory agency are required for hazardous waste treatment, storage, and disposal facilities. Hazardous waste storage for 90 days or more requires a hazardous waste permit. Facilities must typically conform to siting, design, operation, groundwater monitoring, closure and post-closure, and financial requirements included in the permit. Permit renewal frequencies vary by state.			
EAC	\$47,600 amortized over 10 years for state permit application fee (\$4,760 per year) \$36,700 amortized over 10 years for permit application preparation (\$3,670 per year)		Units	Per permit
			\$FY	17
Calculation	Cost = (State permit application fee EAC + Permit application EAC) * Number of hazardous waste permits			
Basis	The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. The application renewal fee is based on a national average. The national average is a mathematical mean of annual fees calculated from available data for the 15 states where Army installations have existing hazardous waste permits.			
Assumptions	This activity only applies to installations with existing hazardous waste permits (Source: AEDB-EQ). This activity does not apply to Army installations located outside the United States and its territories. A contractor will prepare the permit renewal application.			

2.9.9 Hazardous Waste: Fees (6A)

Category	Hazardous Waste	Date Updated	Inflation	2018
ID	6A		EAC	2017
Activity	Hazardous Waste: Fees		Unit of Measure	2016
Cross-Ref	Appendix E, Section BB		Size Adj. Fact	2018
Size Basis	Small (Size D) Medium (Size C)	Unit of Measure Source		AEDB-EQ
Definition	Fees are charged to hazardous waste generators by states. Several states also charge a fixed annual fee for treatment, storage, and disposal facilities. The fees generally are used to conduct hazardous waste disposal facility reviews, inspections, and monitoring. Hazardous waste facility fees and generator fees vary by state.			
EAC	With permit: \$11,200 Without permit: \$3,120	Units	Per installation	
		\$FY	17	
Calculation	If installation has a hazardous waste permit, then Cost = Hazardous waste permit EAC * Size adjustment factor. If installation does not have a hazardous waste permit, then Cost = EAC without hazardous waste permit * Size adjustment factor			
Basis	The EAC for state hazardous waste fees is based on a national average of annual fee schedules for hazardous waste generators and hazardous waste facilities. The national average is a mathematical mean of fees calculated from 50 states. Hazardous waste permit data were obtained from AEDB-EQ. The EAC is based on a small (Size D) installation for IMCOM, ARNG, and AMC and a medium (Size C) installation for USAR.			
Assumptions	Fees must be paid every year. Installations with hazardous waste permits have higher fee requirements than installations without hazardous waste permits. This activity does not apply to Army installations located outside the United States and its territories.			

2.9.10 Hazardous Waste: Sampling and Monitoring (7A)

Category	Hazardous Waste	Date Updated	Inflation	2018
ID	7A		EAC	2017
Activity	Hazardous Waste: Sampling and Monitoring		Unit of Measure	2016
			Size Adj. Fact	2018
Size Basis	Small (Size D) or Medium (Size C)	Unit of Measure Source		AEDB-EQ
Definition	Sampling and monitoring include labor and analytical costs for hazardous waste characterization.			
EAC	\$36,400	Units	Per installation	
		\$FY	17	
Calculation	Cost = EAC * Size adjustment factor			
Basis	<p>The EAC for hazardous waste sampling includes laboratory analytical costs for waste classification.</p> <p>The EAC is based on a small (Size D) installation for IMCOM, ARNG, and AMC and a medium (Size C) installation for USAR.</p> <p>An off-site commercial laboratory will be used for the analytical tests. The mathematical mean of costs from four commercial laboratories was used as the average cost.</p> <p>Army installations located outside the United States and its territories have analogous hazardous waste sampling and monitoring requirements outlined in country-specific FGS.</p>			
Assumptions	<p>A Defense Logistics Agency – Disposition Services (DLA-DS) or base representative will collect the samples and a certified laboratory will analyze the samples.</p> <p>Future waste characterization efforts will be similar in scope and cost to those currently conducted at Army installations.</p> <p>Hazardous waste characterization occurs annually.</p>			

2.9.11 Hazardous Waste: Disposal (8A)

Category	Hazardous Waste		Date Updated	Inflation	2018
ID	8A			EAC	2017
Activity	Hazardous Waste: Disposal			Unit of Measure	2016
				Size Adj. Fact	2018
Size Basis	Medium (Size C)		Unit of Measure Source		AEDB-EQ
Definition	This activity includes transportation and disposal of hazardous waste off-site through DLA-DS or similar approved disposal contract.				
EAC	Hazardous Waste Disposal Cost		Hazardous Waste Management Cost		
	Non-US installations	\$292,000	IMCOM AMC	\$201,000	
	IMCOM	\$66,200	ARNG	\$74,700	
	ARNG	\$34,600	USAR	\$25,400	
	USAR	\$33,200	Units	Per installation	
	AMC	\$31,200	\$FY	17	
Calculation	Cost = (Hazardous waste disposal EAC * Size adjustment factor) + (Hazardous waste management EAC * Size adjustment factor)				
Basis	<p>The disposal cost per installation was determined based on DLA actual disposal costs for 2014 and 2015 for all hazardous and universal waste streams.</p> <p>For non-US installations, the cost was determined by dividing the total disposal cost through non-US DLA-DS facilities by the total number of non-US installations.</p> <p>For US installations, the cost is based on a weighted average of actual disposal costs through US DLA-DS facilities.</p> <p>Hazardous waste management activities include packaging, manifesting, reporting, and inspecting.</p> <p>The AEC is based on a medium (Size C) installation.</p>				
Assumptions	Army installations located outside the United States and its territories have analogous hazardous waste disposal requirements outlined in country-specific FGS.				

2.9.12 Hazardous Waste: Management Supplies and Equipment (9A)

Category	Hazardous Waste	Date Updated	Inflation	2018
ID	9A		EAC	2017
Activity	Hazardous Waste: Management Supplies and Equipment			
Size Basis	Small (Size D) Medium (Size C)			
Definition	This activity includes supplies and equipment for locations where hazardous waste is generated and/or stored. It includes container management (overpacks, labels), security (warning signs), preparedness and prevention (fire extinguishers, spill control kits), and compatible storage (containment pallets). This activity also includes hazardous waste storage containers (55 gal drums).			
EAC	\$9,530	Units	Per installation	
		\$FY	17	
Calculation	Cost = EAC * Size adjustment factor			
Basis	<p>The EAC for supplies is based on professional experience and best engineering judgment from managing hazardous waste storage and spill response.</p> <p>The EAC is based on a small (Size D) installation for IMCOM, ARNG, and AMC and a medium (Size C) installation for USAR.</p> <p>Average costs for drums, spill kits, signs, fire extinguishers, and containment pallets were calculated from the mathematical mean of costs from commercial suppliers for a variety of products in each category.</p> <p>Small installations procure 20 drums (55 gal capacity, steel or polyethylene construction), 8 spill kits (30 to 39 gal spill absorbency), 10 signs (hazmat signals, drum storage area, etc.; indoor/outdoor, various materials), 300 labels (drum identification, shipping, and seals; various materials), 5 fire extinguishers (ABC dry chemical, 10 to 20 lb capacity), and 5 containment pallets (capacity one to four 55 gal drums per pallet) per year.</p>			
Assumptions	Army installations located outside the United States and its territories have analogous hazardous waste requirements outlined in country-specific FGS.			

2.9.13 Hazardous Waste: Management Plans (HWMPs) (10A)

Category	Hazardous Waste		Date Updated	Inflation	2018
ID	10A			EAC	2017
Activity	Hazardous Waste: Management Plans			Size Adj. Fact	2018
Size Basis	Small (Size D) Medium (Size C)				
Definition	This activity includes updating existing Hazardous Waste Management Plans (HWMP). HWMP typically include information on the identification, storage, and transport of hazardous waste; personnel training; manifest tracking; recordkeeping; and contingency plans. HWMP are updated every 5 years and with significant changes to mission resulting a change in hazardous materials or waste generation.				
EAC	\$53,000 amortized over 5 years (\$10,600 per year)		Units	Per installation	
			\$FY	17	
Calculation	USAR	Cost = EAC * Size adjustment factor * Number of RSC states			
	IMCOM AMC ARNG	Cost = EAC * Size adjustment factor			
Basis	The EAC for HWMP includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. The EAC is based on a small (Size D) installation for IMCOM, ARNG, and AMC and a medium (Size C) installation for USAR.				
Assumptions	All installations have an existing HWMP. Future HWMP update efforts will be similar in scope and cost to those previously conducted at DoD installations. A contractor will prepare the plans. Army installations located outside the United States and its territories have analogous HWMP requirements outlined in country-specific FGS.				

2.9.14 Hazardous Waste: Groundwater Monitoring at Subpart X Permitted Facilities (11A)

Category	Hazardous Waste	Date	Inflation	2018
ID	11A	Updated	EAC	2017
Activity	Hazardous Waste: Groundwater Monitoring at Subpart X Permitted Facilities		Unit of Measure	2016
Cross-Ref	Appendix E, Section CC	Unit of Measure Source		AEDB-EQ
Definition	Specific environmental performance standards that must be addressed in the open burn/open detonation (Subpart X) permit are set forth in 40 CFR 264.601(a). This activity includes groundwater monitoring to ensure satisfaction of environmental performance standards.			
EAC	\$81,100	Units	Per permitted facility	
		\$FY	17	
Calculation	All Commands	Cost = EAC		
Basis	<p>The EAC for groundwater monitoring at Subpart X permitted facilities includes labor, travel, and ODCs to conduct analysis, fieldwork, and reporting.</p> <p>Groundwater monitoring will be conducted semiannually with 20 samples (including QA/QC) collected two times per year.</p> <p>The following analyses were determined for groundwater monitoring: explosives (full suite), trace metals (total and dissolved), mercury (total and dissolved), perchlorates, nitrate/nitrite, cyanide (total), VOCs (full suite), semivolatile organic compounds (full suite), and nitrosodimethylamine.</p> <p>An off-site commercial laboratory will be used for the analytical tests. The mathematical mean of costs from four commercial laboratories was used as the average cost.</p>			
Assumptions	<p>This activity only applies to installations with permitted Subpart X facilities. This activity does not apply to Army installations located outside the United States and its territories.</p> <p>RCRA Subpart X permitted facilities require groundwater monitoring. Future groundwater monitoring efforts at open burn/open detonation (Subpart X) units will be similar in scope and cost to those previously conducted at DoD installations.</p> <p>A contractor will collect the samples and a certified laboratory will analyze the samples.</p>			

2.9.15 Hazardous Waste: Incidental Spill Response (12A)

Category	Hazardous Waste		Date Updated	Inflation	2018
ID	12A			EAC	2017
Activity	Hazardous Waste: Incidental Spill Response			Size Adj. Fact	2018
Size Basis	Small (Size D) or Medium (Size C)				
Definition	This activity includes supplies and equipment used to manage incidental POL spills from mobile sources (vehicles, generators, trailers, etc.). Events that may require incidental spill response are accidents, fuel transfer, vehicle refueling, and vehicle engine malfunctions. These supplies are used during the immediate response and are not intended for use during a full site cleanup.				
EAC	\$33,000		Units	Per installation	
			\$FY	17	
Calculation	All Commands	Cost = EAC * Size adjustment factor			
Basis	The EAC for conducting initial response to POL spills is based on professional experience and best engineering judgment. Average costs were obtained for 100 small spill kits (less than 5 gal of oil-based liquids) and 50 larger spill kits (up to 40 gal of oil-based liquids) in over pack drums. The EAC is based on a small (Size D) installation for IMCOM, ARNG, and AMC and a medium (Size C) installation for USAR.				
Assumptions	All installations have the need for incidental spill response. All Army installations maintain spill kits in proper working order. Army installations located outside the United States and its territories have analogous spill response requirements outlined in country-specific FGS.				

2.9.16 Hazardous Waste: Training (13A)

Category	Hazardous Waste		Date Updated	Inflation	2018
ID	13A			EAC	2017
Activity	Hazardous Waste: Training				
Cross Ref	RSC States				
Size Basis	Small (Size D) Extra-large (Size A)				
Definition	This activity involves hazardous waste management training for installation personnel. Personnel will complete initial hazardous waste operations and emergency response standard 40-hour training and take part in annual 8-hour refresher training. At a minimum, the training ensures that employees are able to respond to emergencies and includes training on emergency procedures, equipment, and systems.				
EAC	\$52,100		Units	Per installation	
			\$FY	17	
Calculation	USAR	Cost = EAC * Size adjustment factor * Number of RSC states			
	IMCOM AMC ARNG	Cost = EAC * Size adjustment factor			
Basis	The EAC for conducting hazardous waste training is based on average costs from commercial training providers. The EAC is based on a small (Size D) installation for IMCOM and AMC and an extra-large (Size A) installation for ARNG and USAR.				
Assumptions	Hazardous waste training will be conducted by a commercial training provider either online or in person (local or on-site). Army installations located outside the United States and its territories have analogous hazardous waste training requirements outlined in country-specific FGS.				

2.9.17 Waste reference documents

1. 40 CFR 270, EPA Administered Permit Programs: The Hazardous Waste Permit Program.
 - a. Waste 5A
2. AEDB-EQ, CY2016.
 - a. Waste 1A, 2A, 5A, 6A, 8A, 11A
3. Applicable country-specific FGS.
 - a. Waste 7A, 8A, 9A, 10A, 13A
4. Commercial disposal companies (fees for transportation and disposal used to estimate average) from General Services Administration contract holder schedules.
 - a. Waste 4A
5. Commercial training providers (fees for courses used to estimate average): Hazmateam, Inc., Lion Technology Inc., and McCoy and Associates.
 - a. Waste 13A
6. Costs for sample analyses (used to estimate an average) obtained from the following commercial laboratories: Accutest Laboratories, ALS Environmental, APPL, Inc., and Test America Laboratories, Inc.
 - a. Waste 3A, 7A, 11A
7. Costs obtained from New Pig Corporation and W.W. Grainger, Inc.
 - a. Waste 9A
8. Costs obtained from New Pig Corporation.
 - a. Waste 12A
9. DA 2007. Environmental Quality: Environmental Protection and Enhancement. AR 200-1. 13 December.
 - a. Waste 7A, 11A, 13A
10. DLA-DS hazardous waste FY14 and FY15 disposal data.
 - a. Waste 8A
11. DoD 2017. Overseas Environmental Baseline Guidance Document. DoD 4715.05-G. 5 Oct.
 - a. Waste 3A, 7A, 8A, 9A, 10A, 12A, 13A
12. DOL 2017. "May 2017 National Occupational Employment and Wage Estimates," Bureau of Labor Statistics, May.
 - a. Waste 1A, 3A, 5A, 10A, 11A
13. EPA 2002. Draft RCRA Miscellaneous Treatment Units Encyclopedia X Technical Resource Document. April.
 - a. Waste 11A
14. EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846.
 - a. Waste 7A, 11A
15. HQIIS, February 2018.
 - a. Waste 3A
16. State hazardous waste regulations.
 - a. Waste 5A, 6A

17. State regulatory agency hazardous waste fee schedules.
 - a. Waste 6A
18. State regulatory agency web sites (for hazardous waste permit fees used to estimate a national average).
 - a. Waste 5A
19. State regulatory agency web sites (for solid waste annual fees used to estimate a national average).
 - a. Waste 2A
20. State regulatory agency web sites (for solid waste permit fees used to estimate a national average).
 - a. Waste 1A

2.10 Water

Activities found in the water category are primarily regulated under the CWA and Safe Drinking Water Act (SDWA). The NPDES permit program established by the CWA regulates the release of pollutants via point sources (e.g., storm water discharges and wastewater treatment plants [WWTPs]) into waters of the United States. The Oil Pollution Act of the CWA directs facilities to include plans to prevent, and contingency plans to respond to, releases of oil into surface and ground waters. The SDWA is the primary federal drinking water management statute mandating federal standards to protect the country's drinking water. Together, these regulations set the framework that installations must follow to properly manage and prevent pollution of the nation's surface waters and regulate drinking water quality.

2.10.1 Storm water

The NPDES storm water program implemented the 1987 amendments of the CWA, known as the Water Quality Act, which were established to create a permit and regulation program that incrementally control storm water discharges. The Water Quality Act facilitates and promotes watershed planning to address water quality impairments and implement the NPDES storm water program on a watershed basis. NPDES permit coverage requires SWPPP, inspections/monitoring, and the implementation of minimum control measures, including BMPs. Table 14 lists the 11 storm water activities in EQRM.

Table 14. Storm water category activities.

ID	Storm Water EQRM Activity
1A	Monitoring and Sampling
1B	Monitoring and Sampling – Laboratory Analysis
2A	Permit Applications
2B	Permit Applications – Laboratory Analysis
3A	Permit Fees – NPDES MS4 and Industrial
4A	SWPPP Update
5A	MS4 Plan Update
6A	Inspections
7A	Non-Point Source
8A	TMDL Implementation
9A	Regional Watershed Initiatives

2.10.2 OP2

The original OP2 regulation of the CWA in conjunction with the Water Quality Act and the Oil Pollution Act of 1990 are the primary regulations governing the requirements for prevention of, preparedness for, and response to oil discharges at specific non-transportation-related facilities. These regulations require specific facilities to create SPCC Plans to prevent oil from reaching navigable waters and adjoining shorelines and Facility Response Plans (FRP) to demonstrate a facility's preparedness to respond to a worst-case oil discharge. Table 15 lists the three OP2 activities in EQRM.

Table 15. Oil pollution prevention category activities.

ID	OP2 EQRM Activity
10A	Supplies and Equipment
11A	SPCC Plan Updates
12A	Facility Response Plans

2.10.3 Wastewater

Under the CWA, most facilities that discharges wastewater directly to surface water must obtain an NPDES permit from EPA or the authorized state. NPDES permits are based on installation population density and/or industrial activities. NPDES permits for construction activities are required for any disturbance greater than 1 acre or less depending on state certification and general permit requirements. In addition to addressing these direct discharges, the CWA also establishes a regulatory program to address indirect discharges to publicly owned treatment works (POTW) through the National Pretreatment Program, a component of the NPDES Permit Program. Table 16 lists the seven wastewater activities in EQRM.

Table 16. Wastewater environmental category activities.

ID	Wastewater EQRM Activity
13A	Sampling and Monitoring
13B	Sampling and Monitoring – Laboratory Analysis
14A	Permit Applications
14B	Permit Applications – Laboratory Analysis
15A	Permit Fees
16A	Pretreatment Sampling and Analysis
17A	Sludge Management Plan

2.10.4 Drinking water

The SDWA was established to protect the quality of drinking water in the United States. This law focuses on all waters actually or potentially designed for drinking use, whether from aboveground or underground sources. Table 17 lists the eight drinking water activities in EQRM.

Table 17. Drinking water environmental category activities.

ID	Drinking Water EQRM Activity
18A	Sampling and Monitoring
18B	Sampling and Monitoring – Laboratory Analysis
19A	Sampling and Monitoring Overseas
19B	Sampling and Monitoring Overseas – Laboratory Analysis
20A	Sanitary Surveys or Fees
21A	Consumer Confidence Reports
22A	Sampling Plan
23A	Wellhead Protection Plan

2.10.5 Water drivers

1. 33 USC 1251 et seq., Section 311 Discharge of oil and other hazardous substances
 - a. Water 12A
2. 33 USC 1251 et seq.: Clean Water Act
 - a. Water 1A, 1B, 2A, 2B, 3A, 4A, 5A, 6A, 8A, 9A, 10A, 11A, 13A, 13B, 14A, 14B, 15A
3. 33 USC 1317: Toxic and pretreatment effluent standards
 - a. Water 16A
4. 33 USC 1329: Nonpoint source management programs
 - a. Water 7A
5. 33 USC 1345: Disposal or use of sewage sludge
 - a. Water 17A
6. 40 CFR 112.1–112.12 Spill Prevention Requirements
 - a. Water 11A
7. 40 CFR 112.20 Facility Response Plans, 112.21 Training
 - a. Water 12A
8. 40 CFR 112.3 Spill Prevention Plan
 - a. Water 10A
9. 40 CFR 122 NPDES
 - a. Water 13A, 13B, 14A, 14B, 15A
10. 40 CFR 122.136 Analysis
 - a. Water 1B
11. 40 CFR 122.21 Application for a permit (State)
 - a. Water 1A, 1B, 2A, 2B, 3A, 4A, 5A, 6A
12. 40 CFR 122.26 (Stormwater discharge)
 - a. Water 1A, 1B, 2A, 2B, 3A, 4A, 5A, 6A
13. 40 CFR 122.30–37 (MS4)
 - a. Water 1A, 1B, 2A, 2B, 3A, 4A, 5A, 6A
14. 40 CFR 130.7 EPA TMDL
 - a. Water 8A, 9A
15. 40 CFR 131 WQ Standards
 - a. Water 8A, 9A
16. 40 CFR 131.10 Designation of Use
 - a. Water 7A
17. 40 CFR 131.12 Implementation
 - a. Water 7A
18. 40 CFR 136 (Analysis)
 - a. Water 13B, 14B
19. 40 CFR 136 Analytical Methods
 - a. Water 16A, 18B, 19B
20. 40 CFR 141 Primary Drinking Water
 - a. Water 18A, 18B, 19A, 19B, 22A, 23A
21. 40 CFR 141.151–155 Consumer Confidence
 - a. Water 21A
22. 40 CFR 141.21 Coliform Sampling

- a. Water 20A
- 23.40 CFR 143 Secondary Drinking Water
 - a. Water 18A, 18B, 19A, 19B
- 24.40 CFR 403 Pretreatment Regulations
 - a. Water 16A
- 25.40 CFR 405–471 Effluent Guidelines
 - a. Water 16A
- 26.40 CFR 503 Biosolids
 - a. Water 17A
- 27.41 CFR 122.136 Analysis
 - a. Water 2B
- 28.42 USC 300f et seq. SDWA
 - a. Water 18A, 18B, 19A, 19B, 20A, 21A, 22A, 23A
- 29. Executive Order 13508, Chesapeake Bay Protection and Restoration
 - a. Water 9A

2.10.6 Storm Water: Monitoring and Sampling (1A)

Category	Storm Water		Date Updated	Inflation	2018
ID	1A			EAC	2017
Activity	Storm Water: Monitoring and Sampling			Unit of Measure	2018
				Size Adj. Fact	2018
Size Basis	Medium (Size C)		Unit of Measure Source		HQIS
Definition	<p>This activity includes labor costs associated with storm water sampling, monitoring, and inspections required to comply with NPDES industrial or NPDES MS4 storm water permit requirements. An MS4 is a conveyance or system of conveyances that discharges to waters of the United States, designed or used to collect or convey storm water (including storm drains, pipes, ditches, etc.), not a combined sewer, and not part of a POTW (sewage treatment plant). In general, Phase I MS4 (medium and large cities) are covered by individual permits and Phase II MS4 (small cities, military bases) are covered by a general permit. Each regulated MS4 is required to develop and implement a storm water management program (SWMP) to reduce the contamination of storm water runoff and prohibit illicit discharges to the greatest extent possible.</p> <p>Industrial Permits are required when a facility or site discharges to a MS4 or to waters of the United States AND the facility's industrial activities are listed among the 11 Categories of Industrial Activities [40 CFR 122.26(b)(14)] or the facility's Standard Industrial Classification code falls within one of the sector/subsectors identified. The listed facility or site may qualify for the "no exposure" exclusion under the federal regulations at 40 CFR 122.26(g). An industrial permit may be either a permit for an individual facility or a Multi-sector General Permit.</p>				
EAC	IMCOM USAR AMC	\$10,600	Units	Per installation	
	ARNG	\$2,760	\$FY	17	
Calculation	Cost = EAC * Size adjustment factor				
Basis	The EAC for storm water sampling and monitoring includes labor, travel, and ODCs to conduct analysis, fieldwork, and reporting. The EAC is based on a medium (Size C) installation.				
Assumptions	Contractor personnel will conduct outfall monitoring and sampling. Army installations located outside the United States and its territories have analogous storm water sampling and monitoring requirements outlined in country-specific FGS.				

2.10.7 Storm Water: Monitoring and Sampling – Laboratory Analyses (1B)

Category	Storm Water		Date Updated	Inflation	2018
ID	1B			EAC	2017
Activity	Storm Water: Monitoring and Sampling – Laboratory Analyses			Unit of Measure	2018
				Size Adj. Fact	2018
Size Basis	Extra-large (Size A)		Unit of Measure Source		HQIIS
Definition	This activity includes analytical laboratory costs associated with storm water sampling required to ensure compliance with NPDES industrial or MS4 storm water permit requirements.				
Not included	Storm water sampling and monitoring costs (not including laboratory analyses) fall under activity (1A). Inspections fall under activity (6A). Sampling and monitoring related to point source pollution (TMDL) falls under activity (8A) or (9A).				
EAC	IMCOM USAR AMC	\$39,100	Units	Per installation	
	ARNG	\$10,700	\$FY	17	
Calculation	Cost = EAC * Size adjustment factor				
Basis	<p>The EAC is based on an extra-large (Size A) installation.</p> <p>For IMCOM, AMC, and USAR installations, 24 storm water outfalls will be sampled quarterly for each analyte and sent for laboratory analysis. For ARNG installations, six storm water outfalls will be sampled for each analyte and sent for laboratory analysis.</p> <p>The EAC for storm water sampling and monitoring is based on analytical laboratory costs associated with potential analytes collected at DoD installations.</p> <p>The following analyses were determined for storm water sampling and monitoring at all Army installations: pH, oil and grease, total suspended solids (TSS), biological oxygen demand (BOD), chemical oxygen demand (COD), volatile organic compounds (VOC), cyanide, phenols, ammonia nitrogen, metals, and total phosphorus.</p> <p>Costs were obtained from analytical laboratories for required storm water analytes.</p>				
Assumptions	<p>Analytes selected for inclusion in cost development are generally representative of storm water sampling and analysis parameters for both industrial and MS4 general permit requirements.</p> <p>All installations are or will be required to have an MS4 or industrial storm water general permit.</p>				

2.10.8 Storm Water: Permit Applications (2A)

Category	Storm Water		Date Updated	Inflation	2018
ID	2A			EAC	2017
Activity	Storm Water: Permit Applications			Unit of Measure	2017
Cross-Ref	Appendix E, Section DD		Unit of Measure Source		AEDB-EQ
Definition	All costs associated with completing and filing NPDES permit applications, including filing fees and labor costs associated with the collection of samples required for permit renewal.				
Not included	Storm water permit fees fall under activity (3A). Laboratory analyses related to completing storm water permit applications fall under activity (2B). Storm water sampling and monitoring falls under activity (1A).				
EAC	IMCOM USAR AMC	\$10,600	Units	per industrial storm water permit	
	ARNG	\$2,970			
	IMCOM USAR AMC	\$10,600		per MS4 permit	
	ARNG	\$2,710	\$FY	17	
Calculation	Cost = (MS4 permit EAC * Number of MS4 permits) + (Industrial permit EAC * Number of industrial permits)				
Basis	The EAC for storm water permit applications includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. The number of industrial and MS4 permits per installation was obtained from AEDB-EQ CWA permits data.				
Assumptions	Contract personnel will collect samples and complete renewal applications for both industrial and MS4 NPDES storm water permits. States selected for study are a representative cross section of the United States. This activity does not apply to Army installations located outside the United States and its territories.				

2.10.9 Storm Water: Permit Applications – Laboratory Analysis (2B)

Category	Storm Water	Date Updated	Inflation	2018
ID	2B		EAC	2017
Activity	Storm Water: Permit Applications – Laboratory Analysis		Unit of Measure	2017
Cross-Ref	Appendix E, Section DD	Unit of Measure Source		AEDB-EQ
Definition	This activity includes laboratory analytical costs associated with completing and filing a NPDES permit for both industrial and MS4 storm water permits. Permit renewal is required every 5 years.			
Not included	Costs associated with completing and filing storm water permit applications under activity (2A). Storm water permit fees fall under activity (3A). Laboratory analyses associated with storm water sampling and monitoring falls under activity (1B).			
EAC	\$8,900 amortized over 5 years = \$1,780 per year	Units	Per permit	
		\$FY	17	
Calculation	Cost = EAC * (Number of MS4 permits + Number of industrial permits)			
Basis	Six storm water outfalls will be sampled for each analyte for IMCOM, USAR, and AMC. Five storm water outfalls will be sampled for ARNG. The number of industrial and MS4 permits per installation was obtained from AEDB-EQ CWA permits data. The following analyses were determined for NPDES permits at all Army installations: pH, oil and grease, TSS, BOD, COD, VOC, cyanide, phenols, ammonia nitrogen, total metals, and total phosphorus. Costs were obtained from analytical laboratories for storm water analytes.			
Assumptions	Analytes selected for inclusion in cost development are generally representative of storm water sampling and analysis parameters for both industrial and MS4 general permit requirements. This activity does not apply to Army installations located outside the United States and its territories.			

2.10.10 Storm Water: Permit Fees – National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System and Industrial (3A)

Category	Storm Water	Date Updated	Inflation	2018
ID	3A		EAC	2017
Activity	Storm Water: Permit Fees – NPDES MS4 and Industrial		Unit of Measure	2018 (HQIIS) 2017 (AEDB-EQ)
Cross-Ref	Appendix E, Section DD	Unit of Measure Source		HQIIS AEDB-EQ
Definition	This activity includes annual permit fees charged by NPDES permitting authorities for regular permit maintenance. Permitting authorities have developed different methods for determining fees associated with the annual certification of NPDES storm water permits. Fees are typically based on specific factors for each permit type. • NPDES Industrial Storm water permit: Factors include whether a General or Individual Permit is required based on activities conducted at the facility, pollutants in storm water runoff from the facility, whether facility storm water discharges to water bodies with established TMDL, etc. • NPDES Phase II MS4 Permit: Factors generally based on population of installation and whether a general or individual permit is required.			
Not included	Storm water sampling and monitoring falls under activity (1A).			
EAC	\$1,200	Units	per industrial storm water permit	
	\$1,800		per MS4 permit	
		\$FY	17	
Calculation	Cost = (MS4 permit EAC * Number of MS4 permits) + (Industrial permit EAC * Number of industrial permits)			
Basis	<p>Costs associated with completing and filing storm water applications fall under activity (2A).</p> <p>The EAC is based on recurring fees related to NPDES permits for the 46 states that charge storm water permit fees.</p> <p>For both industrial and MS4 NPDES storm water permits, an average cost per permit type was developed per state based on the mean of the minimum and maximum permit fees.</p> <p>The number of industrial and MS4 permits per installation was obtained from AEDB-EQ CWA permits data.</p>			
Assumptions	<p>Fee is required to be paid annually.</p> <p>This activity does not apply to Army installations located outside the United States and its territories.</p>			

2.10.11 Storm Water: Storm Water Pollution Prevention Plan Update (4A)

Category	Storm Water		Date	Inflation	2018
ID	4A		Updated	EAC	2017
Activity	Storm Water: SWPPP Update			Unit of Measure	2018
				Size Adj. Fact.	2018
Size Basis	Extra-large (Size A)		Unit of Measure Source		HQIIS
Definition	This activity includes costs for updates of SWPPP, which are required by both NPDES industrial and NPDES MS4 storm water permits. The purpose of an SWPPP is to improve water quality by reducing or eliminating the potential for pollutants to enter storm water discharged from a facility. SWPPPs should address the quality of storm water being discharged, identify potential sources of storm water pollution or contamination, and provide appropriate management practices to prevent or control these pollutants. The plan must identify structural and non-structural controls (BMPs) to minimize negative effects caused by storm water discharges and minimize erosion and runoff of pollutants and sediment. Updates become necessary as changes to operations, procedures, or control measures occur.				
Not included	MS4 Plan update costs fall under activity (5A).				
EAC	IMCOM, USAR, and AMC	\$53,200	Units	Per installation	
	ARNG	\$11,900	\$FY	17	
Calculation	Cost = EAC * Size adjustment factor				
Basis	The EAC for the SWPPP update includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. The EAC is based on an extra-large (Size A) installation.				
Assumptions	All Army installations will require an SWPPP. Army installations located outside the United States and its territories have analogous SWPPP requirements outlined in country-specific FGS.				

2.10.12 Storm Water: Municipal Separate Storm Sewer System Plan Update (5A)

Category	Storm Water	Date Updated	Inflation	2018
ID	5A		EAC	2017
Activity	Storm Water: MS4 Plan Update		Unit of Measure	2018 (HQIIS)
Cross-Ref	Appendix E, Section DD			2017 (AEDB-EQ)
Size Basis	Extra-large (Size A)		Size Adj. Fact	2018
		Unit of Measure Source		HQIIS AEDB-EQ
Definition	This activity includes costs associated with the update of basic MS4 SWMP Plans necessary for the completion of SWPPP. Under the Phase II Final Rule, operators of small MS4 located in urbanized areas and other non-conventional MS4 such as military bases are required to obtain coverage, generally under NPDES general permits. Permittees must develop and implement an SWMP. These SWPPP require up-to-date and accurate representation of all pertinent MS4 information, such as outfalls and drainage areas contributing to the outfalls, the location and name of all receiving waters, and current and future locations of BMP.			
Not included	Costs associated with SWPPP updates fall under activity (4A).			
EAC	\$53,200	Units	Per installation	
		\$FY	17	
Calculation	Cost = EAC * Size adjustment factor			
Basis	The EAC includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. The EAC is based on an extra-large (Size A) installation.			
Assumptions	This activity only applies to installations with an MS4 permit. Army installations located outside the United States and its territories have analogous MS4 requirements outlined in country-specific FGS.			

2.10.13 Storm Water: Inspections (6A)

Category	Storm Water		Date Updated	Inflation	2018
ID	6A			EAC	2017
Activity	Storm Water: Inspections			Unit of Measure	2018 (HQIS)
Cross-Ref	Appendix E, Section DD				2017 (AEDB-EQ)
			Unit of Measure Source		HQIIS AEDB-EQ
Definition	This activity includes costs for compliance with inspection requirements in SWPPP and any specific inspection guidelines outlined in the NPDES industrial or MS4 permits. SWPPP typically include routine visual inspections, visual assessments, and comprehensive site inspections. The annual comprehensive site inspection evaluates additional aspects of the SWPPP, including the condition and performance of BMP, trends observed in analytic and visual storm water samples taken during the year and found during routine inspections, and the identification of areas where the SWPPP should be revised to reduce pollutant discharge. Inspections and evaluations include documentation and reporting.				
Not included	Plan updates are included in separate activities: SWPPP (4A) and MS4 Plans (5A). Storm water sampling and monitoring costs (not including laboratory analyses) fall under activity (1A).				
EAC	IMCOM USAR AMC	\$22,100	Units	Per industrial and MS4 permit	
	ARNG	\$2,210	\$FY	17	
Calculation	Cost = EAC * (Number of industrial permits + Number of MS4 permits)				
Basis	The EAC for storm water inspections includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. Army installations located outside the United States and its territories have analogous requirements outlined in country-specific FGS.				
Assumptions	Contractor personnel will conduct routine visual assessment inspections quarterly and a comprehensive site inspection annually.				

2.10.14 Storm Water: Non-Point Source (7A)

Category	Storm Water	Date Updated	Inflation	2018
ID	7A		EAC	2017
Activity	Storm Water: Non-Point Source		Unit of Measure	2018
Cross-Ref	Appendix E, Section EE	Unit of Measure Source		HQIIS
Definition	This activity applies to any source of water pollution that does not meet the legal of "point source" in section 502(14) of the CWA (any discernible, confined and discrete conveyance from which pollutants are or may be discharged). Nonpoint source pollution generally results from land runoff, precipitation, atmospheric deposition, drainage, seepage, or hydrologic modification. Control BMP may include actions taken to prevent and remedy naturally occurring erosion (not caused by maneuver damage or improperly maintained real property) such as planting ground cover and stabilizing erosion-prone areas.			
EAC	\$7	Units	Per maneuver area acre	
		\$FY	17	
Calculation	Cost = EAC * Number of maneuver area acres * 0.25			
Basis	Costs related to point source pollution BMPs (TMDL) fall under activity (8A) or (9A). Costs associated with the ITAM program are included in this activity when the activity is part of mitigation. Costs are based on per acre average cost to mulch, seed, or sod one maneuver training area acre. The for non-point source actions includes requirements for installation management of erosion and sediment controls such as mulching, seeding, and vegetation. The number of maneuver area acres was obtained from HQIIS using real property CATCODES 17710, 17711, and 17720.			
Assumptions	Army installations with maneuver areas will require activities to minimize non-point source erosion. Army installations located outside the United States and its territories have analogous CWA requirements outlined in country-specific FGS.			

2.10.15 Storm Water: Total Maximum Daily Load (TMDL) Implementation (8A)

Category	Storm Water		Date	Inflation	2018
ID	8A		Updated	EAC	2017
Activity	Storm Water: TMDL Implementation			Unit of Measure	2017
Size Basis	Extra-large (Size A)			Size Adj Fact	2018
Cross-Ref	Not presented		Unit of Measure Source		DAIM-ISE
Definition	This activity includes costs to reduce discharges of pollutants of concern to impaired water bodies in accordance with established TMDL. TMDL must clearly identify the links between the water body use impairment, the causes of impairment, and the pollutant load reductions needed to meet the applicable water quality standards. Implementation of TMDL can be highly specific to the impaired water body and can include requirements such as numeric effluent standards or the installation or development of specific structural or non-structural BMP.				
EAC	IMCOM USAR AMC	\$219,000	Units	Per installation not located in a severely impaired watershed	
	ARNG	\$21,900	\$FY	17	
Calculation	If installation has severely impaired waterbodies that are subject to specific regional watershed initiatives (i.e., Chesapeake Bay, Puget Sound) = No. Then Cost = EAC * Size adjustment factor				
Basis	Costs related to non-point source pollution BMPs fall under activity (7A). Costs related to TMDL implementation within the installations having severely impaired waterbodies that are subject to specific regional watershed initiatives (i.e., Chesapeake Bay, Puget Sound) fall under activity (9A). The EAC for TMDL implementation includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. The EAC is based on an average extra-large (Size A) installation and does not apply to installations located within installations with severely impaired waterbodies that are subject to specific regional watershed initiatives (i.e., Chesapeake Bay, Puget Sound).				
Assumptions	This activity does not apply to Army installations located outside the United States and its territories. BMPs are implemented annually. Contractor staff will implement the TMDL.				

2.10.16 Storm Water: Regional Watershed Initiatives (9A)

Category	Storm Water	Date Updated	Inflation	2018
ID	9A		EAC	2017
Activity	Storm Water: Regional Watershed Initiatives		Unit of Measure	2017
Cross-Ref	Not presented	Unit of Measure Source		DAIM-ISE
Definition	This activity includes costs to reduce discharges of pollutants of concern to severely impaired water bodies that are subject to specific regional watershed initiatives (i.e., Chesapeake Bay, Puget Sound) in accordance with established TMDL. TMDL must clearly identify the links between the water body use impairment, the causes of impairment, and the pollutant load reductions needed to meet the applicable water quality standards. Implementation of TMDL is particular to severely impaired water bodies that are subject to specific regional watershed initiatives (i.e., Chesapeake Bay, Puget Sound) and include requirements such as numeric effluent standards and installation or development of specific structural or non-structural BMP.			
EAC	\$244,000	Units	Per installation	
		\$FY	17	
Calculation	If installation has severely impaired water bodies that are subject to specific regional watershed initiatives (i.e., Chesapeake Bay, Puget Sound) = Yes, Then Cost = EAC			
Basis	Costs related to non-point source pollution BMP fall under activity (7A). Costs related to TMDL implementation outside of the Chesapeake Bay watershed fall under activity (8A). Costs were developed based on the installation of four structural BMP (e.g., constructing or retrofitting retention basins, landscaping bio-retention features, installing porous pavement, or installing sand filters) per year.			
Assumptions	This activity only applies to installations with severely impaired water bodies that are subject to specific regional watershed initiatives (i.e., Chesapeake Bay, Puget Sound). Installation personnel at applicable installations will facilitate the TMDL implementation activities. Installation will implement varying types of BMP each year.			

2.10.17 Oil Pollution Prevention (OP2): Supplies and Equipment (10A)

Category	OP2		Date Updated	Inflation	2018
ID	10A			EAC	2017
Activity	OP2: Supplies and Equipment			Unit of Measure	2018
Cross-Ref	Appendix E, Section X		Unit of Measure Source		HQIIS
Definition	This activity includes supplies and equipment for spill response from AST or UST, including spill kits that are typically required by federally mandated SPCC Plans and held by DoD facilities. Spill kits are generally required to be available at every location on a DoD facility where petroleum products are stored or handled or where there is a potential for a spill of petroleum products. Because the kits get used, become damaged, or become inoperable over time, kits should be replaced on a biannual basis.				
EAC	IMCOM AMC	\$2,440	Units	Per tank	
	ARNG USAR	\$610	\$FY	18	
Calculation	Cost = EAC * Number of total (UST and AST) storage tanks or (if number of tanks = 0, then 1 tank)				
Basis	<p>Costs for large spills and maintenance activities are not included in Army Environmental Quality funding.</p> <p>Costs associated with storage tank operator training fall under Storage Tank activity (2A).</p> <p>Costs were obtained from five different types of spill kits sold in overpack drums ranging in size from 50 to 65 gal and with the ability to absorb 30 to 40 gal of liquid petroleum products.</p> <p>The number of UST per installation was obtained from HQIIS using real property CATCODEs 12410, 12411, 12440, 12450, 12460, 12480, 41123, 41131, 41141, and 41181.</p> <p>The number of AST per installation was obtained from HQIIS using real property CATCODEs 41120, 41121, 41130, 41140, 41160, and 41180.</p> <p>The average price per spill kit is \$535.</p>				
Assumptions	<p>All Army installations maintain spill kits in proper working order.</p> <p>IMCOM and AMC installations require two new spill kits per tank twice a year. ARNG and USAR installations require one spill kit per tank per year.</p> <p>Army installations located outside the United States and its territories have analogous requirements outlined in country-specific FGS.</p>				

2.10.18 Oil Pollution Prevention (OP2): Spill Prevention Control Countermeasures Plan Updates (11A)

Category	OP2	Date Updated	Inflation	2018
ID	11A		EAC	2017
Activity	OP2: SPCC Plan Updates		Size Adj. Fact	2018
Size Basis	Medium (Size C)	Unit of Measure Source		Data-Call
Definition	This activity includes updates of SPCC Plans that are generally required for owners or operators of facilities with more than 42,000 gal of underground storage capacity or more than 1,320 gal of aggregate aboveground oil storage capacity. SPCC must be signed by Professional Engineer.			
Not included	FRPs fall under activity (12A).			
EAC	\$53,000 amortized over 5 years (\$10,600 per year)	Units	Per installation	
		\$FY	17	
Calculation	Cost = EAC * Size adjustment factor			
Basis	The EAC for SPCC Plan updates includes contract labor, travel, and ODC. The EAC is based on a medium (Size C) installation.			
Assumptions	Army installations located outside the United States and its territories have analogous SPCC Plan requirements outlined in country-specific FGS.			

2.10.19 Oil Pollution Prevention (OP2): Facility Response Plans (12A)

Category	OP2	Date Updated	Inflation	2018
ID	12A		EAC	2017
Activity	OP2: Facility Response Plans		Unit of Measure	2018
Cross-Ref	Appendix E, Section FF	Unit of Measure Source		EPA
Definition	This activity includes costs associated with updating FRP. The FRP rule applies to a subset of SPCC facilities, including those that have a million gallons or more of oil storage capacity, lack secondary containment, and are located at a distance such that a discharge from the facility could cause injury to fish, wildlife, and sensitive environments or shut down a public water intake; or experience a reportable oil spill in an amount greater than or equal to 10,000 gal within the last 5 years. FRP require annual review and revision to ensure consistency with the National Contingency Plan and applicable Area Contingency Plan. Periodic review is also required with revisions due within 60 days of each change that materially affects the response to a worst-case discharge.			
Not included	SPCC Plan Updates fall under activity (11A). SWPPP updates fall under activity (4A).			
EAC	\$51,000 amortized over 5 years (\$10,200 per year)	Units	Per installation requiring FRP	
		\$FY	17	
Calculation	Cost = EAC			
Basis	The EAC for FRP includes contract labor, travel, and ODC.			
Assumptions	This activity only applies to installations requiring FRP. This activity does not apply to Army installations located outside the United States and its territories.			

2.10.20 Wastewater: Sampling and Monitoring (13A)

Category	Wastewater	Date Updated	Inflation	2018
ID	13A		EAC	2017
Activity	Wastewater: Sampling and Monitoring		Unit of Measure	2018
Cross-Ref	Appendix E, Section GG	Unit of Measure Source		HQIIS
Definition	This activity includes labor costs associated with sampling and monitoring required by NPDES wastewater permits. Anyone discharging, or proposing to discharge, waste or wastewater into the surface waters of the state is required by law to obtain a NPDES permit. The NPDES program is intended to control direct discharge into the surface waters of the state by imposing effluent limits and other conditions necessary to meet state and federal requirements. The NPDES program regulates pollutants discharged directly into waterways from wastewater sources.			
Not included	Costs associated with laboratory analyses for wastewater sampling and monitoring fall under activity (13B). Costs associated with pretreatment sampling and analyses fall under activity (16A).			
EAC	\$4,890	Units	Per federally owned WWTP	
		\$FY	17	
Calculation	Cost = EAC * Number of federally owned WWTP			
Basis	The EAC for wastewater sampling and monitoring includes labor, travel, and ODCs to conduct analysis, fieldwork, and reporting. The number of federally owned WWTP per installation was obtained from HQIIS using real property CATCODEs 83110, 83112, and 83113 If Value of WWTP found in HQIIS >3 assume 3.			
Assumptions	This activity only applies to installations with federally owned wastewater treatment systems. Contract personnel will collect wastewater samples. Labor requirements for sampling will be analogous at each installation WWTP. Two wastewater outfalls will be sampled twice a year for each analyte at each Army installation based on trends in wastewater sampling frequencies. Army installations located outside the United States and its territories have analogous wastewater sampling and monitoring requirements outlined in country-specific FGS.			

2.10.21 Wastewater: Sampling and Monitoring – Laboratory Analyses (13B)

Category	Wastewater	Date Updated	Inflation	2018
ID	13B		EAC	2017
Activity	Wastewater: Sampling and Monitoring – Laboratory Analyses		Unit of Measure	2018
Cross-Ref	Appendix E, Section GG	Unit of Measure Source		HQIIS
Definition	This activity includes costs for laboratory analysis of samples collected during wastewater monitoring as required by NPDES wastewater permits.			
Not included	Wastewater sampling and monitoring costs (not including laboratory analyses) fall under activity (13A). Pretreatment sampling and analyses fall under activity (16A).			
EAC	\$988	Units	Per federally owned WWTP	
		\$FY	17	
Calculation	Cost = EAC * Number of federally owned WWTP			
Basis	<p>The EAC includes analysis of wastewater samples.</p> <p>Costs were obtained from analytical laboratories for required wastewater analytes, including pH, oil and grease, TSS, BOD, COD, phenols, cyanide, and metals.</p> <p>The number of federally owned WWTP per installation was obtained from HQIIS using real property CATCODEs 83110, 83112, and 83113.</p> <p>If Value of WWTP found in HQIIS >3 assume 3.</p>			
Assumptions	<p>This activity only applies to installations with federally owned wastewater treatment systems.</p> <p>Two wastewater outfalls will be sampled twice a year for each analyte at each Army installation with a federally owned WWTP.</p> <p>Analytes selected for inclusion in cost development are generally representative of wastewater sampling and analysis parameters.</p> <p>Army installations located outside the United States and its territories have analogous wastewater sampling and monitoring requirements outlined in country-specific FGS.</p>			

2.10.22 Wastewater: Permit Applications (14A)

Category	Wastewater	Date Updated	Inflation	2018
ID	14A		EAC	2017
Activity	Wastewater: Permit Applications		Unit of Measure	2018
Cross-Ref	Appendix E, Section GG	Unit of Measure Source		HQIIS
Definition	This activity includes costs for preparing permit applications to remain compliant with NPDES wastewater discharge permit requirements or Industrial Wastewater Discharge Permits required for discharge to POTW. Permit applications include the labor required to complete applications and conduct the sampling and monitoring required.			
Not included	Laboratory analyses related to completing wastewater permit applications fall under activity (14B). Wastewater permit fees fall under activity (15A). Wastewater sampling and monitoring falls under activity (13A).			
EAC	\$3,670 amortized over 5 years (\$734 per year)	Units	Per federally owned WWTP	
		\$FY	17	
Calculation	Cost = EAC * Number of federally owned WWTP			
Basis	The EAC for wastewater permit applications includes labor and ODC to conduct analysis, fieldwork, and reporting. The number of federally owned WWTPs per installation was obtained from HQIIS using real property CATCODE 83110, 83112, and 83113. If Value of WWTPs found in HQIIS >3 assume 3.			
Assumptions	Contractor personnel will complete NPDES applications and conduct sampling and monitoring. Applications will generally consist of facility information, site or plumbing plans, and an inventory of all materials stored at the facility. This activity does not apply to Army installations located outside the United States and its territories.			

2.10.23 Wastewater: Permit Applications – Laboratory Analysis (14B)

Category	Wastewater	Date Updated	Inflation	2018
ID	14B		EAC	2017
Activity	Wastewater: Permit Applications – Laboratory Analysis		Unit of Measure	2018
Cross-Ref	Appendix E, Section GG	Unit of Measure Source		HQIIS
Definition	This activity includes costs associated with the laboratory analysis of samples required to prepare a renewal application for NPDES wastewater discharge permit or Industrial Wastewater Discharge Permit.			
Not included	Costs associated with completing and filing wastewater permit applications under activity (14A). Wastewater permit fees fall under activity (15A). Laboratory analyses associated with wastewater sampling and monitoring fall under activity (13B).			
EAC	\$964 amortized over 5 years (\$193 per year)	Units	Per federally owned WWTP	
		\$FY	17	
Calculation	Cost = EAC * Number of federally owned WWTP			
Basis	<p>The EAC is based on an annual cost per facility for analytical monitoring related to NPDES or Industrial Wastewater Discharge permit renewal applications.</p> <p>The following analyses were determined to be representative of regular wastewater monitoring at Army installations: pH, oil and grease, TSS, BOD, COD, phenols, cyanide, and metals.</p> <p>Costs were obtained from analytical laboratories for required wastewater analytes.</p> <p>The number of federally owned WWTPs per installation was obtained from HQIIS using real property CATCODE 83110, 83112, and 83113.</p> <p>If Value of WWTP found in HQIIS >3 assume 3.</p>			
Assumptions	<p>Analytes selected for inclusion in cost development are generally representative of the required wastewater sampling and analysis parameters permit renewal.</p> <p>Permit renewal applications are required to be submitted, on average, once every 3 years</p> <p>This activity does not apply to Army installations located outside the United States and its territories.</p>			

2.10.24 Wastewater: Permit Fees (15A)

Category	Wastewater	Date Updated	Inflation	2018
ID	15A		EAC	2017
Activity	Wastewater: Permit Fees		Unit of Measure	2018
Cross-Ref	Appendix E, Section GG	Unit of Measure Source		HQIIS
Definition	This activity includes costs for annual fees associated with NPDES wastewater discharge permit or Industrial Wastewater Discharge Permit maintenance. This activity does not include annual sewerage fees typically incurred on a metered or estimated volume basis.			
Not included	Wastewater sampling and monitoring falls under activity (13A). Completing and filing wastewater permit applications fall under activity (14A).			
EAC	\$2,590	Units	Per federally owned WWTP	
		\$FY	17	
Calculation	Cost = EAC * Number of federally owned WWTP			
Basis	The EAC is based on 29 states that charge recurring fees for NPDES permits. For wastewater permit fees, the mean of the minimum and maximum fees was used as the cost each state. The number of federally owned WWTP per installation was obtained from HQIIS using real property CATCODEs 83110, 83112, and 83113. If Value of WWTPs found in HQIIS >3 assume 3.			
Assumptions	This activity applies to U.S. installations with federally owned WWTP. This activity does not apply to Army installations located outside the United States and its territories.			

2.10.25 Wastewater: Pretreatment Sampling and Analysis (16A)

Category	Wastewater	Date Updated	Inflation	2018
ID	16A		EAC	2017
Activity	Wastewater: Pretreatment Sampling and Analysis		Unit of Measure	2018
Cross-Ref	Appendix E, Section GG	Unit of Measure Source		HQIIS
Definition	This activity includes costs for labor associated with sampling and analysis of wastewater discharged from a significant industrial user to a POTW to evaluate compliance with pretreatment requirements. DoD facilities typically are considered industrial dischargers and are required to obtain Industrial Wastewater Discharge Permits and conduct sampling. Wastewater pretreatment sampling and analysis is designed to identify pollutants and contaminants that may pass through or interfere with treatment processes at a POTW or that may contaminate sewage sludge.			
Not included	Wastewater sampling and monitoring falls under activity (13A). Wastewater permit application falls under activity (14B).			
EAC	\$14,700		Units	Per federally owned WWTP
			\$FY	17
Calculation	IMCOM, USAR, AMC	Cost = EAC * Number of federally owned WWTP		
	ARNG	Not Applicable		
Basis	The EAC for pretreatment sampling and analysis includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. Sampling costs are for four samples analyzed for representative wastewater analytes. The following analyses were determined to be representative of regular wastewater monitoring at Army installations: pH, oil and grease, TSS, BOD, COD, phenols, cyanide, and metals. The number of federally owned WWTP per installation was obtained from HQIIS. If Value of WWTP found in HQIIS >3 assume 3.			
Assumptions	Army installations with federally owned WWTP are frequently required to have a Wastewater Industrial User Permit and collect and analyze wastewater samples. This activity applies to WWTP at IMCOM, AMC, and USAR installations. This activity does not apply to ARNG installations due to the size of facilities. Wastewater Industrial User Permit sampling is analogous to that required for federally owned WWTP. Army installations located outside the United States and its territories have analogous requirements outlined in country-specific FGS.			

2.10.26 Wastewater: Sludge Management Plan (17A)

Category	Wastewater		Date Updated	Inflation	2018
ID	17A			EAC	2017
Activity	Wastewater: Sludge Management Plan			Unit of Measure	2018
			Unit of Measure Source		HQIIS
Cross-Ref	Appendix E, Section GG				
Definition	This activity includes costs for updating Sludge Management Plans. In most cases, requirements for Sludge Management Plans are incorporated into NPDES wastewater permits and require owner/operators of treatment works to detail plans and procedures for the use or disposal of sewage sludge and demonstrate compliance with applicable state and federal regulations.				
EAC	IMCOM USAR AMC	\$14,700	Units	Per federally owned WWTP	
	ARNG	\$3,170	\$FY	17	
Calculation	Cost = EAC * Number of federally owned WWTP				
Basis	The EAC for sludge management plans includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. The number of federally owned WWTP per installation was obtained from HQIIS using real property CATCODE 83110, 83112, and 83113 (Appendix E. Appendix GG). If Value of WWTP found in HQIIS >3 assume 3.				
Assumptions	Army installations located outside the United States and its territories have analogous requirements outlined in country-specific FGS.				

2.10.27 Drinking Water: Sampling and Monitoring (18A)

Category	Drinking Water	Date Updated	Inflation	2018
ID	18A		EAC	2017
Activity	Drinking Water: Sampling and Monitoring		Unit of Measure	2018
Cross-Ref	Appendix E, Section HH	Unit of Measure Source		HQIS
Definition	This activity includes costs associated with sampling and monitoring for national drinking water regulations and SDWA permit requirements. Water quality sampling must be conducted for public water systems (PWS). A PWS is a system which provides the public with water for human consumption through pipes or other constructed conveyances, if such system has at least 15 service connections or serves at least 25 individuals at least 60 days out of the year. This includes any collection, treatment, storage, and distribution facilities under the control of the system operator. Regular drinking water sampling and monitoring is required for all systems that produce their own water. The third Unregulated Contaminant Monitoring Rule (UCMR3) requires monitoring for 30 contaminants using EPA analytical methods. All large community water systems and non-transient, non-community water systems (CWS) serving more than 10,000 people are required to monitor.			
Not included	Costs associated with laboratory analyses for drinking water sampling and monitoring fall under activity (18B). Overseas drinking water sampling and monitoring falls under activity (19A). Sanitary surveys fall under activity (20A). Drinking water sampling plan falls under activity (22A).			
EAC	\$57,800	Units	per federally owned system	
	\$2,739		per installation with a federally owned system for UCMR3 sampling and monitoring	
		\$FY	17	
Calculation	If (EAC * Number of federally owned potable water plants) + (EAC for UCMR3 monitoring * Number of federally owned potable water plants) >\$100,000, then Cost = \$100,000. Else, Cost = (EAC * Number of federally owned potable water plants) + (EAC for UCMR3 monitoring * Number of federally owned potable water plants)			
Basis	The EAC for drinking water sampling and monitoring includes labor, travel, and ODCs to conduct analysis, fieldwork, and reporting. Costs are based on collection of 4 samples at each of 3 locations (12 total) per year. Contract personnel will collect samples. This activity does not apply to Army installations located outside the United States and its territories. PWS sampling requirements contained in 40 CFR 141 apply to all federally owned potable water treatment systems. UCMR3 monitoring applies to all installations with a federally owned PWS. The number of federally owned drinking water systems was obtained from HQIS, CATCODE 84110.			

2.10.28 Drinking Water: Sampling and Monitoring – Laboratory Analysis (18B)

Category	Drinking Water		Date Updated	Inflation	2018
ID	18B			EAC	2017
Activity	Drinking Water: Sampling and Monitoring – Laboratory Analysis			Unit of Measure	2018
Cross-Ref	Appendix E, Section HH		Unit of Measure Source		HQIIS
Definition	This activity includes costs associated with the laboratory analysis required for samples collected to demonstrate compliance with national drinking water regulations and SDWA permit requirements.				
Not included	Drinking water sampling and monitoring costs (not including laboratory analyses) fall under activity (18A) and overseas costs under activity (19A). Laboratory analyses for overseas drinking water sampling and monitoring fall under activity (19B). Sanitary surveys fall under activity (20A). Drinking water sampling plans fall under activity (22A).				
EAC	CWS	\$20,600	Units	Per federally owned potable water system	
	Transient non-CWS	\$2,250	\$FY	17	
	Non-transient, non-CWS	\$18,300			
	UCMR3 monitoring	\$4,820			
Calculation	Cost = (CWS EAC * Number of CWS) + (Transient non-CWS EAC * Number of transient non-CWS) + (Non-transient non-CWS EAC * Number of non-transient non-CWS) + (UCMR3 monitoring EAC* Number of federally owned potable water plants)				
Basis	<p>Costs are based on collection of 4 samples at each of 3 locations (12 total) per year.</p> <p>The following analyses are required for regular drinking water monitoring at all Army installations: primary and secondary inorganic compounds, disinfection by-products, VOCs, synthetic/semi-volatile organic compounds, and radionuclides. UCMR3 sampling includes additional analytes including seven additional VOC, one synthetic/semi-volatile organic compound, six metals, chromium-6, one oxyhalide anion, six perfluorinated compounds, and seven hormones.</p> <p>The EAC is based on analytical laboratory costs for required drinking water analytes.</p> <p>The number of CWS; transient non-CWS; non-transient, non-CWS was obtained from AEDB-EQ.</p> <p>The number of federally owned drinking water systems was obtained from HQIIS, CATCODE 84110.</p>				
Assumptions	<p>PWS sampling requirements contained in 40 CFR 141 apply to all federally owned potable water treatment systems.</p> <p>UCMR3 monitoring applies to all federally owned PWS in the United States.</p> <p>Frequent (several times a day) or continuous monitoring for turbidity and disinfectant residual will be conducted using in-house monitoring equipment.</p> <p>This activity does not apply to Army installations located outside the United States and its territories.</p>				

2.10.29 Drinking Water: Sampling and Monitoring Overseas (19A)

Category	Drinking Water	Date Updated	Inflation	2018
ID	19A		EAC	2017
Activity	Drinking Water: Sampling and Monitoring Overseas		Unit of Measure	2018
Cross-Ref	Appendix E, Section HH	Unit of Measure Source		HQIIS
Definition	This activity includes cost associated with the labor required to conduct sampling and monitoring at overseas installations to comply with local permits for PWS. Specific water quality sampling must be conducted for a PWS. Regular drinking water sampling and monitoring is required for all systems that produce their own water.			
Not included	Laboratory analyses for overseas drinking water sampling and monitoring fall under activity (19B). Domestic sampling and monitoring for drinking water fall under activity (18A) and laboratory analysis under (18B). Sanitary surveys fall under activity (20A). Drinking water sampling plan falls under activity (22A).			
EAC	\$55,100	Units	Per overseas federally owned drinking water system	
		\$FY	17	
Calculation	Cost = EAC * Number of federally owned PWS			
Basis	The EAC for drinking water sampling and monitoring includes labor, travel, and ODCs to conduct analysis, fieldwork, and reporting. Labor rates are based on DOL rates. Costs are based on collection of 4 samples for 3 locations (12 total) per year. The number of federally owned drinking water systems was obtained from HQIIS, CATCODE 84110. Contract personnel will collect samples. PWS sampling requirements contained in 40 CFR 141 apply to all federally owned potable water treatment systems.			

2.10.30 Drinking Water: Sampling and Monitoring Overseas– Laboratory Analyses (19B)

Category	Drinking Water	Date Updated	Inflation	2018
ID	19B		EAC	2017
Activity	Drinking Water: Sampling and Monitoring Overseas– Laboratory Analyses		Unit of Measure	2018
Cross-Ref	Appendix E, Section HH	Unit of Measure Source		HQIIS
Definition	This activity includes costs for laboratory analysis of drinking water samples required to demonstrate compliance with local permits and by 40 CFR 141 or analogous requirements defined by country-specific FGS for PWS.			
Not included	Drinking water sampling and monitoring, excluding laboratory analyses, fall under activity (18A) and overseas costs under activity (19A). Laboratory analyses for domestic drinking water sampling and monitoring fall under activity (18B). Sanitary surveys fall under activity (20A). Drinking water sampling plan falls under activity (22A).			
EAC	\$18,300	Units	Per federally owned drinking water system	
		\$FY	17	
Calculation	Cost = EAC * Number of federally owned drinking water systems			
Basis	Costs are based on collection of 4 samples at each of 3 locations (12 total) per year. The EAC per drinking water system sampling and monitoring is based on costs obtained from analytical laboratories for all drinking water analytes required. The following analyses are required for regular drinking water monitoring at Army installations: primary and secondary inorganic compounds, disinfection by-products, VOC, and radionuclides. The number of federally owned drinking water systems was obtained from HQIIS, CATCODE 84110.			
Assumptions	Contract personnel will collect samples. Frequent (several times a day) or continuous monitoring for turbidity and disinfectant residual will be conducted using in-house monitoring equipment. This activity only applies to Army installations located outside the United States and its territories. PWS sampling requirements contained in 40 CFR 141 apply for all non-privatized drinking water systems with one entry point to the drinking water distribution.			

2.10.31 Drinking Water: Sanitary Surveys or Fees (20A)

Category	Drinking Water	Date Updated	Inflation	2018
ID	20A		EAC	2017
Activity	Drinking Water: Sanitary Surveys or Fees		Unit of Measure	2018
Cross-Ref	Appendix E, Section HH	Unit of Measure Source		HQIIS
Definition	This activity includes costs for sanitary surveys. Sanitary surveys are on-site reviews of the water source, facility, equipment, operation, and maintenance of a PWS. They serve to evaluate the system’s effectiveness in producing and distributing safe drinking water. CWS will require surveys every 3 years. Non-CWS will require surveys every 5 years.			
Not included	Drinking water sampling and monitoring costs, not including laboratory analyses, fall under activity (18A) and overseas costs under activity (19A). Drinking water sampling plan falls under activity (22A).			
EAC	\$29,100 amortized over 3 years (\$9,690 per year)	Units	Per federally owned potable water system	
		\$FY	17	
Calculation	Cost = EAC * Number of federally owned potable water systems			
Basis	The EAC for sanitary surveys includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. Labor rates are based on DOL rates. The number of federally owned drinking water systems was obtained from HQIIS, CATCODE 84110.			
Assumptions	Sanitary surveys are a state-level requirement. All installations will conduct and pay for sanitary surveys. Installations will update their sanitary surveys every 3 or 5 years. Army installations located outside the United States and its territories have analogous drinking water sanitary survey requirements outlined in country-specific FGS.			

2.10.32 SUB-Drinking Water: Consumer Confidence Reports (21A)

Category	Sub-Drinking Water	Date Updated	Inflation	2018
ID	21A		EAC	2017
Activity	SUB-Drinking Water: Consumer Confidence Reports		Unit of Measure	2018
Cross-Ref	Appendix E, Section HH	Unit of Measure Source		HQIIS
Definition	This activity includes costs for the preparation and distribution of Consumer Confidence Reports. Consumer Confidence Reports are informational documents prepared for a particular drinking water system community. The report informs community members of the status of their drinking water. The report details the contaminant levels in the drinking water system and lists the regulated contaminants, reason for regulation, potential health effects, and technical terminology definitions. Explanations of any violations within the reporting year are mandatory for compliance with National Primary Drinking Water Regulations.			
Not included	Drinking water sampling and monitoring costs, not including laboratory analyses, fall under activity (18A) and overseas costs under activity (19A). Laboratory analysis costs fall under activity (18B) for U.S. installations and (19B) for overseas installations.			
EAC	\$15,500	Units	Per federally owned drinking water system that is also a CWS	
		\$FY	17	
Calculation	Cost = EAC * Number of federally owned CWS			
Basis	The EAC per drinking water system for consumer confidence reports includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. Labor rates are based on DOL rates. The type of drinking water systems and type of system were obtained from the AEDB-EQ Safe Drinking Water Data. The type of drinking water systems was obtained from HQIIS, CATCODE 84110.			
Assumptions	This activity only applies to installations with a federally owned CWS. Each CWS is required to mail the Consumer Confidence Report at least annually to each community member it serves. Army installations located outside the United States and its territories have analogous drinking water consumer confidence report requirements outlined in country-specific FGS.			

2.10.33 Drinking Water: Sampling Plan (22A)

Category	Drinking Water	Date Updated	Inflation	2018
ID	22A		EAC	2017
Activity	Drinking Water: Sampling Plan		Unit of Measure	2018
Size Basis	Extra-large (Size A)		Size Adj. Fact	2018
		Unit of Measure Source		HQIIS
Definition	A sampling plan is a document that specifies the plant design parameters for each process within each treatment plant, the location of each sampling point, the analytical parameters to monitor at each sampling point, and the sampling frequency. Sampling plans apply to all drinking water systems and must follow sampling and monitoring requirements of 40 CFR 141.			
Not included	Drinking water sampling and monitoring costs, not including laboratory analyses, fall under activity (18A) and overseas costs under activity (19A). Laboratory analysis costs fall under activity (18B) for U.S. installations and (19B) for overseas installations. Sanitary surveys fall under activity (20A).			
EAC	\$26,600	Units	Per installation	
		\$FY	17	
Calculation	IMCOM Cost = EAC * Size adjustment factor			
Basis	This includes labor, travel, and ODCs to conduct analysis, fieldwork, and reporting. Labor rates are based on DOL rates. The EAC is based on an extra-large (Size A) installation.			
Assumptions	No specific federal requirement exists for a comprehensive sampling plan, but individual sampling plans are required for several rules (i.e., bacteria rule and total coliform rule). Taken collectively, the rules are considered a legal requirement. All installations will develop drinking water sampling plans. Army installations located outside the United States and its territories have analogous requirements outlined in country-specific FGS.			

2.10.34 Drinking Water: Wellhead Protection Plan (23A)

Category	Drinking Water	Date Updated	Inflation	2018
ID	23A		EAC	2017
Activity	Drinking Water: Wellhead Protection Plan		Unit of Measure	2018
Size Basis	Extra-large (Size A)	Unit of Measure Source		HQIIS
Definition	This activity includes costs for the development of a Wellhead Protection Plan. All states are required by the 1986 Amendments to the SDWA to develop a wellhead protection program and plan for each wellhead area within their jurisdiction. A wellhead protection area is defined as the surface and subsurface area surrounding a well or well field through which contaminants can potentially move and contaminate the public water supply. The plan is designed to protect wellheads from contamination that could potentially lead to adverse health effects among community members. Necessary elements of a Wellhead Protection Plan can include, but are not limited to, delineation of the protection area, identifying contaminant sources, assessment of potential contaminant sources, developing protection strategies, and emergency contingency planning.			
Not included	Consumer Confidence Reports fall under activity (21A). Drinking water sampling plans fall under activity (22A).			
EAC	\$26,600	Units	Per installation	
		\$FY	17	
Calculation	Cost = EAC * Size adjustment factor			
Basis	The EAC for a wellhead protection plan includes labor, travel, and ODC to conduct analysis, fieldwork, and reporting. Labor rates are based on DOL rates. The EAC is based on an extra-large (Size A) installation.			
Assumptions	States are required to develop guidance on wellhead protection for communities. All installations will develop wellhead protection plans. Army installations located outside the United States and its territories have analogous requirements outlined in country-specific FGS.			

2.10.35 Water reference documents

1. AEDB-EQ, FY16.
 - a. Water 2A, 2B, 3A, 5A, 6A, 18B, 21A
2. Alaska Training/Technical Assistance Center 2009. Sanitary Survey Information. April.
 - a. Water 20A
3. Applicable country-specific FGS.
 - a. Water 1A, 1B, 4A, 5A, 6A, 7A, 10A, 11A, 13A, 13B, 16A, 17A, 19A, 19B, 20A, 21A, 22A, 23A
4. Costs for sample analyses obtained from the following analytical laboratories: Accutest Laboratories, ALS Environmental, APPL, Inc., and Test America Laboratories, Inc.
 - a. Water 13B
5. Costs for sample analyses obtained from the following analytical laboratories: ALS Environmental, APPL, Inc., and Test America Laboratories, Inc.
 - a. Water 1B, 2B, 14B
6. Costs for sample analyses obtained from the following analytical laboratories: ALS Environmental, APPL, Inc., ESB Babcock Laboratories, Inc., Test America Laboratories, Inc., and Weck Laboratories, Inc.
 - a. Water 18B, 19B
7. Costs for spill kits obtained from New Pig Corporation.
 - a. Water 10A
8. DA 2009. Army Chesapeake Bay Strategy: Sustain the Mission, Preserve the Bay, Secure the Future. Office of the Assistant Secretary of the Army for Installations and Environment. July 2009.
 - a. Water 9A
9. Directorate of Public Works, Environmental Prevention and Compliance Branch, Fort Stewart. Hunter Army Airfield Storm Water Pollution Prevention Plan. Vol. 1. October 2012.
 - a. Water 8A
10. DoD 2017. Overseas Environmental Baseline Guidance Document. DoD 4715.05-G. 5 Oct.
 - a. Water 1A, 1B, 4A, 5A, 6A, 7A, 10A, 11A, 13A, 13B, 16A, 17A, 19A, 19B, 20A, 21A, 22A, 23A
11. DOL 2017. "May 2017 National Occupational Employment and Wage Estimates," Bureau of Labor Statistics, May.
 - a. Water 1A, 2A, 4A, 5A, 6A, 8A, 11A, 12A, 13A, 14A, 16A, 17A, 18A, 19A, 20A, 21A, 22A, 23A
12. EPA 1994. A Plain English Guide to the EPA Part 503 Biosolids Rule. EPA/832/R-93/003. September.
 - a. Water 17A
13. EPA 1996. Fact Sheet 1: Implementation Requirements. EPA/814-F-96-001. May.

- a. Water 22A
- 14. EPA 1999. NPDES – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges (also known as the Phase II Final Rule). Federal Register, Vol. 64, No. 235, December 1999: Construction and MS4 NPDES regulations.
 - a. Water 5A
- 15. EPA 1999. Preliminary Data Summary of Urban Storm Water Best Management Practices. EPA-821-R-99-012. August. Estimate in EPA document adapted from Brown, W. and T. Schueler 1997. The Economics of Storm Water BMPs in the Mid-Atlantic Region. Center for Watershed Protection. Ellicott City, MD.
 - a. Water 9A
- 16. EPA 1999. Storm Water Management Fact Sheet: Visual Inspection. EPA 832-F-99-046. September.
 - a. Water 6A
- 17. EPA 2008. Evaluating the Effectiveness of Municipal Storm water Programs. EPA-833-F-07-010. January.
 - a. Water 1A, 1B, 2B
- 18. EPA 2008. Final National Pollutant Discharge Elimination System (NPDES) Multi-sector General Permit (MSGP) for Storm water Discharges Associated with Industrial Sources. Office of Wastewater Management. EPA-833-F-08-006. September.
 - a. Water 1A, 1B, 2B
- 19. EPA 2008. Understanding Impaired Waters and Total Maximum Daily Load (TMDL) Requirements for Municipal Storm water Programs. EPA 833-F-07-009. January.
 - a. Water 8A
- 20. EPA 2009. Developing Your Storm Water Pollution Prevention Plan: A Guide for Industrial Operators. EPA 833-B-09-002. February.
 - a. Water 4A, 6A
- 21. EPA 2009. Industrial Storm water Monitoring and Sampling Guide. EPA 832-B-09-003. March.
 - a. Water 1A, 1B, 2B
- 22. EPA 2009. Sanitary Survey. Drinking Water Academy. September.
 - a. Water 20A
- 23. EPA 2010. MS4 Permit Improvement Guide. EPA 833-R-10-001. April.
 - a. Water 4A, 6A
- 24. EPA 2011. Introduction to the National Pretreatment Program. EPA-833-B-11-001. June.
 - a. Water 16A
- 25. EPA 2013. SPCC Guidance for Regional Inspectors.
 - a. Water 11A

26. Federal Register: August 19, 1998, Part 2. 40 CFR Parts 141 and 142. National Primary Drinking Water Regulation: Consumer Confidence Reports; Final Rule.
 - a. Water 21A
27. HQIIS, February 2018.
 - a. Water 7A, 10A, 12A, 13A, 13B, 14A, 14B, 15A, 18A, 18B, 16A, 17A, 19A, 19B, 20A, 21A
28. Office of Wastewater Management. EPA-833-F-08-006. September 2008.
 - a. Water 1B
29. Storm water permit fees, where applicable, obtained from the regulatory agencies within each state researched.
 - a. Water 3A
30. U.S. Geological Survey 1999. User's Guide for Source Water Assessment and Protection at U.S. Army Installations. Part 2 -Guidance for Developing Source Water Assessment and Protection Programs at Army Installations. February.
 - a. Water 23A

3 Size Factor Execution Analysis

The goal of this analysis was to determine whether the size of installations influences the environmental funding executed by the installations. In this case, the traditional regression analysis was applied. The dependent variable is annual environmental expenditure by installation (compliance cost, conservation cost, and pollution prevention cost) expressed in 2018 dollars. The independent variables are qualitative variables (i.e., size). Hence, the independent variables were considered as dummy variables, taking on values of 1 or 0.

The inflation indices used to normalize historical GFEBS data were obtained from the “JinflateC Updated 2017_0321.xlsm”. The indices are summarized in Table 18.

Table 18. Inflation indices.

Fiscal Year	IMCOM	ARNG	USAR
FY15	1.05082	1.05082	1.05082
FY16	1.03836	1.03836	1.03836
FY17	1.02000	1.02000	1.02000

The data set included execution costs for FY15–FY17 that were normalized for inflation to 2018 dollars by multiplying by the indices above. Each data point represented the normalized execution cost for a distinct combination of pillar (i.e., compliance, conservation, or pollution prevention), installation, and year. Each combination of command and pillar was analyzed separately using the data points that represented the given pillar and the installations belonging to the given command. For each combination of command and pillar, an installation belonging to the given command typically contributed three data points — one for each year. However, for some installations, there were combinations of pillar and year for which no execution costs were reported. These combinations were excluded from analysis (as opposed to being treated as zero costs).

Results obtained for Army Active, ARNG, and USAR by installation size are presented in Table 19, Table 20, and Table 21, respectively. Refer to Microsoft® Excel® file, ERDC_POM21-25_Statistics_Size_04302018.xlsx for the size statistics that were performed.

Table 19. Army active environmental costs by installation size.

Cost Category		S/M	S/L	S/XL	M/L	M/XL	L/XL
Compliance Costs		N/A	0.6627	0.4334	0.5349	0.3498	0.6540
Avg. Cost Small	\$1,847,653						
Avg. Cost Medium	\$1,491,213						
Avg. Cost Large	\$2,788,040						
Avg. Cost XL	\$4,263,132						
Conservation Costs		N/A	N/A	0.2107	N/A	0.1802	0.3500
Avg. Cost Small	\$1,159,843						
Avg. Cost Medium	\$991,737						
Avg. Cost Large	\$1,926,326						
Avg. Cost XL	\$5,504,050						
Pollution Prevention Costs		N/A	N/A	0.3450	N/A	0.4653	0.3790
Avg. Cost Small	\$180,732						
Avg. Cost Medium	\$243,782						
Avg. Cost Large	\$198,547						
Avg. Cost XL	\$523,923						

Significance level: $\sigma=0.05$

Execution data for years 2015, 2016, and 2017

Methodology: total cost by installation by year

N/A=Costs are not statistically different

S=Small

M=Medium

Table 20. ARNG environmental costs by installation size.

Cost Category		S/M	S/L	S/XL	M/L	M/XL	L/XL
Compliance Costs		0.5987	0.4808	0.2188	0.8032	0.3655	0.4551
Avg. Cost Small	\$484,185						
Avg. Cost Medium	\$808,747						
Avg. Cost Large	\$1,006,957						
Avg. Cost XL	\$2,212,837						
Conservation Costs		0.5474	0.4504	0.2514	N/A	0.4593	0.5581
Avg. Cost Small	\$359,208						
Avg. Cost Medium	\$656,222						
Avg. Cost Large	\$797,491						
Avg. Cost XL	\$1,428,819						
Pollution Prevention Costs		N/A	N/A	0.2635	N/A	0.2091	0.0937
Avg. Cost Small	\$85,526						
Avg. Cost Medium	\$67,864						
Avg. Cost Large	\$30,423						
Avg. Cost XL	\$324,619						

Significance level: $\sigma=0.05$

Execution data for years 2015, 2016, and 2017

Methodology: total cost by installation by year N/A = Costs are not statistically different

S=Small

M=Medium

L=Large

XL=Extra Large

Table 21. USAR environmental costs by installation size.

Cost Category		S/M	S/L	S/XL	M/L	M/XL	L/XL
Compliance Costs		N/A	0.1374	0.0679	0.5554	0.2744	0.4940
Avg. Cost Small	\$424,314						
Avg. Cost Medium	\$1,715,328						
Avg. Cost Large	\$3,088,543						
Avg. Cost XL	\$6,251,861						
Conservation Costs		N/A*	N/A*	N/A*	4.7006	1.8690	N/A
Avg. Cost Small	N/A						
Avg. Cost Medium	\$1,647,182						
Avg. Cost Large	\$350,419						
Avg. Cost XL	\$881,314						
Pollution Prevention Costs		N/A*	N/A*	N/A*	N/A	N/A	N/A
Avg. Cost Small	N/A						
Avg. Cost Medium	\$317,913						
Avg. Cost Large	\$107,119						
Avg. Cost XL	\$4,257						

Significance level: $\sigma=0.05$

Execution data for years 2015, 2016, and 2017

Methodology: total cost by installation by year

N/A=Costs are not statistically different

N/A*=No costs reported for Small assumed not statistically different

S=Small

M=Medium

L=Large

XL=Extra Large

4 Category Factor Execution Analysis

The goal of this analysis was to determine whether the installation category influences the environmental funding executed by the installations. In this case, the traditional regression analysis was applied. The dependent variable is annual environmental expenditure by installation (compliance cost, conservation cost, and pollution prevention cost) expressed in 2018 dollars. The independent variables are qualitative variables (i.e., category). Hence, the independent variables were considered as dummy variables, taking on values of 1 or 0.

The inflation indices used to normalize historical General Fund Enterprise Business System (GFEBS) data were obtained from the “JinflateC Updated 2017_0321.xlsm”. The indices are summarized in Table 22.

Table 22. Inflation indices.

Fiscal Year	IMCOM	ARNG	USAR
FY15	1.05082	1.05082	1.05082
FY16	1.03836	1.03836	1.03836
FY17	1.02000	1.02000	1.02000

The data set included execution costs for FY15–FY17 that were normalized for inflation to 2018 dollars by multiplying by the indices above. Each data point represented the normalized execution cost for a distinct combination of pillar (i.e., compliance, conservation, or pollution prevention), installation, and year. Each combination of command and pillar was analyzed separately using the data points that represented the given pillar and the installations belonging to the given command. For each combination of command and pillar, an installation belonging to the given command typically contributed three data points — one for each year. However, for some installations, there were combinations of pillar and year for which no execution costs were reported. These combinations were excluded from analysis (as opposed to being treated as zero costs).

Results obtained for Army Active, ARNG, and USAR by installation size are presented in Table 23, Table 24, Table 25, and Table 26, respectively.

Table 23. Army active environmental costs by category (Base = Category 1).

Cost Category		C2/C1	C3/C1	C4/C1	C5/C1	C6/C1
Compliance Costs		N/A	0.3907	0.4008	0.3148	0.3091
Avg. Cost Cat 1	\$5,323,254					
Avg. Cost Cat 2	\$4,324,336					
Avg. Cost Cat 3	\$2,079,868					
Avg. Cost Cat 4	\$2,133,345					
Avg. Cost Cat 5	\$1,676,014					
Avg. Cost Cat 6	\$1,645,591					
Conservation Costs		N/A	0.3291	0.3766	0.3815	0.0861
Avg. Cost Cat 1	\$5,399,678					
Avg. Cost Cat 2	\$5,672,540					
Avg. Cost Cat 3	\$1,777,091					
Avg. Cost Cat 4	\$2,033,778					
Avg. Cost Cat 5	\$2,059,998					
Avg. Cost Cat 6	\$464,735					
Pollution Prevention Costs		0.3195	0.3175	0.1247	0.4113	0.2411
Avg. Cost Cat 1	\$811,106					
Avg. Cost Cat 2	\$259,132					
Avg. Cost Cat 3	\$257,530					
Avg. Cost Cat 4	\$101,160					
Avg. Cost Cat 5	\$333,602					
Avg. Cost Cat 6	\$195,548					

Significance level: $\sigma=0.05$

Execution data for years 2015, 2016, and 2017

Methodology: total cost by installation by year

N/A=Costs are not statistically different

C#=Category

Table 24. Army active environmental costs by category (Base = Category 3).

Cost Category		C1/C3	C2/C3	C4/C3	C5/C3	C6/C3
Compliance Costs		2.5594	2.0791	N/A	N/A	N/A
Avg. Cost Cat 1	\$5,323,254					
Avg. Cost Cat 2	\$4,324,336					
Avg. Cost Cat 3	\$2,079,868					
Avg. Cost Cat 4	\$2,133,345					
Avg. Cost Cat 5	\$1,676,014					
Avg. Cost Cat 6	\$1,645,591					
Conservation Costs		3.0385	3.1920	N/A	N/A	0.2615
Avg. Cost Cat 1	\$5,399,678					
Avg. Cost Cat 2	\$5,672,540					
Avg. Cost Cat 3	\$1,777,091					
Avg. Cost Cat 4	\$2,033,778					
Avg. Cost Cat 5	\$2,059,998					
Avg. Cost Cat 6	\$464,735					
Pollution Prevention Costs		3.1496	N/A	N/A	N/A	N/A
Avg. Cost Cat 1	\$811,106					
Avg. Cost Cat 2	\$259,132					
Avg. Cost Cat 3	\$257,530					
Avg. Cost Cat 4	\$101,160					
Avg. Cost Cat 5	\$333,602					
Avg. Cost Cat 6	\$195,548					

Significance level: $\alpha=0.05$

Execution data for years 2015, 2016, and 2017

Methodology: total cost by installation by year

N/A=Costs are not statistically different

C#=Category

Table 25. ARNG environmental costs by category (Base = Category 3).

Cost Category		C1/C3	C2/C3	C4/C3	C5/C3	C6/C3
Compliance Costs		N/A*	N/A*	N/A	0.6107	0.5789
Avg. Cost Cat 1	N/A					
Avg. Cost Cat 2	N/A					
Avg. Cost Cat 3	\$1,060,023					
Avg. Cost Cat 4	\$1,184,878					
Avg. Cost Cat 5	\$647,407					
Avg. Cost Cat 6	\$613,676					
Conservation Costs		N/A*	N/A*	0.6517	0.3336	0.2575
Avg. Cost Cat 1	N/A					
Avg. Cost Cat 2	N/A					
Avg. Cost Cat 3	\$1,344,367					
Avg. Cost Cat 4	\$876,122					
Avg. Cost Cat 5	\$448,509					
Avg. Cost Cat 6	\$346,144					
Pollution Prevention Costs		N/A*	N/A*	0.2661	0.1518	0.3960
Avg. Cost Cat 1	N/A					
Avg. Cost Cat 2	N/A					
Avg. Cost Cat 3	\$230,208					
Avg. Cost Cat 4	\$61,254					
Avg. Cost Cat 5	\$34,953					
Avg. Cost Cat 6	\$91,162					

Significance level: $\alpha=0.05$

Execution data for years 2015, 2016, and 2017

Methodology: total cost by installation by year

N/A=Costs are not statistically different

N/A*=There were no Category 1 or 2 installations not applicable

C#=Category

Table 26. USAR environmental costs by category (Base = Category 3).

Cost Category		C1/C3	C2/C3	C4/C3	C5/C3	C6/C3
Compliance Costs		N/A*	N/A*	N/A*	N/A*	N/A*
Avg. Cost Cat 1	N/A					
Avg. Cost Cat 2	N/A					
Avg. Cost Cat 3	N/A					
Avg. Cost Cat 4	N/A					
Avg. Cost Cat 5	N/A					
Avg. Cost Cat 6	\$2,913,718					
Conservation Costs		N/A*	N/A*	N/A*	N/A*	N/A*
Avg. Cost Cat 1	N/A					
Avg. Cost Cat 2	N/A					
Avg. Cost Cat 3	N/A					
Avg. Cost Cat 4	N/A					
Avg. Cost Cat 5	N/A					
Avg. Cost Cat 6	\$848,871					
Pollution Prevention Costs		N/A*	N/A*	N/A*	N/A*	N/A*
Avg. Cost Cat 1	N/A					
Avg. Cost Cat 2	N/A					
Avg. Cost Cat 3	N/A					
Avg. Cost Cat 4	N/A					
Avg. Cost Cat 5	N/A					
Avg. Cost Cat 6	\$168,070					

Significance level: $\sigma=0.05$

Execution data for years 2015, 2016, and 2017

Methodology: total cost by installation by year

N/A*=There were no Category 3 installations not applicable

C#=Category

5 DASA-CE Validation Review Memo

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
FINANCIAL MANAGEMENT AND COMPTROLLER
109 ARMY PENTAGON
WASHINGTON DC 20310-0109

SAFM-CE

JAN 08 2019

MEMORANDUM FOR Acting Deputy Assistant Chief of Staff for Installation Management,
ATTN: Ms. Carla Coulson, 600 Army Pentagon, Room 3E535, Washington, DC 20310-0600

SUBJECT: Validation Review of the Environmental Quality Requirements Model (EQRM) for
POM 21-25

1. I have reviewed EQRM for appropriate cost estimating methods used to generate requirements for the Army's VENQ Management Decision Package for POM 21-25 and find it valid to support decision making.
2. I found that the EQRM projections for POM 21-25 are within 3% of DASA-CE's independent cost estimate using Army Standard Service Costing.
3. My review was based on the attached enclosure: Model Review Criteria. The objective was to ensure that the model and its outputs provide accurate and relevant information to support resourcing decisions.
4. Validation of the model does not constitute validation of the requirement as that is beyond scope of this review. Notwithstanding changes to inputs or assumptions, this validation will continue through POM 23-27.
5. My point of contact for this action is Mr. David Molinari, david.p.molinari.civ@mail.mil.

Stephen G. Barth
Deputy Assistant Secretary of the Army
(Cost and Economics)

Enclosure**Model Review Criteria**

Criteria	Review comments	Recommended action
Scalable	The model is scalable by incorporating size and mission adjustments based on installation category.	No action
Consistent	The methods used can be applied consistently across POM cycles.	No action
Accurate	Requirements generated for POM 21-25 are in line with the Army Standard Service Costing estimate.	No action
Identifies Risk	The model does not identify or address risk.	Recommend identifying or addressing risk on possible adverse actions.
Results/Outcome Oriented	Acceptable category projected costs are results/outcome oriented parameters of the model.	No action
Tailored	The model is tailored to compliance, conservation and pollution prevention categories.	No action
Confirmable	The basis for some Engineered Activity Costs could not be independently verified.	Recommend improving documentation of Engineered Activity Costs.
Repeatable	The model can be reproduced or updated as specified by provided final documentation.	No action
Uses Official Databases	The model uses information gathered from official databases.	No action
Uses Official Cost Rates	The model uses a 2% inflation rate assumption.	Use official inflation rates IAW DASA-CE guidance.
Manpower informed	The model uses FTE authorizations.	No action

6 Summary

This document describes the methodology used to evaluate the costs incurred by organizations involved in planning, programming, budgeting, and execution of the Army's environmental programs and estimating those costs for future year planning cycles. As environmental requirements are updated, the model will be changed to address those needs. The document will be updated annually or biennially as directed by G9.

Bibliography

1. 40 CFR 270, EPA Administered Permit Programs: The Hazardous Waste Permit Program.
 - a. Waste 5A
2. AEDB-EQ, Air Pollutant Emissions, CY2016.
 - a. Air 4A, 6A
3. AEDB-EQ, Clean Air Permits, CY2016.
 - a. Air 1A, 2A, 3A, 5A, 7A, 12A
4. AEDB-EQ, Cultural Resources Survey, FY15, Part II, Q34.
 - a. Cultural Resources 7A
5. AEDB-EQ, CY2016.
 - a. Waste 1A, 2A, 5A, 6A, 8A, 11A
6. AEDB-EQ, Fugitive Dust, CY2016.
 - a. Air 8A
7. AEDB-EQ, FY15, Part II, Q1.
 - a. Cultural Resources 6A, 6B
8. AEDB-EQ, FY15, Part II, Q2.
 - a. Cultural Resources 5A, 5B
9. AEDB-EQ, FY15, Part II, Q23, Q33, and Q34.
 - a. Cultural Resources 2D
10. AEDB-EQ, FY15, Part II, Q23.
 - a. Cultural Resources 3A
11. AEDB-EQ, FY15, Part II, Q3.4
 - a. Cultural Resources 2E
12. AEDB-EQ, FY15, Part II, Q39 and Q40.
 - a. Cultural Resources 2C
13. AEDB-EQ, FY15, Part II, Q48.
 - a. Cultural Resources 1A
14. AEDB-EQ, FY15, Part II, Q59.
 - a. Cultural Resources 4A
15. AEDB-EQ, FY16.
 - a. Water 18B, 2A, 2B, 3A, 5A, 6A, 21A
16. AEDB-EQ, GHG Reporting, CY2016.
 - a. Air 11A
17. Alaska Training/Technical Assistance Center 2009. Sanitary Survey Information. April.
 - a. Water 20A
18. Applicable country-specific FGS.
 - a. Air 2A, 10A
 - b. Cultural Resources 1A, 1B, 2D
 - c. IP&I 1A, 3A, 3B, 3C, 5A, 6A
 - d. Natural Resources 1A, 2A, 3A, 4A, 5B, 9C
 - e. Pollution Prevention 1A, 2A
 - f. Toxic Substances 1A
 - g. Waste 7A, 8A, 9A, 10A, 13A

- h. Water 1A, 1B, 4A, 5A, 6A, 7A, 10A, 11A, 13A, 13B, 16A, 17A, 19A, 19B, 20A, 21A, 22A, 23A
- 19. ARNG, July 2019.
 - a. Personnel 1A
- 20. ASA (FM&C), OA 2A, APPN OMA, CTYPE 101 & 102 (IMCOM); OA 6A, APPN OMA, CTYPE 101 & 102 (AMC); and OA 2A, APPN OMAR, CTYPE 101 & 102 (USAR).
 - a. Personnel 1A
- 21. ASA (FM&C), OA 2A, APPN OMA, CTYPE 105 (Korea), CTYPE 110 (Other Direct), CTYPE 206 (Other – Indirect), CTYPE 202 (Germany).
 - a. Personnel 2A
- 22. Commercial disposal companies (fees for transportation and disposal used to estimate average) from General Services Administration contract holder schedules.
 - a. Waste 4A
- 23. Commercial training providers (fees for courses used to estimate average): Hazmateam, Inc., Lion Technology Inc., and McCoy and Associates.
 - a. Waste 13A
- 24. Commercial training providers (fees for online courses used to estimate average): Access Safety, BAOS, Environmental Group Services Limited, Environmental Safety Training Center, Global Environmental Solutions, HazTrainer, Now Environmental Services Inc., Occupational Training & Supply, Inc., Pinnacle Environmental Consultants, Inc., Satori Group, SCS Engineers.
 - a. Toxic Substances 1A
- 25. Costs for sample analyses (used to estimate an average) obtained from the following commercial laboratories: Accutest Laboratories, ALS Environmental, APPL, Inc., and Test America Laboratories, Inc.
 - a. Waste 3A, 7A, 11A
- 26. Costs for sample analyses obtained from the following analytical laboratories: Accutest Laboratories, ALS Environmental, APPL, Inc., and Test America Laboratories, Inc.
 - a. Water 13B
- 27. Costs for sample analyses obtained from the following analytical laboratories: ALS Environmental, APPL, Inc., and Test America Laboratories, Inc.
 - a. Water 1B, 2B, 14B
- 28. Costs for sample analyses obtained from the following analytical laboratories: ALS Environmental, APPL, Inc., ESB Babcock Laboratories, Inc., Test America Laboratories, Inc., and Weck Laboratories, Inc.
 - a. Water 18B, 19B
- 29. Costs for spill kits obtained from New Pig Corporation.
 - a. Water 10A

30. Costs obtained from New Pig Corporation and W.W. Grainger, Inc.
 - a. Waste 9A
31. Costs obtained from New Pig Corporation.
 - a. Waste 12A
32. DA 1995. Model Pollution Prevention Plan. U.S. Army Environmental Center, Aberdeen Proving Ground, MD. February 1995.
 - a. Pollution Prevention 1A
33. DA 1997. Buildings and Structures. Chapter 3. AR 420-70. Headquarters Department of the Army, Washington, DC. 10 October 1997.
 - a. Toxic Substances 1A
34. DA 2007. Environmental Quality: Environmental Protection and Enhancement. AR 200-1. 13 December.
 - a. Cultural Resources 1A
 - b. IP&I 1A, 3A, 3B, 3C, 4A, 5A
 - c. Natural Resources 1A, 2A
 - d. Pollution Prevention 1A, 2A
 - e. Toxic Substances 1A, 2A, 3A
 - f. Waste 7A, 11A, 13A
35. DA 2009. Army Chesapeake Bay Strategy: Sustain the Mission, Preserve the Bay, Secure the Future. Office of the Assistant Secretary of the Army for Installations and Environment. July 2009.
 - a. Water 9A
36. DAIM-ISE, August 2018.
 - a. Natural Resources 5A
37. DAIM-ISE, December 2018.
 - a. Natural Resources 8A
38. Department of the Army (DA) 2007. Environmental Quality: Environmental Protection and Enhancement. Army Regulation (AR) 200-1. 13 December.
 - a. Air 10A
39. Directorate of Public Works, Environmental Prevention and Compliance Branch, Fort Stewart. Hunter Army Airfield Storm Water Pollution Prevention Plan. Vol. 1. October 2012.
 - a. Water 8A
40. DLA-DS hazardous waste FY14 and FY15 disposal data.
 - a. Waste 8A
41. DoD 2008. Cultural Resources Management. DoDI 4715.16. 18 September.
 - a. Cultural Resources 1A
42. DoD 2008. DoD Pest Management Program. DoDI 4150.07. 29 May.
 - a. IP&I 6A
43. DoD 2013. Natural Resources Conservation Program. DoDI 4715.03. 25 November.

- a. Natural Resources 1A, 3A, 4A, 5B, 7A
- 44. DoD 2017. Overseas Environmental Baseline Guidance Document. DoD 4715.05-G. 5 Oct.
 - a. Air 2A 10A
 - b. Cultural Resources 1A, 1B, 2D
 - c. IP&I 1A, 3A, 3B, 3C, 5A, 6A
 - d. Natural Resources 1A, 2A, 3A, 4A, 5B, 9C
 - e. Pollution Prevention 1A, 2A
 - f. Toxic Substances 1A
 - g. Waste 3A, 7A, 8A, 9A, 10A, 13A, 12A
 - h. Water 1A, 1B, 4A, 5A, 6A, 7A, 10A, 11A, 13A, 13B, 16A, 17A, 19A, 19B, 20A, 21A, 22A, 23A
- 45. DOL 2017. "May 2017 National Occupational Employment and Wage Estimates," Bureau of Labor Statistics, May.
 - a. Air 1A, 2A, 3A, 4A, 5A, 7A, 9A, 10A, 11A, 12A
 - b. Cultural Resources 1A, 1B, 2A, 2B, 2C, 2D, 2E, 4A, 6A, 6B, 7A
 - c. IP&I 1A, 2A, 2B, 3A, 3B, 3C, 5A, 6A
 - d. Natural Resources 1A, 2A, 3A, 4A, 5B, 7A, 8A, 9A, 9B, 9C
 - e. Pollution Prevention 1A, 2A
 - f. Toxic Substances 2A, 3A
 - g. Waste 1A, 3A, 5A, 10A, 11A
 - h. Water 1A, 2A, 4A, 5A, 6A, 8A, 11A, 12A, 13A, 14A, 16A, 17A, 18A, 19A, 20A, 21A, 22A, 23A,
- 46. EPA 1994. A Plain English Guide to the EPA Part 503 Biosolids Rule. EPA/832/R-93/003. September.
 - a. Water 17A
- 47. EPA 1996. Fact Sheet 1: Implementation Requirements. EPA/814-F-96-001. May.
 - a. Water 22A
- 48. EPA 1999. NPDES – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges (also known as the Phase II Final Rule). Federal Register, Vol. 64, No. 235, December 1999: Construction and MS4 NPDES regulations.
 - a. Water 5A
- 49. EPA 1999. Preliminary Data Summary of Urban Storm Water Best Management Practices. EPA-821-R-99-012. August. Estimate in EPA document adapted from Brown, W. and T. Schueler 1997. The Economics of Storm Water BMPs in the Mid-Atlantic Region. Center for Watershed Protection. Ellicott City, MD.
 - a. Water 9A
- 50. EPA 1999. Storm Water Management Fact Sheet: Visual Inspection. EPA 832-F-99-046. September.
 - a. Water 6A
- 51. EPA 2002. Draft RCRA Miscellaneous Treatment Units Encyclopedia X Technical Resource Document. April.
 - a. Waste 11A

52. EPA 2008. Evaluating the Effectiveness of Municipal Stormwater Programs. EPA-833-F-07-010. January.
 - a. Water 1A, 1B, 2B
53. EPA 2008. Final National Pollutant Discharge Elimination System (NPDES) MSGP for Stormwater Discharges Associated with Industrial Sources. Office of Wastewater Management. EPA-833-F-08-006. September.
 - a. Water 1A, 1B, 2B
54. EPA 2008. Understanding Impaired Waters and Total Maximum Daily Load (TMDL) Requirements for Municipal Stormwater Programs. EPA 833-F-07-009. January.
 - a. Water 8A
55. EPA 2009. Developing Your Storm Water Pollution Prevention Plan: A Guide for Industrial Operators. EPA 833-B-09-002. February.
 - a. Water 4A, 6A
56. EPA 2009. Industrial Stormwater Monitoring and Sampling Guide. EPA 832-B-09-003. March.
 - a. Water 1A, 1B, 2B
57. EPA 2009. Sanitary Survey. Drinking Water Academy. September.
 - a. Water 20A
58. EPA 2010. MS4 Permit Improvement Guide. EPA 833-R-10-001. April.
 - a. Water 4A, 6A
59. EPA 2011. Introduction to the National Pretreatment Program. EPA-833-B-11-001. June.
 - a. Water 16A
60. EPA 2013. SPCC Guidance for Regional Inspectors.
 - a. Water 11A
61. EPA Reporting Year 2015 TRI data. <https://www.epa.gov/toxics-release-inventory-tri-program/2015-tri-preliminary-dataset>.
 - a. Toxic Substances 3A
62. EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846.
 - a. Waste 7A, 11A
63. Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management. 24 January 2007.
 - a. Pollution Prevention 2A
 - b. Toxic Substances 2A, 3A
64. Federal Register: August 19, 1998, Part 2. 40 CFR Parts 141 and 142. National Primary Drinking Water Regulation: Consumer Confidence Reports; Final Rule.
 - a. Water 21A
65. HQIIS, February 2018.
 - a. Cultural Resources 1B, 2A, 2B, 6A, 7A
 - b. Natural Resources 4A, 9A
 - c. Storage Tanks 1A, 2A

- d. Toxic Substances 1A
 - e. Waste 3A
 - f. Water 7A, 10A, 12A, 13A, 13B, 14A, 14B, 15A, 18A, 18B, 16A, 17A, 19A, 19B, 20A, 21A
66. <https://www.epa.gov/title-v-operating-permits/historical-permit-fee-rates>
- a. Air 6A
67. OACSIM 2008. U.S. Army Installation Geospatial information and Services (IG&S) Data Proponency, Common Installation Picture, and Quality Assurance Plans (QAPs). 15 August.
- a. IP&I 2A, 2B
68. OACSIM-RDR: II PEG Travel, Training, Supply & Equipment (TTSE) cost factors, 2019 Jan.
- a. Personnel 3A
69. OACSIM-RDR: POM 19-23 IT Life Cycle Replacement Costs for Desktop and Laptop, 2019 Jan.
- a. Personnel 3A
70. Office of Wastewater Management. EPA-833-F-08-006. September 2008.
- a. Water 1B
71. State hazardous waste regulations.
- a. Waste 5A, 6A
72. State regulatory agency hazardous waste fee schedules.
- a. Waste 6A
73. State regulatory agency web sites (for hazardous waste permit fees used to estimate a national average).
- a. Waste 5A
74. State regulatory agency web sites (for solid waste annual fees used to estimate a national average).
- a. Waste 2A
75. State regulatory agency web sites (for solid waste permit fees used to estimate a national average).
- a. Waste 1A
76. Storm water permit fees, where applicable, obtained from the regulatory agencies within each state researched.
- a. Water 3A
77. U.S. Geological Survey 1999. User's Guide for Source Water Assessment and Protection at U.S. Army Installations. Part 2 -Guidance for Developing Source Water Assessment and Protection Programs at Army Installations. February.
- a. Water 23A
78. USACE 1987. Corps of Engineers Wetlands Delineation Manual. Final Report. January.
- a. Natural Resources 9A

Appendix A: Environmental Quality Requirements Model (EQRM) Installations List

IMCOM

Aberdeen Proving Ground
Adelphi
Carlisle Barracks
Detroit Arsenal
Dugway
Fort A. P. Hill
Fort Belvoir
Fort Benning
Fort Bliss
Fort Bragg
Fort Campbell
Fort Carson
Fort Detrick
Fort Drum
Fort Gordon
Fort Greely
Fort Hamilton
Fort Hood
Fort Huachuca
Fort Irwin
Fort Jackson
Fort Knox
Fort Leavenworth
Fort Lee
Fort Leonard Wood
Fort Lewis McChord (JBLM)
Fort Meade
Fort Polk
Fort Riley
Fort Rucker
Fort Sill
Fort Stewart (Hunter AAF)
Fort Wainwright
Joint Base Myer-Henderson Hall
Kwajalein Atoll
Picatinny
Presidio of Monterey
Redstone Arsenal
Rock Island Arsenal
USAG Ansbach
USAG Bavaria - Garmish

USAG Bavaria - Grafenwoer
USAG Bavaria - Hohenfels
USAG Benelux
USAG Daegu
USAG Hawaii
USAG Humphreys
USAG Italy
USAG Japan
USAG Miami
USAG Natick
USAG Red Cloud
USAG Rheinland-Pfalz
USAG Rheinland-Pfalz - Baumholder
USAG Stuttgart
USAG Weisbaden
USAG Yongsan
West Point
White Sands
Yuma Proving Ground

ARNG

Alabama
Alaska
Arizona
Arkansas
California
Colorado
Connecticut
Delaware
District of Columbia
Florida
Georgia
Guam Territory
Hawaii
Idaho
Illinois
Indiana
Iowa
Kansas
Kentucky
Louisiana
Maine
Maryland
Massachusetts
Michigan
Minnesota
Mississippi

Missouri
Montana
Nebraska
Nevada
New Hampshire
New Jersey
New Mexico
New York
North Carolina
North Dakota
Ohio
Oklahoma
Oregon
Pennsylvania
Puerto Rico
Rhode Island
South Carolina
South Dakota
Tennessee
Texas
Utah
Vermont
Virgin Islands
Virginia
Washington
West Virginia
Wisconsin
Wyoming

USAR

63rd RSC
81st RSC
88th RSC
99th RSC
9th MSC
Fort Buchanan
Fort Devens
Fort Hunter Liggett (includes Camp Parks)
Fort McCoy

AMC

MOT Concord
MOT Sunny Point

Appendix B: Data Sources Used in EQRM

Table 27. Data sources used in the EQRM sorted by data table order.

Ap E Sect.	Data	Data Source	EQRM Category	ID	EQRM Activity
A	Number of installation acres	HQIIS	Cultural Resources	6A	NAGPRA: Repatriation
			Natural Resources	4A	Implementation of INRMP
				9A	Wetlands Delineations
				9C	Wetlands PLS
B	Number of Title V permits	AEDB-EQ CAA permits module	Air	12A	Stack Testing
				1A	Title V Operating Permit
				5A	Air Pollutant Emissions Inventory
				7A	Monitoring, Recordkeeping, and Reporting
C	Number of synthetic minor permits	AEDB-EQ CAA permits module	Air	12A	Stack Testing
				2A	Synthetic Minor Permit
				5A	Air Pollutant Emissions Inventory
				7A	Monitoring, Recordkeeping, and Reporting
D	Number of minor permits	AEDB-EQ CAA permits module	Air	3A	Minor Source Permits
				5A	Air Pollutant Emissions Inventory
E	Is the installation required to have an RMP per CAA Section 112 or EPCRA?	AEDB-EQ air pollutant emissions module	Air	4A	Risk Management Plans
F	Tons of air emissions	AEDB-EQ air pollutant emissions module	Air	6A	Emission Fees
G	Does installation conduct fugitive dust control that is required	AEDB-EQ air pollutant emissions module	Air	8A	Fugitive Dust Control

Ap E Sect.	Data	Data Source	EQRM Category	ID	EQRM Activity
	by a legal driver?				
H	Is the installation required to report GHG emissions?	AEDB-EQ air pollutant emissions module	Air	11A	GHG Reporting
I	Archaeological survey complete?	AEDB-EQ cultural resources survey	Cultural Resources	2C	NHPA: Archaeological Inventory
J	Number of tribes per state	AEDB-EQ cultural resources survey (part II, Q59)	Cultural Resources	4A	Native American, Alaskan, and Hawaiian Consultation
K	Number of NRHP eligible archaeological sites	AEDB-EQ cultural resources survey (part II, Q34)	Cultural Resources	2D	NHPA: Archaeological Evaluation
				2E	NHPA: Archaeological Mitigation
				7A	Agreement Documents
				2D	NHPA: Archaeological Evaluation
L	Number of NRHP eligible structures >50 years old through 1968	HQIIS (FEE, Owned by State or Local Government [ONST], ENVL)	Cultural Resources	1B	Management Plans: Maintenance and Treatment Plans
				2B	NHPA: Architectural Mitigation
				7A	Agreement Documents
M	Number of archaeological sites	AEDB-EQ cultural resources survey (part II, Q23)	Cultural Resources	2D	NHPA: Archaeological Evaluation
				3A	Archaeological Monitoring
N	Facilities > 50 years old through 1968 Not Evaluated (NEV)	HQIIS	Cultural Resources	2A	NHPA: Architectural Inventories and Evaluation
O	Number of acres accessible for archaeological inventory	AEDB-EQ cultural resources survey (part II, Q39)	Cultural Resources	2C	NHPA: Archaeological Inventory
P	Number of acres having been inventoried for	AEDB-EQ cultural resources survey (part II, Q40)	Cultural Resources	2C	NHPA: Archaeological Inventory

Ap E Sect.	Data	Data Source	EQRM Category	ID	EQRM Activity
	archaeological resources				
Q	Does the installation have a National Historical Landmark (NHL)?	HQIIS	Cultural Resources	1B	Management Plans: Maintenance and Treatment Plans
R	Is there a federal archaeological collection associated with the installation?	AEDB-EQ cultural resources survey (part II, Q48)	Cultural Resources	6A	NAGPRA: Repatriation
				6B	NAGPRA: Management
S	Cubic feet of artifacts	AEDB-EQ cultural resources survey, part II, Q2	Cultural Resources	5A	Maintenance of Artifacts and Records
				5B	Rehabilitation of Artifacts and Records
T	Number of INRMPs	DAIM-ISE	Natural Resources	3A	INRMP Revision
U	Installations reporting NLEB	DAIM-ISE	Natural Resources	5A	TES Management
	Installations reporting RCW				
	Non-RCW species count				
	Number of Component Installations Requiring ICRMPs	AEDB-EQ cultural resources survey (part II, Q48)	Cultural Resources	1A	Management Plans: ICRMP Updates
V	Installations reporting bald or golden eagles	DAIM-ISE	Natural Resources	8A	BGEPA
	Installations with permit for bald or golden eagles				
W	Number of Form R reports per Section 313 of EPCRA	CY2014 Reporting, EPA	Toxic Substances	3A	EPCRA Section 313 Analysis and Reporting

Ap E Sect.	Data	Data Source	EQRM Category	ID	EQRM Activity
X	Number of AST	HQIIS (CATCODES 41120, 41121, 41130, 41140, 41160, 41180)	Storage Tanks	1A	Permits and Fees
				2A	Operator Training
			Water	10A	OP2: Supplies and Equipment
				12A	OP2: Facility Response Plans
	Number of UST	HQIIS (CATCODES 12410, 12411, 12440, 12450, 12460, 12480, 41123, 41131, 41141, 41181)	Storage Tanks	1A	Permits and Fees
				2A	Operator Training
			Water	10A	OP2: Supplies and Equipment
Y	Number of buildings built before 1978 and 1981	HQIIS	Toxic Substances	1A	Asbestos and Lead Awareness Training
Z	Does the installation have an existing solid waste permit?	AEDB-EQ RCRA-D permits module	Waste	1A	Solid Waste: Permit Applications/Renewals
				2A	Solid Waste: Fees
AA	Number of solid waste landfills	HQIIS	Waste	3A	Solid Waste: Landfill Monitoring
BB	Does the installation have an existing hazardous waste permit?	AEDB-EQ RCRA-C permits module	Waste	5A	Hazardous Waste: Permit Applications/Renewals
				6A	Hazardous Waste: Fees
CC	Does the installation have an existing Subpart X permit?	AEDB-EQ RCRA-C permits module	Waste	11A	Hazardous Waste: Groundwater Monitoring at Subpart X Permitted Facilities
DD	Number of industrial storm water permits	AEDB-EQ CWA permits data	Water	2A	Storm Water: Permit Applications
				2B	Storm Water: Permit Applications – Laboratory Analysis
				3A	Storm Water: Permit Fees – NPDES MS4 and Industrial
		AEDB-EQ CWA permits module	Water	2A	Storm Water: Permit Applications

Ap E Sect.	Data	Data Source	EQR Category	ID	EQR Activity
	Number of MS4 storm water permits			2B	Storm Water: Permit Applications – Laboratory Analysis
				3A	Storm Water: Permit Fees – NPDES MS4 and Industrial
				5A	Storm Water: MS4 Plan Update
				6A	Storm Water: Inspections
EE	Number of maneuver area acres	HQIIS	Water	7A	Storm Water: Non-Point Source
FF	Does the installation have more than 1 million gallons aboveground storage capacity and require an FRP?	EPA - https://hifld-dhs-gii.opendata.arcgis.com/	Water	12A	OP2: Facility Response Plans
GG	Number of federally owned WWTPs	HQIIS (CATCODEs 83110, 83112, and 83113)	Water	13A	Wastewater: Monitoring and Sampling
				13B	Wastewater: Monitoring and Sampling – Laboratory Analysis
				14A	Wastewater: Permit Applications
				14B	Wastewater: Permit Applications – Laboratory Analysis
				15A	Wastewater: Permit Fees
				16A	Wastewater: Pretreatment Sampling and Analysis
				17A	Wastewater: Sludge Management Plan
HH	Does the installation have a federally owned CWS, a	AEDB-EQ safe drinking water permits module	Water	18B	Drinking Water: Sampling and Monitoring – Laboratory Analysis

Ap E Sect.	Data	Data Source	EQR Category	ID	EQR Activity
	transient non-CWS, or a non-transient non-CWS?			21A	Drinking Water: Consumer Confidence Reports
	Number of federally owned potable water treatment systems	HQIIS (CATCODE 84110)	Water	18A	Drinking Water: Sampling and Monitoring
				19A	Drinking Water: Sampling and Monitoring Overseas
				19B	Drinking Water: Sampling and Monitoring Overseas – Laboratory Analysis
				20A	Sanitary Surveys or Fees
				21A	Drinking Water: Consumer Confidence Reports
Not presented	Is the installation located in the watershed of a severely impaired water body subject to regional watershed initiatives?	DAIM-ISE	Water	8A	Storm Water: TMDL Implementation
				9A	Storm Water: Regional Watershed Initiatives
Table 5	Testing installation	DAIM-ISE	Air	9A	New Source Review

Table 28. Data sources used in the EQRM sorted by activity.

Category	ID	Activity	Ap E Sect.	Data
Air	1A	Title V Operating Permit	B	Number of Title V permits
	2A	Synthetic Minor Permit	C	Number of synthetic minor permits
	3A	Minor Source Permits	D	Number of minor permits
	4A	Risk Management Plans	E	Is the installation required to have an RMP per CAA Section 112 or EPCRA?
	5A	Air Pollutant Emissions Inventory	B	Number of Title V permits
			C	Number of synthetic minor permits
			D	Number of minor permits
	6A	Emission Fees	F	Tons of air emissions
	7A	Monitoring, Recordkeeping, & Reporting	B	Number of Title V permits
			C	Number of synthetic minor permits
	8A	Fugitive Dust Control	G	Does installation conduct fugitive dust control that is required by a legal driver?
	9A	New Source Review	Table 5	Testing installation
	11A	GHG Reporting	H	Is the installation required to report GHG emissions?
	12A	Stack Testing	B	Number of Title V permits
			C	Number of synthetic minor permits
Cultural Resources	1A	Management Plans: ICRMP Updates	U	Number of Component Installations Requiring ICRMPs
	1B	Management Plans: Maintenance and Treatment Plans	L	Number of NRHP eligible structures >50 years old through 1968
			Q	Does the installation have an NHL?
	2A	NHPA: Architectural Inventories and Evaluation	N	Facilities > 50 years old through 1968 Not Evaluated (NEV)
	2B	NHPA: Architectural Mitigation	L	Number of NRHP eligible structures >50 years old through 1968
	2C	NHPA: Archaeological Inventory	I	Archaeological survey complete?

Category	ID	Activity	Ap E Sect.	Data
			O	Number of acres accessible for archaeological inventory
			P	Number of acres having been inventoried for archaeological resources
	2D	NHPA: Archaeological Evaluation	K	Number of NRHP eligible archaeological sites
				Number of NRHP ineligible archaeological sites
Cultural Resources			M	Number of archaeological sites
Cultural Resources	2E	NHPA: Archaeological Mitigation	K	Number of NRHP eligible archaeological sites
Cultural Resources	3A	Archaeological Monitoring	M	Number of archaeological sites
	4A	Native American, Alaskan, and Hawaiian Consultation	J	Number of tribes per state
	5A	Maintenance of Artifacts and Records	S	Cubic feet of artifacts
	5B	Rehabilitation of Artifacts and Records	S	Cubic feet of artifacts
	6A	NAGPRA: Repatriation	A	Number of installation acres
			R	Is there a federal archaeological collection associated with the installation?
	6B	NAGPRA: Management	R	Is there a federal archaeological collection associated with the installation?
Cultural Resources	7A	Agreement Documents	K	Number of NRHP eligible archaeological sites
			L	Number of NRHP eligible structures >50 years old through 1968
Natural Resources	3A	INRMP Revision	T	Number of INRMP
	4A	Implementation of INRMP	A	Number of installation acres
	5A	TES Management	U	Installations reporting NLEB
				Installations reporting RCW
				Non-RCW species count
	8A	BGEPA	V	Installations reporting bald or golden eagles

Category	ID	Activity	Ap E Sect.	Data
				Installations with permit for bald or golden eagles
	9A	Wetlands Delineations	A	Number of installation acres
	9C	Wetlands PLS		
Storage Tanks	1A	Permits and Fees	X	Number of AST
			X	Number of UST
	2A	Operator Training	X	Number of AST
			X	Number of UST
Toxic Substances	1A	Asbestos and Lead Awareness Training	Y	Number of buildings built before 1978 and 1981
	3A	EPCRA Section 313 Analysis and Reporting	W	Number of Form R reports per Section 313 of EPCRA
Waste	1A	Solid Waste: Permit Applications/Renewals	Z	Does the installation have an existing solid waste permit?
	2A	Solid Waste: Fees	Z	Does the installation have an existing solid waste permit?
	3A	Solid Waste: Landfill Monitoring	AA	Number of solid waste landfills
	5A	Hazardous Waste: Permit Applications/Renewals	BB	Does the installation have an existing hazardous waste permit?
	6A	Hazardous Waste: Fees	BB	Does the installation have an existing hazardous waste permit?
	11A	Hazardous Waste: Groundwater Monitoring at Subpart X Permitted Facilities	CC	Does the installation have an existing Subpart X permit?
Water	2A	Storm Water: Permit Applications	DD	Number of industrial storm water permits
	2A	Storm Water: Permit Applications	DD	Number of MS4 storm water permits
	2B	Storm Water: Permit Applications – Laboratory Analysis	DD	Number of industrial storm water permits
	2B	Storm Water: Permit Applications – Laboratory Analysis	DD	Number of MS4 storm water permits
	3A	Storm Water: Permit Fees – NPDES MS4 and Industrial	DD	Number of industrial storm water permits

Category	ID	Activity	Ap E Sect.	Data
	3A	Storm Water: Permit Fees – NPDES MS4 and Industrial	DD	Number of MS4 storm water permits
	5A	Storm Water: MS4 Plan Update	DD	Number of MS4 storm water permits
	6A	Storm Water: Inspections	DD	Number of MS4 storm water permits
Water	7A	Storm Water: Non-Point Source	EE	Number of maneuver area acres
Water	8A	Storm Water: TMDL Implementation	N/A	Is the installation located in the watershed of a severely impaired water body subject to regional watershed initiatives?
Water	9A	Storm Water: Regional Watershed Initiatives	N/A	Is the installation located in the watershed of a severely impaired water body subject to regional watershed initiatives?
Water	10A	OP2: Supplies and Equipment	X	Number of AST
Water	10A	OP2: Supplies and Equipment	X	Number of UST
Water	12A	OP2: Facility Response Plans	FF	Does the installation have more than 1 million gallons aboveground storage capacity and require an FRP?
Water	13A	Wastewater: Monitoring and Sampling	GG	Number of federally owned WWTP
Water	13B	Wastewater: Monitoring and Sampling – Laboratory Analysis	GG	Number of federally owned WWTP
Water	14A	Wastewater: Permit Applications	GG	Number of federally owned WWTP
Water	14B	Wastewater: Permit Applications – Laboratory Analysis	GG	Number of federally owned WWTP
Water	15A	Wastewater: Permit Fees	GG	Number of federally owned WWTP
Water	16A	Wastewater: Pretreatment Sampling and Analysis	GG	Number of federally owned WWTP
Water	17A	Wastewater: Sludge Management Plan	GG	Number of federally owned WWTP
Water	18A	Drinking Water: Sampling and Monitoring	HH	Number of federally owned potable water treatment systems
Water	18B	Drinking Water: Sampling and Monitoring – Laboratory Analysis	HH	Does the installation have a federally owned CWS, a transient

Category	ID	Activity	Ap E Sect.	Data
				non-CWS, or a non- transient non-CWS?
Water	19A	Drinking Water: Sampling and Monitoring Overseas	HH	Number of federally owned potable water treatment systems
Water	19B	Drinking Water: Sampling and Monitoring Overseas – Laboratory Analysis	HH	Number of federally owned potable water treatment systems
Water	20A	Sanitary Surveys or Fees	HH	Number of federally owned potable water treatment systems
Water	21A	Drinking Water: Consumer Confidence Reports	HH	Does the installation have a federally owned CWS, a transient non-CWS, or a non- transient non-CWS?
Water	21A	Drinking Water: Consumer Confidence Reports	HH	Number of federally owned potable water treatment systems

Appendix C: Installation Category and Size Designations

Installation Category designations for all commands were derived from the Army G-3 Sustainable Range Program Category designation list. The list was updated and approved by the Training Support Work Group in October 2012. Installation category designations are based on the number of maneuver impact miles, environmental impacts to mission, and installation size.

IMCOM

Size designations, shown in Table 29, were provided by HQ IMCOM, November 2013 as the following: Category A (extra-large), Category B (large), Category C (medium), and Category D (small). Installation size is primarily driven by the total land acreage, total Garrison population, number of regulatory inspections, CWA permits, and active range acreage.

Table 29. IMCOM installation category and size designations.

IMCOM EQRM Installation Name	Size	Tier Category
Aberdeen Proving Ground	B	Category 3
Adelphi	D	Category 6
Carlisle Barracks	D	Category 6
Detroit Arsenal	C	Category 6
Dugway	D	Category 3
Fort A. P. Hill	D	Category 3
Fort Belvoir	B	Category 6
Fort Benning	A	Category 2
Fort Bliss	A	Category 1
Fort Bragg	A	Category 2
Fort Campbell	A	Category 2
Fort Carson	A	Category 1
Fort Detrick	B	Category 6
Fort Drum	A	Category 2
Fort Gordon	B	Category 4
Fort Greely	D	Category 3

IMCOM EQRM Installation Name	Size	Tier Category
Fort Hamilton	D	Category 6
Fort Hood	A	Category 1
Fort Huachuca	B	Category 5
Fort Irwin	B	Category 2
Fort Jackson	B	Category 4
Fort Knox	B	Category 3
Fort Leavenworth	B	Category 3
Fort Lee	B	Category 6
Fort Leonard Wood	B	Category 3
Fort Lewis McChord (JBLM)	A	Category 1
Fort Meade	B	Category 6
Fort Polk	B	Category 2
Fort Riley	A	Category 2
Fort Rucker	C	Category 3
Fort Sill	A	Category 3
Fort Stewart (Hunter AAF)	A	Category 2
Fort Wainwright	C	Category 2
Joint Base Myer-Henderson Hall	B	Category 6
Kwajalein Atoll	D	Category 6
Picatinny	D	Category 6
Presidio of Monterey	C	Category 6
Redstone Arsenal	B	Category 6
Rock Island Arsenal	D	Category 6
USAG Ansbach	C	Category 6
USAG Bavaria – Garmish	D	Category 6
USAG Bavaria – Grafenwoer	B	Category 3
USAG Bavaria – Hohenfels	C	Category 3
USAG Benelux	D	Category 6
USAG Daegu	C	Category 3
USAG Hawaii	A	Category 2
USAG Humphreys	C	Category 3
USAG Italy	C	Category 6
USAG Japan	C	Category 6

IMCOM EQRM Installation Name	Size	Tier Category
USAG Miami	D	Category 6
USAG Natick	D	Category 6
USAG Red Cloud	C	Category 3
USAG Rheinland-Pfalz	B	Category 6
USAG Rheinland-Pfalz – Baumholder	D	Category 6
USAG Stuttgart	C	Category 6
USAG Weisbaden	D	Category 6
USAG Yongsan	B	Category 3
West Point	C	Category 5
White Sands	D	Category 3
Yuma Proving Ground	D	Category 3

ARNG

Size designations, shown in Table 30, were provided by the ARNG in November 2013. The number of sites within each ARNG installation (i.e., state or territory) determines the size designation of small (fewer than 41 sites), medium (fewer than 73 sites), large (fewer than 129 sites), and extra-large (more than 129 sites).

Table 30. ARNG installation category and size designations.

ARNG EQRM Installation Name	Size	Tier Category
Alabama	Large	Category 5
Alaska	Large	Category 6
Arizona	Medium	Category 6
Arkansas	Large	Category 3
California	Power Generation	Category 4
Colorado	Small	Category 6
Connecticut	Small	Category 6
Delaware	Small	Category 6
District of Columbia	Small	Category 6
Florida	Large	Category 3
Georgia	Large	Category 4
Guam Territory	Small	Category 6
Hawaii	Small	Category 6

ARNG EQRM Installation Name	Size	Tier Category
Idaho	Medium	Category 3
Illinois	Medium	Category 4
Indiana	Large	Category 3
Iowa	Medium	Category 5
Kansas	Medium	Category 6
Kentucky	Medium	Category 5
Louisiana	Large	Category 4
Maine	Small	Category 5
Maryland	Medium	Category 6
Massachusetts	Medium	Category 4
Michigan	Medium	Category 4
Minnesota	Large	Category 3
Mississippi	Power Generation	Category 3
Missouri	Large	Category 4
Montana	Medium	Category 4
Nebraska	Small	Category 5
Nevada	Small	Category 6
New Hampshire	Small	Category 6
New Jersey	Small	Category 6
New Mexico	Medium	Category 5
New York	Large	Category 6
North Carolina	Large	Category 5
North Dakota	Medium	Category 4
Ohio	Medium	Category 6
Oklahoma	Medium	Category 4
Oregon	Large	Category 5
Pennsylvania	Large	Category 3
Puerto Rico	Small	Category 6
Rhode Island	Small	Category 6
South Carolina	Large	Category 6
South Dakota	Medium	Category 6
Tennessee	Large	Category 6
Texas	Large	Category 4

ARNG EQRM Installation Name	Size	Tier Category
Utah	Medium	Category 4
Vermont	Small	Category 5
Virgin Islands	Small	Category 6
Virginia	Medium	Category 3
Washington	Medium	Category 6
West Virginia	Medium	Category 5
Wisconsin	Large	Category 6
Wyoming	Small	Category 4

USAR

The number of facilities within each USAR RSC determines the size designation, shown in Table 31, of small (fewer than 10 sites), medium (fewer than 170 sites), large (fewer than 250 sites), or extra-large (XL) (more than 250 sites).

Table 31. USAR installation category and size designations.

USAR EQRM Installation Name	Size	Tier Category
63rd RSC	Medium	Category 6
81st RSC	Large	Category 6
88th RSC	XL	Category 6
99th RSC	Large	Category 6
9th MSC	Small	Category 6
Fort Buchanan	Medium	Category 4
Fort Devens	Medium	Category 6
Fort Hunter Liggett (includes Camp Parks)	Medium	Category 3

AMC

Installation size, shown in Table 32, is primarily driven by the total land acreage, total Garrison population, number of regulatory inspections, CWA permits, and active range acreage.

Table 32. AMC installation category and size designations.

AMC EQRM Installation Name	Size	Tier Category
MOT Concord	D	Category 6
MOT Sunny Point	D	Category 6

Appendix D: Competing and Critical Requirement Levels

The Critical or “Amber” level of funding is the required funding to fund all Class 0, 1, and 2 projects. The Competing or “Green” level of funding also includes Class 3 projects and defines the 100% level. All funding for Amber level is 100% unless indicated otherwise in Table 33.

Table 33. Competing and critical requirement funding levels.

EQRM Activities	Amber (Critical) % of Competing (Green) EQRM Output*			
	IMCOM	ARNG	USAR	AMC
* 100% unless otherwise noted				
Personnel				
DAC/FRSE Labor (1A)				
LN Labor (2A)				
Travel; Training, Equipment, and Supplies; and IT Life-Cycle Replacement (3A)				
Air				
Title V Operating Permit (1A)				
Synthetic Minor Permit (2A)				
Minor Source Permits (3A)				
Risk Management Plans (4A)				
Air Pollutant Emissions Inventory (5A)				
Emission Fees (6A)				
Monitoring, Recordkeeping, and Reporting (7A)				
Fugitive Dust Control (8A)				
NSR (Testing Installations) (9A)				
ODS Management Plan (10A)	60	60	60	60
GHG Reporting (11A)				
Stack Testing (12A)				
Cultural Resources				
Management Plans: ICRMP Updates (1A)				
Management Plans: Maintenance and Treatment Plans (1B)	75	75	75	75
NHPA: Architectural Inventories and Evaluation (2A)	75	75	75	75
NHPA: Architectural Mitigation (2B)	80	80	80	80
NHPA: Archaeological Inventory (2C)	80	80	80	80
NHPA: Archaeological Evaluation (2D)	80	80	80	80

EQRM Activities	Amber (Critical) % of Competing (Green) EQRM Output*			
	IMCOM	ARNG	USAR	AMC
* 100% unless otherwise noted				
NHPA: Archaeological Mitigation (2E)	80	80	80	80
Archaeological Monitoring (3A)	80	80	80	80
Native American, Alaskan, and Hawaiian Consultation (4A)				
Maintenance of Artifacts and Records (5A)				
Rehabilitation of Artifacts and Records (5B)				
NAGPRA: Repatriation (6A) NAGPRA of 1990				
NAGPRA: Management (6B)				
Agreement Documents (7A)	75	75	75	75
IP&I				
Regional Initiatives (1A)	30	30	30	30
Environmental GIS Layers – Compliance (2A)	80	80	80	80
Environmental GIS Layers – Conservation (2B)	80	80	80	80
Environmental Awareness Training – Compliance (3A)	70	70	70	70
Environmental Awareness Training – Conservation (3B)	70	70	70	70
Environmental Awareness Training – P2 (3C)	70	70	70	70
ICUZ Studies (4A)	50	50	50	50
Compliance Corrective Actions (5A)				
Integrated Pest Management Plan (6A)				
Natural Resources				
Planning Level Surveys (PLS) (1A)	80	80	80	80
TES PLS (2A)	50	50	50	90
INRMP Revision (3A)				
INRMP Implementation (4A)	75	75	75	75
TES Management (5A)	65	65	65	
TES Management – Overseas (5B)				
SAR/Candidate Species Management (6A)				
MBTA (7A)	90	90	90	90
BGEPA (8A)				
Wetlands				
Delineations (9A)	90	90	90	90
Monitoring (9B)	90	90	90	90
PLS (9C)	80	80	80	80
Pollution Prevention (P2)				
P2 Plan Updates (1A)	50	50	50	50

EQRM Activities	Amber (Critical) % of Competing (Green) EQRM Output*			
	IMCOM	ARNG	USAR	AMC
* 100% unless otherwise noted				
P2 Opportunity Assessments (2A)	50	50	50	50
Storage Tanks				
Permits and Fees (includes registration) (1A)				
Operator Training (2A)				
Toxic Substances				
Asbestos and Lead Awareness Training (1A)	60	60	60	60
EPCRA Sections 302, 311, and 312 Analysis and Reporting (2A)				
EPCRA Section 313 Analysis and Reporting (3A)				
Waste				
Solid Waste				
Permit Applications/Renewals (1A)				
Fees (2A)				
Landfill Monitoring (3A)				
Hazardous Waste				
POL-contaminated Waste (4A)				
Permit Applications/Renewals (5A)				
Fees (6A)				
Sampling and Monitoring (7A)				
Disposal (8A)				
Management Supplies and Equipment (9A)				
Management Plans (10A)				
Groundwater Monitoring at Subpart X Permitted Facilities (11A)				
Incidental Spill Response (12A)				
Training (13A)				
Water				
Storm Water				
Monitoring and Sampling (1A)				
Monitoring and Sampling – Laboratory Analyses (1B)				
Permit Applications (2A)				
Permit Applications – Laboratory Analysis (2B)				
Permit Fees – NPDES MS4 and Industrial (3A)				
SWPPP Update (4A)				
MS4 Plan Update (5A)				
Inspections (6A)				

EQRM Activities	Amber (Critical) % of Competing (Green) EQRM Output*			
	IMCOM	ARNG	USAR	AMC
* 100% unless otherwise noted				
Non-Point Source (7A)				
TMDL Implementation (8A)				
Regional Watershed Initiatives (9A)				
Oil Pollution Prevention (OP2)				
Supplies and Equipment (10A)				
SPCC Plan Updates (11A)				
Facility Response Plans (12A)				
Wastewater				
Sampling and Monitoring (13A)				
Sampling and Monitoring – Laboratory Analyses (13B)				
Permit Applications (14A)				
Permit Applications – Laboratory Analysis (14B)				
Permit Fees (15A)				
Pretreatment Sampling and Analysis (16A)				
Sludge Management Plan (17A)				
Drinking Water				
Sampling and Monitoring (18A)				
Sampling and Monitoring – Laboratory Analysis (18B)				
Sampling and Monitoring Overseas (19A)				
Sampling and Monitoring Overseas– Laboratory Analyses (19B)				
Sanitary Surveys or Fees (20A)				
Consumer Confidence Reports (21A)				
Sampling Plan (22A)				
Wellhead Protection Plan (23A)				
Sludge Management Plan (17A)				
* 100% unless otherwise noted				

Appendix E: Authoritative Data

Section A. Number of Installation Acres

Tables 34 and 35 contain the number of acres reported as status code “active” in Headquarters Installation Information System (HQIIS) as of August 2016 (POM FY19) June 2017 (POM FY20), and February 2018 (POM FY21).

Table 34. Total number of acres by command.

Command	Total Number of Acres		
POM	FY19	FY20	FY21
IMCOM	14,517,191	14,334,334	14,564,356
AMC	22,418	22,418	22,418
ARNG	2,412,433	2,431,940	2,429,395
USAR	321,107	321,081	321,081
Total	17,273,149	17,109,773	17,337,250

Table 35. Total number of acres by installation.

Command	Installation	Number of Acres		
POM		FY19	FY20	FY21
IMCOM	Aberdeen Proving Ground	2,364,428	2,364,428	2,364,428
IMCOM	Adelphi	1,807	1,807	1,807
IMCOM	Carlisle Barracks	579	454	579
IMCOM	Detroit Arsenal	284	284	284
IMCOM	Dugway	798,214	798,214	798,214
IMCOM	Fort A. P. Hill	75,819	75,819	75,819
IMCOM	Fort Belvoir	8,751	8,751	8,751
IMCOM	Fort Benning	184,413	184,413	184,413
IMCOM	Fort Bliss	1,117,532	1,117,532	1,117,532
IMCOM	Fort Bragg	1,463,975	1,463,975	1,463,975
IMCOM	Fort Campbell	112,476	112,476	112,476
IMCOM	Fort Carson	373,313	373,313	373,313
IMCOM	Fort Detrick	1,287	1,287	1,419
IMCOM	Fort Drum	107,265	107,265	107,265
IMCOM	Fort Gordon	58,548	56,530	58,548

Command	Installation	Number of Acres		
POM		FY19	FY20	FY21
IMCOM	Fort Greely	27,950	27,950	27,950
IMCOM	Fort Hamilton	178	178	178
IMCOM	Fort Hood	214,224	214,224	214,224
IMCOM	Fort Huachuca	101,475	101,475	101,475
IMCOM	Fort Irwin	638,599	638,599	638,599
IMCOM	Fort Jackson	52,301	52,301	52,301
IMCOM	Fort Knox	109,111	109,111	109,111
IMCOM	Fort Leavenworth	5,637	5,637	5,637
IMCOM	Fort Lee	165,956	5,905	165,956
IMCOM	Fort Leonard Wood	63,270	63,270	63,270
IMCOM	Fort Lewis McChord (JBLM)	434,668	414,939	434,668
IMCOM	Fort Meade	5,102	5,102	5,102
IMCOM	Fort Polk	198,974	198,974	198,974
IMCOM	Fort Riley	100,706	100,706	114,541
IMCOM	Fort Rucker	62,857	62,857	62,857
IMCOM	Fort Sill	93,832	93,832	93,830
IMCOM	Fort Stewart (Hunter AAF)	285,110	285,110	285,110
IMCOM	Fort Wainwright	1,582,612	1,582,612	1,582,612
IMCOM	Joint Base Myer-Henderson Hall	417	417	417
IMCOM	Kwajalein Atoll	1,361	1,361	1,361
IMCOM	Picatinny	6,563	6,493	7,689
IMCOM	Presidio of Monterey	1,278	442	16,333
IMCOM	Redstone Arsenal	37,910	37,910	37,910
IMCOM	Rock Island Arsenal	870	870	1,320
IMCOM	USAG Ansbach	2,215	2,215	2,215
IMCOM	USAG Bavaria - Garmish	185	185	185
IMCOM	USAG Bavaria - Grafenwoer	56,763	56,763	56,763
IMCOM	USAG Bavaria - Hohenfels	40,362	40,362	40,362
IMCOM	USAG Benelux	1,098	1,098	1,098
IMCOM	USAG Daegu	1,409	1,409	1,409
IMCOM	USAG Hawaii	189,366	189,366	189,366
IMCOM	USAG Humphreys	10,121	10,121	10,121

Command	Installation	Number of Acres		
POM		FY19	FY20	FY21
IMCOM	USAG Italy	3,052	3,052	3,052
IMCOM	USAG Japan	3,367	3,367	3,365
IMCOM	USAG Miami	34	34	34
IMCOM	USAG Natick	226	226	226
IMCOM	USAG Red Cloud	11,203	11,203	11,203
IMCOM	USAG Rheinland-Pfalz	8,636	8,636	8,656
IMCOM	USAG Rheinland-Pfalz - Baumholder	1,667	1,667	1,647
IMCOM	USAG Stuttgart	2,409	2,409	2,409
IMCOM	USAG Weisbaden	1,845	1,818	1,726
IMCOM	USAG Yongsan	1,485	1,485	1,485
IMCOM	West Point	16,078	16,078	16,078
IMCOM	White Sands	2,297,106	2,297,106	2,313,797
IMCOM	Yuma Proving Ground	1,008,911	1,008,911	1,008,911
ARNG	Alabama	24,015	24,028	23,970
ARNG	Alaska	501,020	501,020	501,010
ARNG	Arizona	60,273	60,273	60,269
ARNG	Arkansas	97,428	97,441	97,441
ARNG	California	54,511	54,511	54,498
ARNG	Colorado	248	239	234
ARNG	Connecticut	2,343	2,347	2,347
ARNG	Delaware	409	409	409
ARNG	District of Columbia	10	10	10
ARNG	Florida	88,089	97,784	94,092
ARNG	Georgia	2,549	2,553	2,549
ARNG	Guam Territory	66	66	66
ARNG	Hawaii	1,183	1,190	1,187
ARNG	Idaho	220,155	219,193	219,193
ARNG	Illinois	41,457	41,457	6,101
ARNG	Indiana	1,083	1,083	36,439
ARNG	Iowa	31,681	31,940	31,928
ARNG	Kansas	369	367	367
ARNG	Kentucky	13,141	13,917	13,917

Command	Installation	Number of Acres		
POM		FY19	FY20	FY21
ARNG	Louisiana	31,852	31,852	33,672
ARNG	Maine	361,625	364,865	364,865
ARNG	Maryland	2,415	2,411	2,411
ARNG	Massachusetts	15,837	15,837	15,730
ARNG	Michigan	155,781	155,781	155,772
ARNG	Minnesota	75,249	78,337	77,362
ARNG	Mississippi	150,847	150,713	150,692
ARNG	Missouri	10,588	10,588	11,863
ARNG	Montana	32,714	33,275	33,265
ARNG	Nebraska	6,339	6,338	6,338
ARNG	Nevada	2,940	2,940	2,940
ARNG	New Hampshire	5,629	5,629	717
ARNG	New Jersey	711	709	709
ARNG	New Mexico	18,144	18,221	18,077
ARNG	New York	3,669	3,669	3,669
ARNG	North Carolina	803	803	5,715
ARNG	North Dakota	14,535	14,427	14,421
ARNG	Ohio	23,610	23,585	23,583
ARNG	Oklahoma	34,601	34,561	34,798
ARNG	Oregon	69,247	69,247	69,247
ARNG	Pennsylvania	18,971	20,771	20,771
ARNG	Puerto Rico	12,889	12,866	12,865
ARNG	Rhode Island	2,491	2,491	671
ARNG	South Carolina	2,889	2,916	1,634
ARNG	South Dakota	9,746	10,926	10,926
ARNG	Tennessee	4,800	4,800	4,679
ARNG	Texas	34,134	34,128	34,125
ARNG	Utah	23,609	23,609	26,294
ARNG	Vermont	11,290	11,290	11,290
ARNG	Virgin Islands	140	140	140
ARNG	Virginia	43,453	43,463	43,222
ARNG	Washington	825	873	868

Command	Installation	Number of Acres		
POM		FY19	FY20	FY21
ARNG	West Virginia	6,125	6,141	6,127
ARNG	Wisconsin	956	956	956
ARNG	Wyoming	82,949	82,954	82,954
USAR	63rd RSC	3,060	3,060	3,060
USAR	81st RSC	1,636	1,633	1,633
USAR	88th RSC	10,315	10,310	10,310
USAR	99th RSC	3,480	3,462	3,462
USAR	9th MSC	144	144	144
USAR	Fort Buchanan	746	746	746
USAR	Fort Devens	5,212	5,212	5,212
USAR	Fort Hunter Liggett (includes Camp Parks)	166,869	166,869	166,869
USAR	Fort McCoy	129,645	129,645	129,645
AMC	MOT Concord	6,100	6,100	6,100
AMC	MOT Sunny Point	16,318	16,318	16,318

Section B. Number of Title V Operating Permits

Tables 36 and 37 contain the number of Title V operating permits by command and installation respectively as reported in the EQ data call CY15 (POM FY19) and first half FY21 (POM FY20 and FY21).

Table 36. Number of Title V operating permits by command.

Command	Number of Title V Operating Permits	
	POM	FY19
IMCOM	36	31
ARNG	0	1
USAR	1	0
AMC	0	0
Total	37	32

Table 37. Number of Title V operating permits by installation.

Command	Installation	Number of Title V Operating Permits	
POM		FY19	FY20/21
IMCOM	Aberdeen Proving Ground	2	3
IMCOM	Adelphi	0	1
IMCOM	Carlisle Barracks	0	0
IMCOM	Detroit Arsenal	0	0
IMCOM	Dugway	1	1
IMCOM	Fort A. P. Hill	0	0
IMCOM	Fort Belvoir	1	1
IMCOM	Fort Benning	1	1
IMCOM	Fort Bliss	1	0
IMCOM	Fort Bragg	2	1
IMCOM	Fort Campbell	2	2
IMCOM	Fort Carson	5	2
IMCOM	Fort Detrick	1	1
IMCOM	Fort Drum	1	1
IMCOM	Fort Gordon	1	0
IMCOM	Fort Greely	1	1
IMCOM	Fort Hamilton	0	0
IMCOM	Fort Hood	1	1
IMCOM	Fort Huachuca	0	0

Command	Installation	Number of Title V Operating Permits	
		FY19	FY20/21
IMCOM	Fort Irwin	0	0
IMCOM	Fort Jackson	1	1
IMCOM	Fort Knox	1	1
IMCOM	Fort Leavenworth	0	0
IMCOM	Fort Lee	0	0
IMCOM	Fort Leonard Wood	1	1
IMCOM	Fort Lewis McChord (JBLM)	0	0
IMCOM	Fort Meade	0	0
IMCOM	Fort Polk	1	1
IMCOM	Fort Riley	1	1
IMCOM	Fort Rucker	1	1
IMCOM	Fort Sill	0	0
IMCOM	Fort Stewart (Hunter AAF)	2	2
IMCOM	Fort Wainwright	1	1
IMCOM	Joint Base Myer-Henderson Hall	1	1
IMCOM	Kwajalein Atoll	0	0
IMCOM	Picatinny	1	1
IMCOM	Presidio of Monterey	0	0
IMCOM	Redstone Arsenal	1	1
IMCOM	Rock Island Arsenal	1	1
IMCOM	USAG Ansbach	0	0
IMCOM	USAG Bavaria - Garmish	0	0
IMCOM	USAG Bavaria - Grafenwoer	0	0
IMCOM	USAG Bavaria - Hohenfels	0	0
IMCOM	USAG Benelux	0	0
IMCOM	USAG Daegu	0	0
IMCOM	USAG Hawaii	0	0
IMCOM	USAG Humphreys	0	0
IMCOM	USAG Italy	0	0
IMCOM	USAG Japan	0	0
IMCOM	USAG Miami	0	0
IMCOM	USAG Natick	0	0
IMCOM	USAG Red Cloud	0	0
IMCOM	USAG Rheinland-Pfalz	0	0
IMCOM	USAG Rheinland-Pfalz - Baumholder	0	0
IMCOM	USAG Stuttgart	0	0

Command	Installation	Number of Title V Operating Permits	
		FY19	FY20/21
IMCOM	USAG Weisbaden	0	0
IMCOM	USAG Yongsan	0	0
IMCOM	West Point	1	1
IMCOM	White Sands	1	1
IMCOM	Yuma Proving Ground	1	0
ARNG	Alabama	0	0
ARNG	Alaska	0	0
ARNG	Arizona	0	0
ARNG	Arkansas	0	0
ARNG	California	0	0
ARNG	Colorado	0	0
ARNG	Connecticut	0	0
ARNG	Delaware	0	0
ARNG	District of Columbia	0	0
ARNG	Florida	0	0
ARNG	Georgia	0	0
ARNG	Guam Territory	0	0
ARNG	Hawaii	0	0
ARNG	Idaho	0	0
ARNG	Illinois	0	0
ARNG	Indiana	0	0
ARNG	Iowa	0	0
ARNG	Kansas	0	0
ARNG	Kentucky	0	1
ARNG	Louisiana	0	0
ARNG	Maine	0	0
ARNG	Maryland	0	0
ARNG	Massachusetts	0	0
ARNG	Michigan	0	0
ARNG	Minnesota	0	0
ARNG	Mississippi	0	0
ARNG	Missouri	0	0
ARNG	Montana	0	0
ARNG	Nebraska	0	0
ARNG	Nevada	0	0
ARNG	New Hampshire	0	0

Command	Installation	Number of Title V Operating Permits	
POM		FY19	FY20/21
ARNG	New Jersey	0	0
ARNG	New Mexico	0	0
ARNG	New York	0	0
ARNG	North Carolina	0	0
ARNG	North Dakota	0	0
ARNG	Ohio	0	0
ARNG	Oklahoma	0	0
ARNG	Oregon	0	0
ARNG	Pennsylvania	0	0
ARNG	Puerto Rico	0	0
ARNG	Rhode Island	0	0
ARNG	South Carolina	0	0
ARNG	South Dakota	0	0
ARNG	Tennessee	0	0
ARNG	Texas	0	0
ARNG	Utah	0	0
ARNG	Vermont	0	0
ARNG	Virgin Islands	0	0
ARNG	Virginia	0	0
ARNG	Washington	0	0
ARNG	West Virginia	0	0
ARNG	Wisconsin	0	0
ARNG	Wyoming	0	0
USAR	63rd RSC	0	0
USAR	81st RSC	0	0
USAR	88th RSC	0	0
USAR	99th RSC	0	0
USAR	9th MSC	0	0
USAR	Fort Buchanan	1	0
USAR	Fort Devens	0	0
USAR	Fort Hunter Liggett (includes Camp Parks)	0	0
USAR	Fort McCoy	0	0
AMC	MOT Concord	0	0
AMC	MOT Sunny Point	0	0

Section C. Number of Synthetic Minor Permits

Tables 38 and 39 contain the number of synthetic minor operating permits by command and installation respectively as reported in the EQ data call CY15 (POM FY19) and first half FY17 (POM FY20 and FY21).

Table 38. Number of synthetic minor permits by command.

Command	Number of Synthetic Minor Permits	
POM	FY19	FY20/21
IMCOM	34	27
ARNG	17	15
USAR	5	1
AMC	0	0
Total	56	43

Table 39. Number of synthetic minor permits by installation.

Command	Installation	Number of Synthetic Minor Permits	
POM		FY19	FY20/21
IMCOM	Aberdeen Proving Ground	0	1
IMCOM	Adelphi	0	0
IMCOM	Carlisle Barracks	0	0
IMCOM	Detroit Arsenal	1	1
IMCOM	Dugway	0	0
IMCOM	Fort A. P. Hill	1	1
IMCOM	Fort Belvoir	1	3
IMCOM	Fort Benning	0	0
IMCOM	Fort Bliss	0	0
IMCOM	Fort Bragg	0	0
IMCOM	Fort Campbell	0	0
IMCOM	Fort Carson	17	5
IMCOM	Fort Detrick	1	1
IMCOM	Fort Drum	0	0
IMCOM	Fort Gordon	2	2
IMCOM	Fort Greely	2	2

Command	Installation	Number of Synthetic Minor Permits	
		FY19	FY20/21
IMCOM	Fort Hamilton	0	0
IMCOM	Fort Hood	0	0
IMCOM	Fort Huachuca	1	2
IMCOM	Fort Irwin	0	0
IMCOM	Fort Jackson	0	0
IMCOM	Fort Knox	0	0
IMCOM	Fort Leavenworth	0	0
IMCOM	Fort Lee	1	1
IMCOM	Fort Leonard Wood	0	0
IMCOM	Fort Lewis McChord (JBLM)	3	1
IMCOM	Fort Meade	1	1
IMCOM	Fort Polk	0	0
IMCOM	Fort Riley	0	0
IMCOM	Fort Rucker	0	0
IMCOM	Fort Sill	1	2
IMCOM	Fort Stewart (Hunter AAF)	0	0
IMCOM	Fort Wainwright	0	0
IMCOM	Joint Base Myer- Henderson Hall	1	1
IMCOM	Kwajalein Atoll	0	0
IMCOM	Picatinny	0	0
IMCOM	Presidio of Monterey	0	0
IMCOM	Redstone Arsenal	0	0
IMCOM	Rock Island Arsenal	0	0
IMCOM	USAG Ansbach	0	0
IMCOM	USAG Bavaria - Garmish	0	0
IMCOM	USAG Bavaria - Grafenwoer	0	0

Command	Installation	Number of Synthetic Minor Permits	
		FY19	FY20/21
IMCOM	USAG Bavaria - Hohenfels	0	0
IMCOM	USAG Benelux	0	0
IMCOM	USAG Daegu	0	0
IMCOM	USAG Hawaii	1	1
IMCOM	USAG Humphreys	0	0
IMCOM	USAG Italy	0	0
IMCOM	USAG Japan	0	0
IMCOM	USAG Miami	0	0
IMCOM	USAG Natick	0	1
IMCOM	USAG Red Cloud	0	0
IMCOM	USAG Rheinland-Pfalz	0	0
IMCOM	USAG Rheinland-Pfalz - Baumholder	0	0
IMCOM	USAG Stuttgart	0	0
IMCOM	USAG Weisbaden	0	0
IMCOM	USAG Yongsan	0	0
IMCOM	West Point	0	0
IMCOM	White Sands	0	0
IMCOM	Yuma Proving Ground	0	1
ARNG	Alabama	0	0
ARNG	Alaska	0	0
ARNG	Arizona	2	3
ARNG	Arkansas	2	0
ARNG	California	0	0
ARNG	Colorado	0	0
ARNG	Connecticut	0	0
ARNG	Delaware	0	0
ARNG	District of Columbia	0	0

Command	Installation	Number of Synthetic Minor Permits	
		FY19	FY20/21
ARNG	Florida	0	0
ARNG	Georgia	0	0
ARNG	Guam Territory	0	0
ARNG	Hawaii	0	0
ARNG	Idaho	0	0
ARNG	Illinois	0	0
ARNG	Indiana	0	0
ARNG	Iowa	1	1
ARNG	Kansas	0	0
ARNG	Kentucky	2	1
ARNG	Louisiana	1	0
ARNG	Maine	0	0
ARNG	Maryland	0	0
ARNG	Massachusetts	0	0
ARNG	Michigan	0	0
ARNG	Minnesota	1	1
ARNG	Mississippi	3	3
ARNG	Missouri	0	0
ARNG	Montana	0	0
ARNG	Nebraska	0	0
ARNG	Nevada	0	0
ARNG	New Hampshire	0	0
ARNG	New Jersey	3	3
ARNG	New Mexico	0	0
ARNG	New York	0	0
ARNG	North Carolina	0	0
ARNG	North Dakota	1	1
ARNG	Ohio	0	1
ARNG	Oklahoma	0	0
ARNG	Oregon	0	0
ARNG	Pennsylvania	0	0
ARNG	Puerto Rico	0	0
ARNG	Rhode Island	0	0
ARNG	South Carolina	0	0

Command	Installation	Number of Synthetic Minor Permits	
		FY19	FY20/21
ARNG	South Dakota	0	0
ARNG	Tennessee	1	1
ARNG	Texas	0	0
ARNG	Utah	0	0
ARNG	Vermont	0	0
ARNG	Virgin Islands	0	0
ARNG	Virginia	0	0
ARNG	Washington	0	0
ARNG	West Virginia	0	0
ARNG	Wisconsin	0	0
ARNG	Wyoming	0	0
USAR	63rd RSC	0	0
USAR	81st RSC	0	0
USAR	88th RSC	0	0
USAR	99th RSC	0	0
USAR	9th MSC	0	0
USAR	Fort Buchanan	5	0
USAR	Fort Devens	0	0
USAR	Fort Hunter Liggett (includes Camp Parks)	0	0
USAR	Fort McCoy	0	1
AMC	MOT Concord	0	0
AMC	MOT Sunny Point	0	0

Section D. Number of Minor Source Permits

Tables 40 and 41 contain the number of minor source permits by command and installation respectively as reported in the EQ data call CY15 (POM FY19) and first half FY17 (POM FY20 and F21).

Table 40. Number of minor source permits by command.

Command	Number of Minor Source Permits	
POM	FY19	FY20/21
IMCOM	450	597
ARNG	168	195
USAR	44	55
AMC	0	0
Total	662	847

Table 41. Number of minor source permits by installation.

Command	Installation	Number of Minor Source Permits	
POM		FY19	FY20/21
IMCOM	Aberdeen Proving Ground	98	173
IMCOM	Adelphi	3	6
IMCOM	Carlisle Barracks	0	0
IMCOM	Detroit Arsenal	1	1
IMCOM	Dugway	0	2
IMCOM	Fort A. P. Hill	0	0
IMCOM	Fort Belvoir	3	0
IMCOM	Fort Benning	0	0
IMCOM	Fort Bliss	7	0
IMCOM	Fort Bragg	0	0
IMCOM	Fort Campbell	0	0
IMCOM	Fort Carson	0	21
IMCOM	Fort Detrick	0	0
IMCOM	Fort Drum	0	0
IMCOM	Fort Gordon	0	0
IMCOM	Fort Greely	0	0
IMCOM	Fort Hamilton	1	1
IMCOM	Fort Hood	2	19
IMCOM	Fort Huachuca	0	0
IMCOM	Fort Irwin	143	170

Command	Installation	Number of Minor Source Permits	
POM		FY19	FY20/21
IMCOM	Fort Jackson	0	0
IMCOM	Fort Knox	0	0
IMCOM	Fort Leavenworth	1	1
IMCOM	Fort Lee	0	0
IMCOM	Fort Leonard Wood	4	7
IMCOM	Fort Lewis McChord (JBLM)	50	80
IMCOM	Fort Meade	0	0
IMCOM	Fort Polk	0	0
IMCOM	Fort Riley	0	0
IMCOM	Fort Rucker	0	0
IMCOM	Fort Sill	0	0
IMCOM	Fort Stewart (Hunter AAF)	1	0
IMCOM	Fort Wainwright	0	1
IMCOM	Joint Base Myer-Henderson Hall	0	0
IMCOM	Kwajalein Atoll	0	0
IMCOM	Picatinny	0	0
IMCOM	Presidio of Monterey	26	32
IMCOM	Redstone Arsenal	0	0
IMCOM	Rock Island Arsenal	1	1
IMCOM	USAG Ansbach	6	7
IMCOM	USAG Bavaria - Garmish	0	0
IMCOM	USAG Bavaria - Grafenwoer	5	6
IMCOM	USAG Bavaria - Hohenfels	0	0
IMCOM	USAG Benelux	5	2
IMCOM	USAG Daegu	0	0
IMCOM	USAG Hawaii	1	4
IMCOM	USAG Humphreys	0	0
IMCOM	USAG Italy	20	2
IMCOM	USAG Japan	49	36
IMCOM	USAG Miami	0	0
IMCOM	USAG Natick	3	2
IMCOM	USAG Red Cloud	0	0
IMCOM	USAG Rheinland-Pfalz	1	17
IMCOM	USAG Rheinland-Pfalz - Baumholder	5	5
IMCOM	USAG Stuttgart	1	0
IMCOM	USAG Weisbaden	12	0

Command	Installation	Number of Minor Source Permits	
POM		FY19	FY20/21
IMCOM	USAG Yongsan	0	0
IMCOM	West Point	0	0
IMCOM	White Sands	0	0
IMCOM	Yuma Proving Ground	1	1
ARNG	Alabama	0	0
ARNG	Alaska	0	0
ARNG	Arizona	3	2
ARNG	Arkansas	0	0
ARNG	California	34	44
ARNG	Colorado	0	2
ARNG	Connecticut	0	5
ARNG	Delaware	1	1
ARNG	District of Columbia	0	0
ARNG	Florida	0	0
ARNG	Georgia	0	0
ARNG	Guam Territory	2	2
ARNG	Hawaii	0	0
ARNG	Idaho	0	0
ARNG	Illinois	0	2
ARNG	Indiana	0	6
ARNG	Iowa	0	0
ARNG	Kansas	1	0
ARNG	Kentucky	1	1
ARNG	Louisiana	2	3
ARNG	Maine	3	2
ARNG	Maryland	0	0
ARNG	Massachusetts	1	1
ARNG	Michigan	0	0
ARNG	Minnesota	1	2
ARNG	Mississippi	0	0
ARNG	Missouri	2	2
ARNG	Montana	0	0
ARNG	Nebraska	0	0
ARNG	Nevada	1	4
ARNG	New Hampshire	3	4
ARNG	New Jersey	55	52

Command	Installation	Number of Minor Source Permits	
POM		FY19	FY20/21
ARNG	New Mexico	0	0
ARNG	New York	4	2
ARNG	North Carolina	0	0
ARNG	North Dakota	4	4
ARNG	Ohio	2	0
ARNG	Oklahoma	0	0
ARNG	Oregon	2	2
ARNG	Pennsylvania	0	1
ARNG	Puerto Rico	21	11
ARNG	Rhode Island	0	7
ARNG	South Carolina	1	1
ARNG	South Dakota	0	1
ARNG	Tennessee	0	0
ARNG	Texas	3	3
ARNG	Utah	1	1
ARNG	Vermont	2	2
ARNG	Virgin Islands	8	13
ARNG	Virginia	2	1
ARNG	Washington	2	1
ARNG	West Virginia	6	10
ARNG	Wisconsin	0	0
ARNG	Wyoming	0	0
USAR	63rd RSC	8	5
USAR	81st RSC	0	0
USAR	88th RSC	3	4
USAR	99th RSC	5	5
USAR	9th MSC	0	0
USAR	Fort Buchanan	1	1
USAR	Fort Devens	0	1
USAR	Fort Hunter Liggett (includes Camp Parks)	26	39
USAR	Fort McCoy	1	0
AMC	MOT Concord	0	0
AMC	MOT Sunny Point	0	0

Section E. Installations Subject to Risk Management Plans

Tables 42 contains the number of installations subject to risk management plans by Command. Table 43 lists the installations that are subject to risk management plans as reported in the EQ data call CY15 (POM FY19) and first half FY17 (POM FY20 and FY21).

Table 42. Installations subject to risk management plans by command.

Command	Installations Subject to Risk Management Plans
POM	FY19/20/21
IMCOM	7
ARNG	0
USAR	0
AMC	0
Total	7

Table 43. Installations subject to risk management plans.

Command	Installation
IMCOM	Aberdeen Proving Ground
IMCOM	Dugway
IMCOM	Fort Detrick
IMCOM	Fort Gordon
IMCOM	Presidio of Monterey
IMCOM	Redstone Arsenal
IMCOM	Yuma Proving Ground

Section F. Tons of Air Emissions

Tables 44 and 45 indicate the tons of air emissions by command and by installation respectively as reported in the EQ data call CY15 (POM FY19) and first half FY17 (POM FY20 and FY21).

Table 44. Tons of air emissions by command.

Command	Tons of Air Emissions	
	POM	FY19
IMCOM	5,767	5,767
ARNG	79	79
USAR	67	67
AMC	-	-
Total	5,913	5,913

Table 45. Tons of air emissions by installation.

Command	Installation	Tons of Air Emissions	
POM		FY19	FY20/21
IMCOM	Aberdeen Proving Ground	200	200
IMCOM	Adelphi	17	17
IMCOM	Carlisle Barracks	0	0
IMCOM	Detroit Arsenal	11	11
IMCOM	Dugway	512	512
IMCOM	Fort A. P. Hill	7	7
IMCOM	Fort Belvoir	53	53
IMCOM	Fort Benning	72	72
IMCOM	Fort Bliss	156	156
IMCOM	Fort Bragg	205	205
IMCOM	Fort Campbell	105	105
IMCOM	Fort Carson	284	284
IMCOM	Fort Detrick	200	200
IMCOM	Fort Drum	85	85
IMCOM	Fort Gordon	78	78
IMCOM	Fort Greely	0	0
IMCOM	Fort Hamilton	0	0
IMCOM	Fort Hood	203	203
IMCOM	Fort Huachuca	34	34
IMCOM	Fort Irwin	77	77

Command	Installation	Tons of Air Emissions	
		FY19	FY20/21
POM			
IMCOM	Fort Jackson	51	51
IMCOM	Fort Knox	100	100
IMCOM	Fort Leavenworth	0	0
IMCOM	Fort Lee	40	40
IMCOM	Fort Leonard Wood	63	63
IMCOM	Fort Lewis McChord (JBLM)	136	136
IMCOM	Fort Meade	45	45
IMCOM	Fort Polk	59	59
IMCOM	Fort Riley	133	133
IMCOM	Fort Rucker	51	51
IMCOM	Fort Sill	66	66
IMCOM	Fort Stewart (Hunter AAF)	210	210
IMCOM	Fort Wainwright	199	199
IMCOM	Joint Base Myer-Henderson Hall	6	6
IMCOM	Kwajalein Atoll	0	0
IMCOM	Picatinny	31	31
IMCOM	Presidio of Monterey	0	0
IMCOM	Redstone Arsenal	1772	1772
IMCOM	Rock Island Arsenal	398	398
IMCOM	USAG Ansbach	0	0
IMCOM	USAG Bavaria - Garmish	0	0
IMCOM	USAG Bavaria - Grafenwoer	0	0
IMCOM	USAG Bavaria - Hohenfels	0	0
IMCOM	USAG Benelux	0	0
IMCOM	USAG Daegu	0	0
IMCOM	USAG Hawaii	2	0
IMCOM	USAG Humphreys	0	0
IMCOM	USAG Italy	0	2
IMCOM	USAG Japan	0	0
IMCOM	USAG Miami	0	0
IMCOM	USAG Natick	0	0
IMCOM	USAG Red Cloud	0	0
IMCOM	USAG Rheinland-Pfalz	0	0
IMCOM	USAG Rheinland-Pfalz - Baumholder	0	0
IMCOM	USAG Stuttgart	0	0
IMCOM	USAG Weisbaden	0	0

Command	Installation	Tons of Air Emissions	
POM		FY19	FY20/21
IMCOM	USAG Yongsan	0	0
IMCOM	West Point	28	28
IMCOM	White Sands	51	51
IMCOM	Yuma Proving Ground	27	27
ARNG	Alabama	0	0
ARNG	Alaska	0	0
ARNG	Arizona	3	3
ARNG	Arkansas	0	0
ARNG	California	0	0
ARNG	Colorado	0	0
ARNG	Connecticut	0	0
ARNG	Delaware	0	0
ARNG	District of Columbia	0	0
ARNG	Florida	0	0
ARNG	Georgia	0	0
ARNG	Guam Territory	1	1
ARNG	Hawaii	0	0
ARNG	Idaho	0	0
ARNG	Illinois	0	0
ARNG	Indiana	0	0
ARNG	Iowa	0	0
ARNG	Kansas	0	0
ARNG	Kentucky	1	1
ARNG	Louisiana	0	0
ARNG	Maine	0	0
ARNG	Maryland	0	0
ARNG	Massachusetts	0	0
ARNG	Michigan	0	0
ARNG	Minnesota	12	12
ARNG	Mississippi	15	15
ARNG	Missouri	7	7
ARNG	Montana	0	0
ARNG	Nebraska	0	0
ARNG	Nevada	1	1
ARNG	New Hampshire	0	0
ARNG	New Jersey	0	0

Command	Installation	Tons of Air Emissions	
POM		FY19	FY20/21
ARNG	New Mexico	0	0
ARNG	New York	0	0
ARNG	North Carolina	0	0
ARNG	North Dakota	26	26
ARNG	Ohio	0	0
ARNG	Oklahoma	0	0
ARNG	Oregon	0	0
ARNG	Pennsylvania	4	4
ARNG	Puerto Rico	0	0
ARNG	Rhode Island	0	0
ARNG	South Carolina	0	0
ARNG	South Dakota	0	0
ARNG	Tennessee	0	0
ARNG	Texas	0	0
ARNG	Utah	0	0
ARNG	Vermont	3	3
ARNG	Virgin Islands	0	0
ARNG	Virginia	5	5
ARNG	Washington	0	0
ARNG	West Virginia	0	0
ARNG	Wisconsin	0	0
ARNG	Wyoming	0	0
USAR	63rd RSC	0	0
USAR	81st RSC	0	0
USAR	88th RSC	2	2
USAR	99th RSC	0	0
USAR	9th MSC	0	0
USAR	Fort Buchanan	7	7
USAR	Fort Devens	7	7
USAR	Fort Hunter Liggett (includes Camp Parks)	0	0
USAR	Fort McCoy	51	51
AMC	MOT Concord	0	0
AMC	MOT Sunny Point	0	0

Section G. Installations Reporting Fugitive Dust Activities

Table 46 summarizes the total number of installations reporting fugitive dust activities by command. Table 47 lists the installations that reported fugitive dust requirements in the EQ data call CY15 (POM FY19) and first half FY17 (POM FY20).

Table 46. Number of facilities reporting fugitive dust activities by command.

Command	Facilities Meeting Fugitive Dust Requirements	
	FY19	FY20/FY21
IMCOM	23	23
ARNG	5	5
USAR	3	3
AMC	0	0
Total	31	31

Table 47. Number of facilities reporting fugitive dust activities by installation.

Command	Installation	Facilities Meeting Fugitive Dust Requirements	
		FY19	FY20/FY21
IMCOM	Aberdeen Proving Ground	1	1
IMCOM	Adelphi	0	0
IMCOM	Carlisle Barracks	0	0
IMCOM	Detroit Arsenal	0	0
IMCOM	Dugway	1	1
IMCOM	Fort A. P. Hill	0	0
IMCOM	Fort Belvoir	0	0
IMCOM	Fort Benning	1	1
IMCOM	Fort Bliss	1	1
IMCOM	Fort Bragg	0	0
IMCOM	Fort Campbell	1	1
IMCOM	Fort Carson	1	1
IMCOM	Fort Detrick	0	0
IMCOM	Fort Drum	1	1
IMCOM	Fort Gordon	1	1

Command	Installation	Facilities Meeting Fugitive Dust Requirements	
		FY19	FY20/FY21
POM			
IMCOM	Fort Greely	1	1
IMCOM	Fort Hamilton	0	0
IMCOM	Fort Hood	0	0
IMCOM	Fort Huachuca	1	1
IMCOM	Fort Irwin	1	1
IMCOM	Fort Jackson	0	0
IMCOM	Fort Knox	0	0
IMCOM	Fort Leavenworth	0	0
IMCOM	Fort Lee	1	1
IMCOM	Fort Leonard Wood	1	1
IMCOM	Fort Lewis McChord (JBLM)	1	1
IMCOM	Fort Meade	0	0
IMCOM	Fort Polk	1	1
IMCOM	Fort Riley	0	0
IMCOM	Fort Rucker	0	0
IMCOM	Fort Sill	0	0
IMCOM	Fort Stewart (Hunter AAF)	1	1
IMCOM	Fort Wainwright	1	1
IMCOM	Joint Base Myer-Henderson Hall	1	1
IMCOM	Kwajalein Atoll	0	0
IMCOM	Picatinny	0	0
IMCOM	Presidio of Monterey	1	1
IMCOM	Redstone Arsenal	0	0
IMCOM	Rock Island Arsenal	1	1
IMCOM	USAG Ansbach	0	0
IMCOM	USAG Bavaria - Garmish	0	0
IMCOM	USAG Bavaria - Grafenwoer	0	0
IMCOM	USAG Bavaria - Hohenfels	0	0
IMCOM	USAG Benelux	0	0
IMCOM	USAG Daegu	0	0
IMCOM	USAG Hawaii	1	1
IMCOM	USAG Humphreys	0	0

Command	Installation	Facilities Meeting Fugitive Dust Requirements	
POM		FY19	FY20/FY21
IMCOM	USAG Italy	0	0
IMCOM	USAG Japan	0	0
IMCOM	USAG Miami	0	0
IMCOM	USAG Natick	1	1
IMCOM	USAG Red Cloud	0	0
IMCOM	USAG Rheinland-Pfalz	0	0
IMCOM	USAG Rheinland-Pfalz - Baumholder	0	0
IMCOM	USAG Stuttgart	0	0
IMCOM	USAG Weisbaden	0	0
IMCOM	USAG Yongsan	0	0
IMCOM	West Point	0	0
IMCOM	White Sands	0	0
IMCOM	Yuma Proving Ground	1	1
ARNG	Alabama	0	0
ARNG	Alaska	0	0
ARNG	Arizona	1	1
ARNG	Arkansas	0	0
ARNG	California	0	0
ARNG	Colorado	0	0
ARNG	Connecticut	0	0
ARNG	Delaware	0	0
ARNG	District of Columbia	0	0
ARNG	Florida	0	0
ARNG	Georgia	0	0
ARNG	Guam Territory	1	1
ARNG	Hawaii	0	0
ARNG	Idaho	0	0
ARNG	Illinois	0	0
ARNG	Indiana	0	0
ARNG	Iowa	0	0
ARNG	Kansas	0	0
ARNG	Kentucky	0	0

Command	Installation	Facilities Meeting Fugitive Dust Requirements	
POM		FY19	FY20/FY21
ARNG	Louisiana	0	0
ARNG	Maine	0	0
ARNG	Maryland	0	0
ARNG	Massachusetts	0	0
ARNG	Michigan	0	0
ARNG	Minnesota	0	0
ARNG	Mississippi	0	0
ARNG	Missouri	0	0
ARNG	Montana	0	0
ARNG	Nebraska	0	0
ARNG	Nevada	1	1
ARNG	New Hampshire	0	0
ARNG	New Jersey	0	0
ARNG	New Mexico	0	0
ARNG	New York	0	0
ARNG	North Carolina	0	0
ARNG	North Dakota	0	0
ARNG	Ohio	0	0
ARNG	Oklahoma	0	0
ARNG	Oregon	0	0
ARNG	Pennsylvania	1	1
ARNG	Puerto Rico	0	0
ARNG	Rhode Island	0	0
ARNG	South Carolina	0	0
ARNG	South Dakota	0	0
ARNG	Tennessee	0	0
ARNG	Texas	0	0
ARNG	Utah	0	0
ARNG	Vermont	0	0
ARNG	Virgin Islands	0	0
ARNG	Virginia	1	1
ARNG	Washington	0	0

Command	Installation	Facilities Meeting Fugitive Dust Requirements	
		FY19	FY20/FY21
POM			
ARNG	West Virginia	0	0
ARNG	Wisconsin	0	0
ARNG	Wyoming	0	0
USAR	63rd RSC	0	0
USAR	81st RSC	0	0
USAR	88th RSC	0	0
USAR	99th RSC	1	1
USAR	9th MSC	0	0
USAR	Fort Buchanan	1	1
USAR	Fort Devens	0	0
USAR	Fort Hunter Liggett (includes Camp Parks)	0	0
USAR	Fort McCoy	1	1
AMC	MOT Concord	0	0
AMC	MOT Sunny Point	0	0

Section H. Installations Subject to Greenhouse Gas (GHG) Reporting

Table 48 summarizes the count of installations subject to greenhouse gas reporting by command. Table 49 lists the installations that are subject to GHG reporting as reported in the EQ data call 2Q CY15 (POM FY19) and first half FY17 (POM FY20 and FY21).

Table 48. Count of installations subject to GHG reporting by command.

Command	GHG Reporting	
	FY19	FY20/21
IMCOM	20	20
ARNG	1	1
USAR	0	0
AMC	0	0
Total	21	21

Table 49. Installations subject to GHG reporting.

Command	Installation
IMCOM	Aberdeen Proving Ground
IMCOM	Fort Belvoir
IMCOM	Fort Benning
IMCOM	Fort Bliss
IMCOM	Fort Bragg
IMCOM	Fort Campbell
IMCOM	Fort Carson
IMCOM	Fort Detrick
IMCOM	Fort Drum
IMCOM	Fort Gordon
IMCOM	Fort Hood
IMCOM	Fort Jackson
IMCOM	Fort Knox
IMCOM	Fort Leonard Wood
IMCOM	Fort Lewis McChord (JBLM)
IMCOM	Fort Riley
IMCOM	Fort Stewart (Hunter AAF)
IMCOM	Redstone Arsenal
IMCOM	Rock Island Arsenal
IMCOM	West Point
ARNG	Mississippi

Section I. Status of Installation Archaeological Survey

Table 50 summarizes the number of installations that have completed archaeological surveys. Table 51 lists the installations that have completed their archaeological survey. Completion was determined by using the number of acres reported as available for inventory and the number of acres reported as being inventoried as reported in AEDB-EQ, FY15 (POM FY19 and POM FY20).

Table 50. Installations with updated archaeological surveys by command.

Command	Installations with updated Archaeological Surveys
POM	FY19-21
IMCOM	16
ARNG	14
USAR	4
AMC	0
Total	34

Table 51. Installations with updated archaeological surveys.

Command	Installation
IMCOM	Carlisle Barracks
IMCOM	Detroit Arsenal
IMCOM	Fort Belvoir
IMCOM	Fort Detrick
IMCOM	Fort Greely
IMCOM	Fort Hamilton
IMCOM	Fort Jackson
IMCOM	Fort Leonard Wood
IMCOM	Fort Meade
IMCOM	Fort Rucker
IMCOM	Fort Sill
IMCOM	Redstone Arsenal
IMCOM	USAG Japan
IMCOM	USAG Miami
IMCOM	USAG Natick

Command	Installation
IMCOM	USAG Yongsan
ARNG	Colorado
ARNG	District of Columbia
ARNG	Florida
ARNG	Kansas
ARNG	Kentucky
ARNG	Maine
ARNG	Maryland
ARNG	Montana
ARNG	Nevada
ARNG	North Dakota
ARNG	Ohio
ARNG	Pennsylvania
ARNG	South Carolina
ARNG	Texas
USAR	81st RSC
USAR	9th MSC
USAR	Fort Buchanan
USAR	Fort McCoy

Section J. Number of Tribes with Whom Installations Consult

Table 52 lists the number of tribes that consult the Army by command. Table 53 indicates the number of tribes with whom installations consult on all cultural resources issues as reported in AEDB-EQ, FY15: Part II, Q59 (POM FY19, FY20, and FY21).

Table 52. Number of tribes with whom commands consult.

Command	Consulting Tribes	
POM	FY19	FY20/21
IMCOM	341	341
ARNG	780	780
USAR	376	376
AMC	4	4
Total	1,501	1,501

Table 53. Number of tribes with whom installations consult.

Command	Installation	Consulting Tribes	
POM		FY19	FY20/21
IMCOM	Aberdeen Proving Ground	9	9
IMCOM	Adelphi	0	0
IMCOM	Carlisle Barracks	14	14
IMCOM	Detroit Arsenal	23	23
IMCOM	Dugway	15	15
IMCOM	Fort A. P. Hill	2	2
IMCOM	Fort Belvoir	4	4
IMCOM	Fort Benning	10	10
IMCOM	Fort Bliss	4	4
IMCOM	Fort Bragg	8	8
IMCOM	Fort Campbell	12	12
IMCOM	Fort Carson	13	13
IMCOM	Fort Detrick	0	0
IMCOM	Fort Drum	3	3
IMCOM	Fort Gordon	9	9
IMCOM	Fort Greely	7	7
IMCOM	Fort Hamilton	0	0
IMCOM	Fort Hood	7	7

Command	Installation	Consulting Tribes	
POM		FY19	FY20/21
IMCOM	Fort Huachuca	11	11
IMCOM	Fort Irwin	12	12
IMCOM	Fort Jackson	13	13
IMCOM	Fort Knox	3	3
IMCOM	Fort Leavenworth	11	11
IMCOM	Fort Lee	2	2
IMCOM	Fort Leonard Wood	5	5
IMCOM	Fort Lewis McChord (JBLM)	7	7
IMCOM	Fort Meade	15	15
IMCOM	Fort Polk	10	10
IMCOM	Fort Riley	4	4
IMCOM	Fort Rucker	20	20
IMCOM	Fort Sill	8	8
IMCOM	Fort Stewart (Hunter AAF)	16	16
IMCOM	Fort Wainwright	6	6
IMCOM	Joint Base Myer-Henderson Hall	5	5
IMCOM	Kwajalein Atoll	0	0
IMCOM	Picatinny	4	4
IMCOM	Presidio of Monterey	1	1
IMCOM	Redstone Arsenal	16	16
IMCOM	Rock Island Arsenal	11	11
IMCOM	USAG Ansbach	0	0
IMCOM	USAG Bavaria - Garmish	0	0
IMCOM	USAG Bavaria - Grafenwoer	0	0
IMCOM	USAG Bavaria - Hohenfels	0	0
IMCOM	USAG Benelux	0	0
IMCOM	USAG Daegu	0	0
IMCOM	USAG Hawaii	0	0
IMCOM	USAG Humphreys	0	0
IMCOM	USAG Italy	0	0
IMCOM	USAG Japan	0	0
IMCOM	USAG Miami	0	0

Command	Installation	Consulting Tribes	
POM		FY19	FY20/21
IMCOM	USAG Natick	1	1
IMCOM	USAG Red Cloud	0	0
IMCOM	USAG Rheinland-Pfalz	0	0
IMCOM	USAG Rheinland-Pfalz - Baumholder	0	0
IMCOM	USAG Stuttgart	0	0
IMCOM	USAG Weisbaden	0	0
IMCOM	USAG Yongsan	0	0
IMCOM	West Point	1	1
IMCOM	White Sands	5	5
IMCOM	Yuma Proving Ground	14	14
ARNG	Alabama	19	19
ARNG	Alaska	100	100
ARNG	Arizona	26	26
ARNG	Arkansas	21	21
ARNG	California	1	1
ARNG	Colorado	19	19
ARNG	Connecticut	2	2
ARNG	Delaware	6	6
ARNG	District of Columbia	0	0
ARNG	Florida	12	12
ARNG	Georgia	13	13
ARNG	Guam Territory	0	0
ARNG	Hawaii	0	0
ARNG	Idaho	8	8
ARNG	Illinois	16	16
ARNG	Indiana	17	17
ARNG	Iowa	23	23
ARNG	Kansas	20	20
ARNG	Kentucky	10	10
ARNG	Louisiana	11	11
ARNG	Maine	4	4
ARNG	Maryland	0	0
ARNG	Massachusetts	3	3
ARNG	Michigan	31	31
ARNG	Minnesota	21	21

Command	Installation	Consulting Tribes	
POM		FY19	FY20/21
ARNG	Mississippi	13	13
ARNG	Missouri	24	24
ARNG	Montana	8	8
ARNG	Nebraska	11	11
ARNG	Nevada	2	2
ARNG	New Hampshire	2	2
ARNG	New Jersey	6	6
ARNG	New Mexico	22	22
ARNG	New York	10	10
ARNG	North Carolina	8	8
ARNG	North Dakota	12	12
ARNG	Ohio	56	56
ARNG	Oklahoma	38	38
ARNG	Oregon	9	9
ARNG	Pennsylvania	14	14
ARNG	Puerto Rico	0	0
ARNG	Rhode Island	1	1
ARNG	South Carolina	14	14
ARNG	South Dakota	9	9
ARNG	Tennessee	20	20
ARNG	Texas	12	12
ARNG	Utah	8	8
ARNG	Vermont	1	1
ARNG	Virgin Islands	0	0
ARNG	Virginia	6	6
ARNG	Washington	35	35
ARNG	West Virginia	4	4
ARNG	Wisconsin	34	34
ARNG	Wyoming	18	18
USAR	63rd RSC	125	125
USAR	81st RSC	59	59
USAR	88th RSC	160	160
USAR	99th RSC	28	28
USAR	9th MSC	0	0
USAR	Fort Buchanan	0	0
USAR	Fort Devens	0	0

Command	Installation	Consulting Tribes	
POM		FY19	FY20/21
USAR	Fort Hunter Liggett (includes Camp Parks)	3	3
USAR	Fort McCoy	1	1
AMC	MOT Concord	4	4
AMC	MOT Sunny Point	0	0

Section K. Number of Eligible and Ineligible Archaeological Sites

Tables 54 and 55 indicate the number of NRHP eligible and ineligible archaeological sites on each installation. Recorded archaeological sites are those sites that have been officially identified and given identification numbers (trinomials) and that currently still exist (i.e., are not destroyed) as reported in AEDBEQ, FY15: Part II, Q34 and Q33 (POM FY19, FY20, and FY21).

Table 54. Number of eligible and ineligible archaeological sites by command.

Command	Total NRHP Eligible Archaeological Sites	Total NRHP Ineligible Archaeological Sites
IMCOM	8374	35335
ARNG	1284	5510
USAR	134	444
AMC	37	140
Total	9,829	41,429

Table 55. Number of eligible and ineligible archaeological sites by installation.

Command	Installation	NRHP Eligible Archaeological Sites	NRHP Ineligible Archaeological Sites
IMCOM	Aberdeen Proving Ground	3	11
IMCOM	Adelphi	2	10
IMCOM	Carlisle Barracks	7	0
IMCOM	Detroit Arsenal	0	0
IMCOM	Dugway	625	1819
IMCOM	Fort A. P. Hill	9	224
IMCOM	Fort Belvoir	13	141
IMCOM	Fort Benning	222	2816
IMCOM	Fort Bliss	3341	9788
IMCOM	Fort Bragg	129	177
IMCOM	Fort Campbell	26	925
IMCOM	Fort Carson	686	3648
IMCOM	Fort Detrick	2	6
IMCOM	Fort Drum	288	602
IMCOM	Fort Gordon	41	998
IMCOM	Fort Greely	1	4

Command	Installation	NRHP Eligible Archaeological Sites	NRHP Ineligible Archaeological Sites
IMCOM	Fort Hamilton	0	0
IMCOM	Fort Hood	205	1897
IMCOM	Fort Huachuca	289	82
IMCOM	Fort Irwin	34	253
IMCOM	Fort Jackson	66	636
IMCOM	Fort Knox	2	1004
IMCOM	Fort Leavenworth	1	0
IMCOM	Fort Lee	27	44
IMCOM	Fort Leonard Wood	88	269
IMCOM	Fort Lewis McChord (JBLM)	363	1057
IMCOM	Fort Meade	1	32
IMCOM	Fort Polk	136	3396
IMCOM	Fort Riley	48	493
IMCOM	Fort Rucker	6	309
IMCOM	Fort Sill	58	263
IMCOM	Fort Stewart (Hunter AAF)	62	2120
IMCOM	Fort Wainwright	76	103
IMCOM	Joint Base Myer-Henderson Hall	0	0
IMCOM	Kwajalein Atoll	0	0
IMCOM	Picatinny	2	6
IMCOM	Presidio of Monterey	1	1
IMCOM	Redstone Arsenal	61	464
IMCOM	Rock Island Arsenal	12	0
IMCOM	USAG Ansbach	0	0
IMCOM	USAG Bavaria - Garmish	0	0
IMCOM	USAG Bavaria - Grafenwoer	0	0
IMCOM	USAG Bavaria - Hohenfels	0	0
IMCOM	USAG Benelux	0	0
IMCOM	USAG Daegu	0	0
IMCOM	USAG Hawaii	110	517
IMCOM	USAG Humphreys	0	0
IMCOM	USAG Italy	0	0
IMCOM	USAG Japan	0	0

Command	Installation	NRHP Eligible Archaeological Sites	NRHP Ineligible Archaeological Sites
IMCOM	USAG Miami	0	0
IMCOM	USAG Natick	0	4
IMCOM	USAG Red Cloud	0	0
IMCOM	USAG Rheinland-Pfalz	0	0
IMCOM	USAG Rheinland-Pfalz - Baumholder	0	0
IMCOM	USAG Stuttgart	0	0
IMCOM	USAG Weisbaden	0	0
IMCOM	USAG Yongsan	0	0
IMCOM	West Point	55	26
IMCOM	White Sands	445	870
IMCOM	Yuma Proving Ground	831	320
ARNG	Alabama	138	329
ARNG	Alaska	0	4
ARNG	Arizona	253	182
ARNG	Arkansas	83	446
ARNG	California	8	7
ARNG	Colorado	0	0
ARNG	Connecticut	1	0
ARNG	Delaware	0	0
ARNG	District of Columbia	0	0
ARNG	Florida	20	87
ARNG	Georgia	0	0
ARNG	Guam Territory	0	0
ARNG	Hawaii	13	2
ARNG	Idaho	44	212
ARNG	Illinois	3	23
ARNG	Indiana	2	473
ARNG	Iowa	0	0
ARNG	Kansas	0	21
ARNG	Kentucky	0	20
ARNG	Louisiana	0	0
ARNG	Maine	7	5
ARNG	Maryland	0	0

Command	Installation	NRHP Eligible Archaeological Sites	NRHP Ineligible Archaeological Sites
ARNG	Massachusetts	44	64
ARNG	Michigan	13	208
ARNG	Minnesota	6	182
ARNG	Mississippi	4	2
ARNG	Missouri	61	127
ARNG	Montana	18	80
ARNG	Nebraska	0	0
ARNG	Nevada	0	4
ARNG	New Hampshire	2	1
ARNG	New Jersey	0	0
ARNG	New Mexico	135	74
ARNG	New York	0	0
ARNG	North Carolina	10	4
ARNG	North Dakota	16	69
ARNG	Ohio	10	282
ARNG	Oklahoma	56	163
ARNG	Oregon	0	49
ARNG	Pennsylvania	0	0
ARNG	Puerto Rico	0	0
ARNG	Rhode Island	0	2
ARNG	South Carolina	36	241
ARNG	South Dakota	0	0
ARNG	Tennessee	4	37
ARNG	Texas	40	614
ARNG	Utah	61	100
ARNG	Vermont	70	2
ARNG	Virgin Islands	0	0
ARNG	Virginia	2	365
ARNG	Washington	5	6
ARNG	West Virginia	15	19
ARNG	Wisconsin	0	0
ARNG	Wyoming	104	1004
USAR	63rd RSC	8	13

Command	Installation	NRHP Eligible Archaeological Sites	NRHP Ineligible Archaeological Sites
USAR	81st RSC	0	0
USAR	88th RSC	1	58
USAR	99th RSC	0	0
USAR	9th MSC	0	0
USAR	Fort Buchanan	0	0
USAR	Fort Devens	0	0
USAR	Fort Hunter Liggett (includes Camp Parks)	7	4
USAR	Fort McCoy	118	369
AMC	MOT Concord	2	0
AMC	MOT Sunny Point	35	140

Section L. Number of National Register of Historic Places (NRHP) Eligible Structures

Buildings eligible for the national NRHP are those listed in HQIIS with and Real Property Asset (RPA) type description of “building”, not “Land”, “Structure”, or “Linear Structure”, and must be built 50 years earlier than the date of evaluation.

Table 56 and 57 indicates the number of structures that may be considered eligible for listing on the NRHP as reported in HQIIS August 2016 (POM FY19) June 2017 (POM FY20), and February 2018 (POM FY21). The reported values prior to FY21 most likely included the RPA type description “Structure” for the Guard, Reserves, and AMC.

**Table 56. Number of NRHP eligible structures
by command.**

Command	Number of NRHP Eligible Structures		
POM	FY19	FY20	FY21
IMCOM	29072	33808	38,615
ARNG	35777	35870	10,798
USAR	5396	5103	1,883
AMC	297	377	112
Total	70,542	75,158	51,408

Table 57. Number of NRHP eligible structures by installation.

Command	Installation	Number of NRHP Eligible Structures		
POM		FY19	FY20	FY21
IMCOM	Aberdeen Proving Ground	866	889	862
IMCOM	Adelphi	45	51	32
IMCOM	Carlisle Barracks	364	345	107
IMCOM	Detroit Arsenal	85	84	57
IMCOM	Dugway	336	417	302
IMCOM	Fort A. P. Hill	210	216	142
IMCOM	Fort Belvoir	485	465	572
IMCOM	Fort Benning	575	603	1377
IMCOM	Fort Bliss	1386	1356	1569
IMCOM	Fort Bragg	865	815	2245
IMCOM	Fort Campbell	497	502	1146

Command	Installation	Number of NRHP Eligible Structures		
POM		FY19	FY20	FY21
IMCOM	Fort Carson	437	473	524
IMCOM	Fort Detrick	178	123	216
IMCOM	Fort Drum	297	254	140
IMCOM	Fort Gordon	509	480	522
IMCOM	Fort Greely	104	104	78
IMCOM	Fort Hamilton	155	133	45
IMCOM	Fort Hood	1007	1046	1864
IMCOM	Fort Huachuca	341	350	397
IMCOM	Fort Irwin	181	183	137
IMCOM	Fort Jackson	520	553	306
IMCOM	Fort Knox	802	753	1095
IMCOM	Fort Leavenworth	222	236	488
IMCOM	Fort Lee	270	210	205
IMCOM	Fort Leonard Wood	715	728	1136
IMCOM	Fort Lewis McChord (JBLM)	2602	1076	4389
IMCOM	Fort Meade	189	197	779
IMCOM	Fort Polk	414	447	84
IMCOM	Fort Riley	405	449	634
IMCOM	Fort Rucker	518	556	514
IMCOM	Fort Sill	1018	1025	1045
IMCOM	Fort Stewart (Hunter AAF)	901	898	907
IMCOM	Fort Wainwright	366	394	284
IMCOM	Joint Base Myer-Henderson Hall	278	315	169
IMCOM	Kwajalein Atoll	556	567	379
IMCOM	Picatinny	570	576	770
IMCOM	Presidio of Monterey	141	122	1008
IMCOM	Redstone Arsenal	1608	1684	928
IMCOM	Rock Island Arsenal	166	159	103
IMCOM	USAG Ansbach	44	409	251
IMCOM	USAG Bavaria - Garmish	10	128	69
IMCOM	USAG Bavaria - Grafenwoer	377	1570	783
IMCOM	USAG Bavaria - Hohenfels	145	639	342

Command	Installation	Number of NRHP Eligible Structures		
POM		FY19	FY20	FY21
IMCOM	USAG Benelux	53	222	123
IMCOM	USAG Daegu	431	427	260
IMCOM	USAG Hawaii	1036	1051	1362
IMCOM	USAG Humphreys	204	121	125
IMCOM	USAG Italy	624	666	513
IMCOM	USAG Japan	396	814	382
IMCOM	USAG Miami	0	0	0
IMCOM	USAG Natick	89	88	66
IMCOM	USAG Red Cloud	585	642	465
IMCOM	USAG Rheinland-Pfalz	289	1667	1824
IMCOM	USAG Rheinland-Pfalz - Baumholder	108	647	398
IMCOM	USAG Stuttgart	126	676	393
IMCOM	USAG Weisbaden	96	615	421
IMCOM	USAG Yongsan	543	823	688
IMCOM	West Point	510	536	555
IMCOM	White Sands	1833	1827	1758
IMCOM	Yuma Proving Ground	389	406	280
ARNG	Alabama	403	409	139
ARNG	Alaska	66	71	58
ARNG	Arizona	1507	1567	939
ARNG	Arkansas	1299	1542	393
ARNG	California	3033	3008	900
ARNG	Colorado	78	89	13
ARNG	Connecticut	178	165	40
ARNG	Delaware	176	209	63
ARNG	District of Columbia	37	39	2
ARNG	Florida	1788	1686	204
ARNG	Georgia	745	743	161
ARNG	Guam Territory	40	40	30
ARNG	Hawaii	102	113	83
ARNG	Idaho	373	370	35
ARNG	Illinois	852	928	66

Command	Installation	Number of NRHP Eligible Structures		
POM		FY19	FY20	FY21
ARNG	Indiana	454	463	204
ARNG	Iowa	1390	1671	181
ARNG	Kansas	266	263	50
ARNG	Kentucky	443	441	51
ARNG	Louisiana	924	975	699
ARNG	Maine	300	269	42
ARNG	Maryland	364	344	105
ARNG	Massachusetts	584	578	185
ARNG	Michigan	1097	936	223
ARNG	Minnesota	1510	1482	962
ARNG	Mississippi	3354	3277	648
ARNG	Missouri	668	638	131
ARNG	Montana	497	475	77
ARNG	Nebraska	423	422	177
ARNG	Nevada	195	193	22
ARNG	New Hampshire	520	485	36
ARNG	New Jersey	491	488	105
ARNG	New Mexico	18	16	5
ARNG	New York	462	464	131
ARNG	North Carolina	262	284	84
ARNG	North Dakota	287	267	208
ARNG	Ohio	1670	1627	1096
ARNG	Oklahoma	354	395	177
ARNG	Oregon	517	542	106
ARNG	Pennsylvania	2272	2116	570
ARNG	Puerto Rico	579	656	168
ARNG	Rhode Island	343	340	79
ARNG	South Carolina	461	483	45
ARNG	South Dakota	142	162	46
ARNG	Tennessee	415	408	91
ARNG	Texas	756	664	177
ARNG	Utah	432	391	71

Command	Installation	Number of NRHP Eligible Structures		
POM		FY19	FY20	FY21
ARNG	Vermont	285	320	85
ARNG	Virgin Islands	4	4	1
ARNG	Virginia	789	810	350
ARNG	Washington	159	154	58
ARNG	West Virginia	212	221	64
ARNG	Wisconsin	1098	1059	101
ARNG	Wyoming	103	108	61
USAR	63rd RSC	558	483	99
USAR	81st RSC	773	798	188
USAR	88th RSC	1308	1185	219
USAR	99th RSC	1287	1183	241
USAR	9th MSC	32	17	2
USAR	Fort Buchanan	193	192	155
USAR	Fort Devens	94	115	44
USAR	Fort Hunter Liggett (includes Camp Parks)	227	210	114
USAR	Fort McCoy	924	920	821
AMC	MOT Concord	131	189	69
AMC	MOT Sunny Point	166	188	43

Section M. Number of Archaeological Sites

Tables 58 and 59 summarize the number of recorded archaeological sites (total) by command and on each installation respectively. Recorded archaeological sites are those sites that have been officially identified and given identification numbers (trinomials) and that currently still exist (i.e., are not destroyed) as reported in AEDB-EQ, FY15: Part II, Q23 (POM FY19, FY20, and FY21).

Table 58. Number of archaeological sites by command.

Command	Number of Archaeological Sites
POM	FY19/20/21
IMCOM	70105
ARNG	10132
USAR	1333
AMC	37
Total	81,607

Table 59. Number of archaeological sites by installation.

Command	Installation	Number of Archaeological Sites
POM		FY19/20/21
IMCOM	Aberdeen Proving Ground	58
IMCOM	Adelphi	42
IMCOM	Carlisle Barracks	7
IMCOM	Detroit Arsenal	0
IMCOM	Dugway	2536
IMCOM	Fort A. P. Hill	501
IMCOM	Fort Belvoir	303
IMCOM	Fort Benning	3575
IMCOM	Fort Bliss	19935
IMCOM	Fort Bragg	3190
IMCOM	Fort Campbell	1575
IMCOM	Fort Carson	5276
IMCOM	Fort Detrick	8
IMCOM	Fort Drum	890
IMCOM	Fort Gordon	1153
IMCOM	Fort Greely	16
IMCOM	Fort Hamilton	0

Command	Installation	Number of Archaeological Sites
POM		FY19/20/21
IMCOM	Fort Hood	2239
IMCOM	Fort Huachuca	455
IMCOM	Fort Irwin	1399
IMCOM	Fort Jackson	702
IMCOM	Fort Knox	1172
IMCOM	Fort Leavenworth	58
IMCOM	Fort Lee	121
IMCOM	Fort Leonard Wood	569
IMCOM	Fort Lewis McChord (JBLM)	2341
IMCOM	Fort Meade	33
IMCOM	Fort Polk	3708
IMCOM	Fort Riley	925
IMCOM	Fort Rucker	315
IMCOM	Fort Sill	401
IMCOM	Fort Stewart (Hunter AAF)	2402
IMCOM	Fort Wainwright	672
IMCOM	Joint Base Myer-Henderson Hall	0
IMCOM	Kwajalein Atoll	0
IMCOM	Picatinny	56
IMCOM	Presidio of Monterey	10
IMCOM	Redstone Arsenal	937
IMCOM	Rock Island Arsenal	12
IMCOM	USAG Ansbach	0
IMCOM	USAG Bavaria - Garmish	0
IMCOM	USAG Bavaria - Grafenwoer	0
IMCOM	USAG Bavaria - Hohenfels	0
IMCOM	USAG Benelux	0
IMCOM	USAG Daegu	0
IMCOM	USAG Hawaii	2242
IMCOM	USAG Humphreys	0
IMCOM	USAG Italy	0
IMCOM	USAG Japan	0
IMCOM	USAG Miami	0
IMCOM	USAG Natick	4
IMCOM	USAG Red Cloud	0
IMCOM	USAG Rheinland-Pfalz	0
IMCOM	USAG Rheinland-Pfalz - Baumholder	0
IMCOM	USAG Stuttgart	0

Command	Installation	Number of Archaeological Sites
POM		FY19/20/21
IMCOM	USAG Weisbaden	0
IMCOM	USAG Yongsan	0
IMCOM	West Point	267
IMCOM	White Sands	8088
IMCOM	Yuma Proving Ground	1912
ARNG	Alabama	517
ARNG	Alaska	41
ARNG	Arizona	468
ARNG	Arkansas	1048
ARNG	California	197
ARNG	Colorado	0
ARNG	Connecticut	14
ARNG	Delaware	1
ARNG	District of Columbia	0
ARNG	Florida	107
ARNG	Georgia	0
ARNG	Guam Territory	0
ARNG	Hawaii	15
ARNG	Idaho	256
ARNG	Illinois	26
ARNG	Indiana	582
ARNG	Iowa	15
ARNG	Kansas	21
ARNG	Kentucky	31
ARNG	Louisiana	695
ARNG	Maine	12
ARNG	Maryland	0
ARNG	Massachusetts	108
ARNG	Michigan	221
ARNG	Minnesota	289
ARNG	Mississippi	649
ARNG	Missouri	188
ARNG	Montana	98
ARNG	Nebraska	7
ARNG	Nevada	4
ARNG	New Hampshire	4
ARNG	New Jersey	0
ARNG	New Mexico	226

Command	Installation	Number of Archaeological Sites
POM		FY19/20/21
ARNG	New York	0
ARNG	North Carolina	14
ARNG	North Dakota	118
ARNG	Ohio	292
ARNG	Oklahoma	224
ARNG	Oregon	149
ARNG	Pennsylvania	1
ARNG	Puerto Rico	252
ARNG	Rhode Island	12
ARNG	South Carolina	277
ARNG	South Dakota	0
ARNG	Tennessee	42
ARNG	Texas	707
ARNG	Utah	161
ARNG	Vermont	77
ARNG	Virgin Islands	0
ARNG	Virginia	512
ARNG	Washington	12
ARNG	West Virginia	34
ARNG	Wisconsin	0
ARNG	Wyoming	1408
USAR	63rd RSC	8
USAR	81st RSC	1
USAR	88th RSC	61
USAR	99th RSC	19
USAR	9th MSC	0
USAR	Fort Buchanan	0
USAR	Fort Devens	1
USAR	Fort Hunter Liggett (includes Camp Parks)	673
USAR	Fort McCoy	570
AMC	MOT Concord	2
AMC	MOT Sunny Point	35

Section N. Historical Facilities Not Evaluated

Tables 60 and 61 indicate the number of facilities greater than 50 years old by command and installation respectively that have not yet been evaluated. The number of structures not evaluated per installation was obtained from HQIIS, as RPA type description “Buildings”, built year as indicated, HISTORIC STATUS CODE, NEV.

Data on NEV structures refers to structures that may potentially be considered eligible for listing on the NRHP and have not been previously evaluated as reported in HQIIS August 2016, June 2017, and February 2018 (POM FY19, 20, and 21, respectively).

Table 60. NR eligible structures greater than 50 years old not evaluated by command.

Command	Facilities > 50 Years Old Not Evaluated		
	Through 1969	Through 1969	Before 1970
POM	FY19	FY20	FY21
IMCOM	15,669	22,089	14,448
ARNG	27,689	27,032	3,390
USAR	4,360	3,740	1,344
AMC	143	204	1
Total	47,861	53,065	19,183

Table 61. NR eligible structures greater than 50 years old not evaluated by installation.

Command	Installation	Facilities > 50 Years Old Not Evaluated		
		Through 1969	Through 1969	Before 1970
POM		FY19	FY20	FY21
IMCOM	Aberdeen Proving Ground	291	336	258
IMCOM	Adelphi	42	48	29
IMCOM	Carlisle Barracks	347	328	36
IMCOM	Detroit Arsenal	11	44	5
IMCOM	Dugway	100	137	44
IMCOM	Fort A. P. Hill	51	59	21
IMCOM	Fort Belvoir	276	236	74
IMCOM	Fort Benning	183	185	281

Command	Installation	Facilities > 50 Years Old Not Evaluated		
		Through 1969	Through 1969	Before 1970
POM		FY19	FY20	FY21
IMCOM	Fort Bliss	685	659	99
IMCOM	Fort Bragg	213	365	45
IMCOM	Fort Campbell	197	208	330
IMCOM	Fort Carson	266	276	8
IMCOM	Fort Detrick	19	1	1
IMCOM	Fort Drum	2	0	0
IMCOM	Fort Gordon	237	224	29
IMCOM	Fort Greely	50	50	2
IMCOM	Fort Hamilton	87	62	4
IMCOM	Fort Hood	528	557	170
IMCOM	Fort Huachuca	152	168	136
IMCOM	Fort Irwin	153	153	101
IMCOM	Fort Jackson	313	366	184
IMCOM	Fort Knox	614	565	84
IMCOM	Fort Leavenworth	19	57	221
IMCOM	Fort Lee	62	104	59
IMCOM	Fort Leonard Wood	412	404	130
IMCOM	Fort Lewis McChord (JBLM)	1046	609	1453
IMCOM	Fort Meade	70	87	550
IMCOM	Fort Polk	6	0	0
IMCOM	Fort Riley	220	259	300
IMCOM	Fort Rucker	423	463	438
IMCOM	Fort Sill	532	532	11
IMCOM	Fort Stewart (Hunter AAF)	214	210	9
IMCOM	Fort Wainwright	225	233	11
IMCOM	Joint Base Myer-Henderson Hall	79	153	16
IMCOM	Kwajalein Atoll	153	207	134
IMCOM	Picatinny	92	95	94
IMCOM	Presidio of Monterey	35	25	784
IMCOM	Redstone Arsenal	810	891	69
IMCOM	Rock Island Arsenal	69	65	13

Command	Installation	Facilities > 50 Years Old Not Evaluated		
		Through 1969	Through 1969	Before 1970
POM		FY19	FY20	FY21
IMCOM	USAG Ansbach	44	409	251
IMCOM	USAG Bavaria - Garmish	10	128	69
IMCOM	USAG Bavaria - Grafenwoer	377	1570	783
IMCOM	USAG Bavaria - Hohenfels	145	639	342
IMCOM	USAG Benelux	53	220	121
IMCOM	USAG Daegu	431	427	260
IMCOM	USAG Hawaii	648	663	468
IMCOM	USAG Humphreys	196	121	125
IMCOM	USAG Italy	624	666	513
IMCOM	USAG Japan	396	813	381
IMCOM	USAG Miami	0	0	0
IMCOM	USAG Natick	53	48	39
IMCOM	USAG Red Cloud	585	642	465
IMCOM	USAG Rheinland-Pfalz	289	1646	1804
IMCOM	USAG Rheinland-Pfalz - Baumholder	108	647	398
IMCOM	USAG Stuttgart	126	667	386
IMCOM	USAG Weisbaden	96	615	421
IMCOM	USAG Yongsan	237	806	675
IMCOM	West Point	299	325	99
IMCOM	White Sands	1479	1483	584
IMCOM	Yuma Proving Ground	189	133	31
ARNG	Alabama	293	186	32
ARNG	Alaska	63	68	58
ARNG	Arizona	632	656	50
ARNG	Arkansas	1148	1118	35
ARNG	California	1987	1993	294
ARNG	Colorado	62	85	10
ARNG	Connecticut	102	90	19
ARNG	Delaware	137	173	27
ARNG	District of Columbia	36	38	1
ARNG	Florida	1536	1472	86

Command	Installation	Facilities > 50 Years Old Not Evaluated		
		Through 1969	Through 1969	Before 1970
POM		FY19	FY20	FY21
ARNG	Georgia	658	656	78
ARNG	Guam Territory	40	40	30
ARNG	Hawaii	41	48	8
ARNG	Idaho	267	281	27
ARNG	Illinois	546	699	21
ARNG	Indiana	72	82	128
ARNG	Iowa	1205	1645	156
ARNG	Kansas	236	234	21
ARNG	Kentucky	412	411	22
ARNG	Louisiana	618	666	160
ARNG	Maine	261	240	12
ARNG	Maryland	250	245	69
ARNG	Massachusetts	460	454	58
ARNG	Michigan	939	799	95
ARNG	Minnesota	421	423	25
ARNG	Mississippi	3322	3250	623
ARNG	Missouri	618	586	78
ARNG	Montana	475	448	52
ARNG	Nebraska	375	374	58
ARNG	Nevada	187	184	12
ARNG	New Hampshire	488	453	6
ARNG	New Jersey	416	414	19
ARNG	New Mexico	14	12	3
ARNG	New York	423	427	53
ARNG	North Carolina	216	238	38
ARNG	North Dakota	219	183	126
ARNG	Ohio	1388	1351	211
ARNG	Oklahoma	306	361	46
ARNG	Oregon	423	448	22
ARNG	Pennsylvania	1681	864	85
ARNG	Puerto Rico	566	639	154

Command	Installation	Facilities > 50 Years Old Not Evaluated		
		Through 1969	Through 1969	Before 1970
POM		FY19	FY20	FY21
ARNG	Rhode Island	246	237	28
ARNG	South Carolina	458	482	45
ARNG	South Dakota	74	97	10
ARNG	Tennessee	335	337	10
ARNG	Texas	618	528	45
ARNG	Utah	380	339	17
ARNG	Vermont	223	256	13
ARNG	Virgin Islands	4	4	1
ARNG	Virginia	459	378	40
ARNG	Washington	109	107	9
ARNG	West Virginia	181	205	51
ARNG	Wisconsin	1007	968	2
ARNG	Wyoming	56	60	11
USAR	63rd RSC	454	416	69
USAR	81st RSC	716	741	131
USAR	88th RSC	1121	603	98
USAR	99th RSC	856	772	148
USAR	9th MSC	32	17	2
USAR	Fort Buchanan	53	52	23
USAR	Fort Devens	80	101	30
USAR	Fort Hunter Liggett (includes Camp Parks)	135	129	27
USAR	Fort McCoy	913	909	816
AMC	MOT Concord	81	106	1
AMC	MOT Sunny Point	62	98	0

Section O. Acres Accessible for Archaeological Inventory

Tables 62 and 63 indicate the number of acres accessible for archaeological inventory by command and per installation, respectively, as reported in AEDB-EQ, FY15: Part II, Q39 (POM FY19, FY20, and FY21).

Table 62. Acres accessible for archaeological inventory by command.

Command	Acres Accessible for Archaeological Inventory
IMCOM	9117238
ARNG	1149721
USAR	233057
AMC	19641
Total	10,519,657

Table 63. Acres accessible for archaeological inventory by installation.

Command	Installation	Acres Accessible for Archaeological Inventory
IMCOM	Aberdeen Proving Ground	8256
IMCOM	Adelphi	1807
IMCOM	Carlisle Barracks	458
IMCOM	Detroit Arsenal	0
IMCOM	Dugway	682471
IMCOM	Fort A. P. Hill	64000
IMCOM	Fort Belvoir	9126
IMCOM	Fort Benning	163797
IMCOM	Fort Bliss	1000000
IMCOM	Fort Bragg	121000
IMCOM	Fort Campbell	68984
IMCOM	Fort Carson	353880
IMCOM	Fort Detrick	1364
IMCOM	Fort Drum	80830
IMCOM	Fort Gordon	51554
IMCOM	Fort Greely	7200
IMCOM	Fort Hamilton	0

Command	Installation	Acres Accessible for Archaeological Inventory
IMCOM	Fort Hood	205377
IMCOM	Fort Huachuca	73272
IMCOM	Fort Irwin	662207
IMCOM	Fort Jackson	45175
IMCOM	Fort Knox	57000
IMCOM	Fort Leavenworth	5735
IMCOM	Fort Lee	4176
IMCOM	Fort Leonard Wood	58000
IMCOM	Fort Lewis McChord (JBLM)	380424
IMCOM	Fort Meade	4975
IMCOM	Fort Polk	211805
IMCOM	Fort Riley	83056
IMCOM	Fort Rucker	48407
IMCOM	Fort Sill	55792
IMCOM	Fort Stewart (Hunter AAF)	269533
IMCOM	Fort Wainwright	1414674
IMCOM	Joint Base Myer-Henderson Hall	370
IMCOM	Kwajalein Atoll	0
IMCOM	Picatinny	1625
IMCOM	Presidio of Monterey	1553
IMCOM	Redstone Arsenal	35717
IMCOM	Rock Island Arsenal	800
IMCOM	USAG Ansbach	0
IMCOM	USAG Bavaria - Garmish	0
IMCOM	USAG Bavaria - Grafenwoer	0
IMCOM	USAG Bavaria - Hohenfels	0
IMCOM	USAG Benelux	0
IMCOM	USAG Daegu	0
IMCOM	USAG Hawaii	157878
IMCOM	USAG Humphreys	0
IMCOM	USAG Italy	0
IMCOM	USAG Japan	0

Command	Installation	Acres Accessible for Archaeological Inventory
IMCOM	USAG Miami	0
IMCOM	USAG Natick	160
IMCOM	USAG Red Cloud	0
IMCOM	USAG Rheinland-Pfalz	0
IMCOM	USAG Rheinland-Pfalz - Baumholder	0
IMCOM	USAG Stuttgart	0
IMCOM	USAG Weisbaden	0
IMCOM	USAG Yongsan	0
IMCOM	West Point	9600
IMCOM	White Sands	2200000
IMCOM	Yuma Proving Ground	515200
ARNG	Alabama	18175
ARNG	Alaska	26872
ARNG	Arizona	58879
ARNG	Arkansas	72377
ARNG	California	41636
ARNG	Colorado	0
ARNG	Connecticut	2200
ARNG	Delaware	180
ARNG	District of Columbia	1
ARNG	Florida	51311
ARNG	Georgia	754
ARNG	Guam Territory	93
ARNG	Hawaii	1254
ARNG	Idaho	139807
ARNG	Illinois	6313
ARNG	Indiana	29979
ARNG	Iowa	3611
ARNG	Kansas	4112
ARNG	Kentucky	13125
ARNG	Louisiana	33500
ARNG	Maine	2473

Command	Installation	Acres Accessible for Archaeological Inventory
ARNG	Maryland	0
ARNG	Massachusetts	15158
ARNG	Michigan	125692
ARNG	Minnesota	47981
ARNG	Mississippi	29067
ARNG	Missouri	12110
ARNG	Montana	25330
ARNG	Nebraska	6354
ARNG	Nevada	2242
ARNG	New Hampshire	476
ARNG	New Jersey	1009
ARNG	New Mexico	17678
ARNG	New York	1350
ARNG	North Carolina	5100
ARNG	North Dakota	11552
ARNG	Ohio	21007
ARNG	Oklahoma	29404
ARNG	Oregon	55513
ARNG	Pennsylvania	16000
ARNG	Puerto Rico	11192
ARNG	Rhode Island	740
ARNG	South Carolina	17800
ARNG	South Dakota	1144
ARNG	Tennessee	4953
ARNG	Texas	32446
ARNG	Utah	22732
ARNG	Vermont	9096
ARNG	Virgin Islands	60
ARNG	Virginia	26549
ARNG	Washington	837
ARNG	West Virginia	4622
ARNG	Wisconsin	1133

Command	Installation	Acres Accessible for Archaeological Inventory
ARNG	Wyoming	86742
USAR	63rd RSC	3692
USAR	81st RSC	193
USAR	88th RSC	10834
USAR	99th RSC	3000
USAR	9th MSC	0
USAR	Fort Buchanan	746
USAR	Fort Devens	4000
USAR	Fort Hunter Liggett (includes Camp Parks)	162478
USAR	Fort McCoy	48114
AMC	MOT Concord	6641
AMC	MOT Sunny Point	13000

Section P. Acres with Completed Archaeological Inventory

Tables 64 and 65 indicate the number of installation acres that have undergone archaeological inventory as reported in AEDB-EQ, FY15: Part II, Q40 (POM FY19, FY20, and FY21) by command and installation, respectively.

Table 64. Acres with completed archaeological inventory by command.

Command	Acres
IMCOM	4,566,142
ARNG	985,503
USAR	143,527
AMC	6,000
Total	5,701,172

Table 65. Acres with completed archaeological inventory by installation.

Command	Installation	Acres
IMCOM	Aberdeen Proving Ground	3,500
IMCOM	Adelphi	967
IMCOM	Carlisle Barracks	458
IMCOM	Detroit Arsenal	-
IMCOM	Dugway	248,380
IMCOM	Fort A. P. Hill	7,018
IMCOM	Fort Belvoir	9,126
IMCOM	Fort Benning	163,495
IMCOM	Fort Bliss	781,889
IMCOM	Fort Bragg	104,066
IMCOM	Fort Campbell	33,902
IMCOM	Fort Carson	318,524
IMCOM	Fort Detrick	1,364
IMCOM	Fort Drum	71,748
IMCOM	Fort Gordon	47,740
IMCOM	Fort Greely	7,200
IMCOM	Fort Hamilton	-
IMCOM	Fort Hood	202,854
IMCOM	Fort Huachuca	54,106
IMCOM	Fort Irwin	311,085

Command	Installation	Acres
IMCOM	Fort Jackson	45,175
IMCOM	Fort Knox	50,897
IMCOM	Fort Leavenworth	4,759
IMCOM	Fort Lee	3,922
IMCOM	Fort Leonard Wood	58,000
IMCOM	Fort Lewis McChord (JBLM)	353,484
IMCOM	Fort Meade	4,975
IMCOM	Fort Polk	201,458
IMCOM	Fort Riley	60,277
IMCOM	Fort Rucker	48,407
IMCOM	Fort Sill	55,792
IMCOM	Fort Stewart (Hunter AAF)	268,134
IMCOM	Fort Wainwright	216,217
IMCOM	Joint Base Myer-Henderson Hall	70
IMCOM	Kwajalein Atoll	-
IMCOM	Picatinny	851
IMCOM	Presidio of Monterey	1,381
IMCOM	Redstone Arsenal	35,717
IMCOM	Rock Island Arsenal	660
IMCOM	USAG Ansbach	-
IMCOM	USAG Bavaria - Garmish	-
IMCOM	USAG Bavaria - Grafenwoer	-
IMCOM	USAG Bavaria - Hohenfels	-
IMCOM	USAG Benelux	-
IMCOM	USAG Daegu	-
IMCOM	USAG Hawaii	70,620
IMCOM	USAG Humphreys	-
IMCOM	USAG Italy	-
IMCOM	USAG Japan	-
IMCOM	USAG Miami	-
IMCOM	USAG Natick	160
IMCOM	USAG Red Cloud	-
IMCOM	USAG Rheinland-Pfalz	-
IMCOM	USAG Rheinland-Pfalz - Baumholder	-
IMCOM	USAG Stuttgart	-
IMCOM	USAG Weisbaden	-
IMCOM	USAG Yongsan	-

Command	Installation	Acres
IMCOM	West Point	7,101
IMCOM	White Sands	536,565
IMCOM	Yuma Proving Ground	174,098
ARNG	Alabama	11,368
ARNG	Alaska	25,692
ARNG	Arizona	54,000
ARNG	Arkansas	70,026
ARNG	California	33,203
ARNG	Colorado	-
ARNG	Connecticut	321
ARNG	Delaware	110
ARNG	District of Columbia	1
ARNG	Florida	51,311
ARNG	Georgia	589
ARNG	Guam Territory	79
ARNG	Hawaii	1,014
ARNG	Idaho	100,187
ARNG	Illinois	6,035
ARNG	Indiana	28,571
ARNG	Iowa	2,012
ARNG	Kansas	4,112
ARNG	Kentucky	13,125
ARNG	Louisiana	30,430
ARNG	Maine	2,473
ARNG	Maryland	-
ARNG	Massachusetts	15,079
ARNG	Michigan	125,131
ARNG	Minnesota	31,829
ARNG	Mississippi	24,064
ARNG	Missouri	9,070
ARNG	Montana	25,330
ARNG	Nebraska	6,000
ARNG	Nevada	2,242
ARNG	New Hampshire	452
ARNG	New Jersey	482
ARNG	New Mexico	16,859
ARNG	New York	352

Command	Installation	Acres
ARNG	North Carolina	232
ARNG	North Dakota	11,552
ARNG	Ohio	21,007
ARNG	Oklahoma	29,057
ARNG	Oregon	23,822
ARNG	Pennsylvania	16,000
ARNG	Puerto Rico	7,710
ARNG	Rhode Island	416
ARNG	South Carolina	17,800
ARNG	South Dakota	790
ARNG	Tennessee	4,384
ARNG	Texas	32,446
ARNG	Utah	21,743
ARNG	Vermont	9,037
ARNG	Virgin Islands	40
ARNG	Virginia	10,359
ARNG	Washington	500
ARNG	West Virginia	2,968
ARNG	Wisconsin	922
ARNG	Wyoming	83,169
USAR	63rd RSC	1,703
USAR	81st RSC	193
USAR	88th RSC	9,973
USAR	99th RSC	2,800
USAR	9th MSC	-
USAR	Fort Buchanan	746
USAR	Fort Devens	520
USAR	Fort Hunter Liggett (includes Camp Parks)	79,478
USAR	Fort McCoy	48,114
AMC	MOT Concord	1,000
AMC	MOT Sunny Point	5,000

Section Q. Installations with National Historic Landmarks (NHL)

Table 66 summarizes the number of NHL by command. Table 67 lists the installations that have areas designated an NHL. NHL data were obtained from HQIIS and confirmed through DAIMISE personnel, with independent research available here:

https://www.nps.gov/nr/research/data_downloads.htm

These data points have not changed for FY 18–20.

Table 66. Command summary of installations with historic landmarks.

Command	Total Number of Installations
IMCOM	12
ARNG	-
USAR	1
AMC	-
Total	13

Table 67. Installations with historic landmarks.

Command	Installation	Historic Site Name	Location	State	Date Listed dd/mm/yy
IMCOM	Carlisle Barracks	Carlisle Indian School	Carlisle	PA	15/10/66
IMCOM	Fort Benning	Yuchi Town	Fort Benning	AL	19/6/96
IMCOM	Fort Huachuca	Fort Huachuca	Sierra Vista	AZ	20/11/74
IMCOM	Fort Leavenworth	Fort Leavenworth	Leavenworth	KS	15/10/66
IMCOM	Fort Sill	Fort Sill	Fort Sill	OK	15/10/66
IMCOM	Fort Wainwright	Ladd Field	Fairbanks	AK	
IMCOM	Joint Base Myer-Henderson Hall	Fort Myer Historic District	Arlington	VA	28/11/72
		Quarters 1, Fort Myer	Arlington	VA	28/11/72
IMCOM	Kwajalein Atoll	Kwajalein Island Battlefield	Kwajalein Atoll	MARSHALL ISLANDS	
		Roi-Namur Battlefield	Kwajalein Atoll	MARSHALL ISLANDS	
IMCOM	Rock Island Arsenal	Rock Island Arsenal	Rock Island	IL	30/9/69
IMCOM	USAG Hawaii	Palm Circle Historic District	Honolulu	HI	26/10/84

Command	Installation	Historic Site Name	Location	State	Date Listed dd/mm/yy
		Wheeler Field	Schofield Barracks	HI	
IMCOM	West Point	U.S. Military Academy	West Point	NY	15/10/66
IMCOM	White Sands	Trinity Site	Bingham	NM	15/10/66
		Launch Complex 33	White Sands Missile Range	NM	3/10/85
USAR	88th RSC	Fort Douglas	Salt Lake City	UT	15/6/70

Section R. Installations with Federal Archaeological Collections

An archaeological collection (per 36 CFR 79) for the purposes of the survey was defined as material remains that are excavated or removed during a survey, excavation, or other study of a prehistoric or historic resource (located on federal property) and associated records that are prepared or assembled in connection with the survey, excavation, or other study.

Tables 68 and 69 summarize the number of installations that are associated with federal archaeological collections by command and by installation as reported in AEDB-EQ, FY15: Part II, Q1 (POM FY19, FY20, and FY21), respectively.

Table 68. Installations with federal archaeological collections by command.

Command	Number Installations with Collections
IMCOM	40
ARNG	33
USAR	6
AMC	1
Total	80

Table 69. Installations with federal archaeological collections.

Command	Installation with Federal Archaeological Collections
IMCOM	Aberdeen Proving Ground
IMCOM	Adelphi
IMCOM	Carlisle Barracks
IMCOM	Dugway
IMCOM	Fort A. P. Hill
IMCOM	Fort Belvoir
IMCOM	Fort Benning
IMCOM	Fort Bliss
IMCOM	Fort Bragg
IMCOM	Fort Campbell
IMCOM	Fort Carson
IMCOM	Fort Detrick
IMCOM	Fort Drum
IMCOM	Fort Gordon
IMCOM	Fort Greely

Command	Installation with Federal Archaeological Collections
IMCOM	Fort Hood
IMCOM	Fort Huachuca
IMCOM	Fort Irwin
IMCOM	Fort Jackson
IMCOM	Fort Knox
IMCOM	Fort Leavenworth
IMCOM	Fort Lee
IMCOM	Fort Leonard Wood
IMCOM	Fort Lewis McChord (JBLM)
IMCOM	Fort Meade
IMCOM	Fort Polk
IMCOM	Fort Riley
IMCOM	Fort Rucker
IMCOM	Fort Sill
IMCOM	Fort Stewart (Hunter AAF)
IMCOM	Fort Wainwright
IMCOM	Joint Base Myer-Henderson Hall
IMCOM	Picatinny
IMCOM	Presidio of Monterey
IMCOM	Redstone Arsenal
IMCOM	Rock Island Arsenal
IMCOM	USAG Hawaii
IMCOM	West Point
IMCOM	White Sands
IMCOM	Yuma Proving Ground
ARNG	Alabama
ARNG	Arizona
ARNG	Arkansas
ARNG	California
ARNG	Connecticut
ARNG	Florida
ARNG	Hawaii
ARNG	Illinois
ARNG	Indiana
ARNG	Iowa
ARNG	Kentucky

Command	Installation with Federal Archaeological Collections
ARNG	Maine
ARNG	Massachusetts
ARNG	Michigan
ARNG	Minnesota
ARNG	Mississippi
ARNG	Missouri
ARNG	New Hampshire
ARNG	New Mexico
ARNG	New York
ARNG	North Dakota
ARNG	Ohio
ARNG	Oklahoma
ARNG	Pennsylvania
ARNG	Puerto Rico
ARNG	Rhode Island
ARNG	South Carolina
ARNG	Tennessee
ARNG	Texas
ARNG	Utah
ARNG	Vermont
ARNG	Virginia
ARNG	Wyoming
USAR	63rd RSC
USAR	88th RSC
USAR	99th RSC
USAR	Fort Devens
USAR	Fort Hunter Liggett (includes Camp Parks)
USAR	Fort McCoy
AMC	MOT Sunny Point

Section S. Cubic Feet of Artifacts

Tables 70 and 71 summarize the volume of archeological artifacts by command and installation respectively, as reported in AEDB-EQ, FY15: Part II, Q2 (POM FY19, FY20, and FY21).

Table 70. Cubic feet of archeological artifacts by command.

Command	Archeological Artifacts (cubic ft)
POM	FY19-21
IMCOM	19393
ARNG	1892
USAR	532
AMC	30
Total	21,847

Table 71. Cubic feet of archeological artifacts by installation.

Command	Installation	Archeological Artifacts (cubic ft)
POM		FY19-21
IMCOM	Aberdeen Proving Ground	113
IMCOM	Adelphi	64
IMCOM	Carlisle Barracks	70
IMCOM	Detroit Arsenal	0
IMCOM	Dugway	79
IMCOM	Fort A. P. Hill	148
IMCOM	Fort Belvoir	222
IMCOM	Fort Benning	1420
IMCOM	Fort Bliss	3070
IMCOM	Fort Bragg	1028
IMCOM	Fort Campbell	259
IMCOM	Fort Carson	977
IMCOM	Fort Detrick	11
IMCOM	Fort Drum	943
IMCOM	Fort Gordon	81
IMCOM	Fort Greely	3
IMCOM	Fort Hamilton	0

Command	Installation	Archeological Artifacts (cubic ft)
POM		FY19-21
IMCOM	Fort Hood	629
IMCOM	Fort Huachuca	450
IMCOM	Fort Irwin	932
IMCOM	Fort Jackson	158
IMCOM	Fort Knox	178
IMCOM	Fort Leavenworth	185
IMCOM	Fort Lee	244
IMCOM	Fort Leonard Wood	238
IMCOM	Fort Lewis McChord (JBLM)	334
IMCOM	Fort Meade	32
IMCOM	Fort Polk	1264
IMCOM	Fort Riley	560
IMCOM	Fort Rucker	11
IMCOM	Fort Sill	3826
IMCOM	Fort Stewart (Hunter AAF)	398
IMCOM	Fort Wainwright	60
IMCOM	Joint Base Myer-Henderson Hall	3
IMCOM	Kwajalein Atoll	0
IMCOM	Picatinny	34
IMCOM	Presidio of Monterey	35
IMCOM	Redstone Arsenal	412
IMCOM	Rock Island Arsenal	2
IMCOM	USAG Ansbach	0
IMCOM	USAG Bavaria - Garmish	0
IMCOM	USAG Bavaria - Grafenwoer	0
IMCOM	USAG Bavaria - Hohenfels	0
IMCOM	USAG Benelux	0
IMCOM	USAG Daegu	0
IMCOM	USAG Hawaii	334
IMCOM	USAG Humphreys	0
IMCOM	USAG Italy	0
IMCOM	USAG Japan	0

Command	Installation	Archeological Artifacts (cubic ft)
POM		FY19-21
IMCOM	USAG Miami	0
IMCOM	USAG Natick	0
IMCOM	USAG Red Cloud	0
IMCOM	USAG Rheinland-Pfalz	0
IMCOM	USAG Rheinland-Pfalz - Baumholder	0
IMCOM	USAG Stuttgart	0
IMCOM	USAG Weisbaden	0
IMCOM	USAG Yongsan	0
IMCOM	West Point	186
IMCOM	White Sands	371
IMCOM	Yuma Proving Ground	29
ARNG	Alabama	126
ARNG	Alaska	0
ARNG	Arizona	20
ARNG	Arkansas	115
ARNG	California	219
ARNG	Colorado	0
ARNG	Connecticut	149
ARNG	Delaware	0
ARNG	District of Columbia	0
ARNG	Florida	1
ARNG	Georgia	0
ARNG	Guam Territory	0
ARNG	Hawaii	47
ARNG	Idaho	0
ARNG	Illinois	75
ARNG	Indiana	60
ARNG	Iowa	190
ARNG	Kansas	0
ARNG	Kentucky	53
ARNG	Louisiana	0
ARNG	Maine	1

Command	Installation	Archeological Artifacts (cubic ft)
POM		FY19-21
ARNG	Maryland	0
ARNG	Massachusetts	5
ARNG	Michigan	54
ARNG	Minnesota	20
ARNG	Mississippi	113
ARNG	Missouri	36
ARNG	Montana	0
ARNG	Nebraska	0
ARNG	Nevada	0
ARNG	New Hampshire	7
ARNG	New Jersey	0
ARNG	New Mexico	32
ARNG	New York	44
ARNG	North Carolina	0
ARNG	North Dakota	34
ARNG	Ohio	35
ARNG	Oklahoma	55
ARNG	Oregon	0
ARNG	Pennsylvania	27
ARNG	Puerto Rico	60
ARNG	Rhode Island	5
ARNG	South Carolina	20
ARNG	South Dakota	0
ARNG	Tennessee	8
ARNG	Texas	36
ARNG	Utah	50
ARNG	Vermont	17
ARNG	Virgin Islands	0
ARNG	Virginia	156
ARNG	Washington	0
ARNG	West Virginia	0
ARNG	Wisconsin	0

Command	Installation	Archeological Artifacts (cubic ft)
POM		FY19-21
ARNG	Wyoming	22
USAR	63rd RSC	2
USAR	81st RSC	0
USAR	88th RSC	211
USAR	99th RSC	16
USAR	9th MSC	0
USAR	Fort Buchanan	0
USAR	Fort Devens	27
USAR	Fort Hunter Liggett (includes Camp Parks)	150
USAR	Fort McCoy	126
AMC	MOT Concord	0
AMC	MOT Sunny Point	30

Section T. Number of Integrated Natural Resources Management Plans (INRMP)

Tables 72 and 73 indicate the number of INRMP by command and installation, respectively, as reported by DAIM-ISE, July 2015 (POM FY19 and POM FY20) and EQ Data Call second half FY17 (POM FY21).

Table 72. INRMP by command.

Command	Number of INRMPs	
POM	FY19/20	FY21
IMCOM	41	38
ARNG	97	89
USAR	8	8
AMC	1	2
Total	147	137

Table 73. INRMP by installation.

Command	Installation	Number of INRMPs	
POM		FY19/20	FY21
IMCOM	Aberdeen Proving Ground	1	1
IMCOM	Adelphi	1	1
IMCOM	Carlisle Barracks	0	0
IMCOM	Detroit Arsenal	0	0
IMCOM	Dugway	1	1
IMCOM	Fort A. P. Hill	1	1
IMCOM	Fort Belvoir	1	1
IMCOM	Fort Benning	1	1
IMCOM	Fort Bliss	1	1
IMCOM	Fort Bragg	1	1
IMCOM	Fort Campbell	1	1
IMCOM	Fort Carson	1	1
IMCOM	Fort Detrick	1	0
IMCOM	Fort Drum	1	1
IMCOM	Fort Gordon	1	1
IMCOM	Fort Greely	1	0
IMCOM	Fort Hamilton	0	0

Command	Installation	Number of INRMPs	
POM		FY19/20	FY21
IMCOM	Fort Hood	1	1
IMCOM	Fort Huachuca	1	1
IMCOM	Fort Irwin	1	1
IMCOM	Fort Jackson	1	1
IMCOM	Fort Knox	1	1
IMCOM	Fort Leavenworth	1	1
IMCOM	Fort Lee	1	1
IMCOM	Fort Leonard Wood	1	1
IMCOM	Fort Lewis McChord (JBLM)	2	2
IMCOM	Fort Meade	1	1
IMCOM	Fort Polk	1	1
IMCOM	Fort Riley	1	1
IMCOM	Fort Rucker	1	1
IMCOM	Fort Sill	1	1
IMCOM	Fort Stewart (Hunter AAF)	1	1
IMCOM	Fort Wainwright	1	1
IMCOM	Joint Base Myer-Henderson Hall	0	0
IMCOM	Kwajalein Atoll	0	0
IMCOM	Picatinny	1	1
IMCOM	Presidio of Monterey	1	1
IMCOM	Redstone Arsenal	1	1
IMCOM	Rock Island Arsenal	1	0
IMCOM	USAG Ansbach	0	0
IMCOM	USAG Bavaria - Garmish	0	0
IMCOM	USAG Bavaria - Grafenwoer	0	0
IMCOM	USAG Bavaria - Hohenfels	0	0
IMCOM	USAG Benelux	0	0
IMCOM	USAG Daegu	0	0
IMCOM	USAG Hawaii	3	3
IMCOM	USAG Humphreys	0	0
IMCOM	USAG Italy	0	0
IMCOM	USAG Japan	0	0

Command	Installation	Number of INRMPs	
POM		FY19/20	FY21
IMCOM	USAG Miami	0	0
IMCOM	USAG Natick	0	0
IMCOM	USAG Red Cloud	0	0
IMCOM	USAG Rheinland-Pfalz	0	0
IMCOM	USAG Rheinland-Pfalz - Baumholder	0	0
IMCOM	USAG Stuttgart	0	0
IMCOM	USAG Weisbaden	0	0
IMCOM	USAG Yongsan	0	0
IMCOM	West Point	1	1
IMCOM	White Sands	1	1
IMCOM	Yuma Proving Ground	1	1
ARNG	Alabama	1	1
ARNG	Alaska	1	0
ARNG	Arizona	2	2
ARNG	Arkansas	2	2
ARNG	California	3	2
ARNG	Colorado	0	0
ARNG	Connecticut	3	2
ARNG	Delaware	2	2
ARNG	District of Columbia	0	0
ARNG	Florida	2	2
ARNG	Georgia	0	0
ARNG	Guam Territory	0	0
ARNG	Hawaii	3	3
ARNG	Idaho	1	1
ARNG	Illinois	2	2
ARNG	Indiana	1	1
ARNG	Iowa	1	1
ARNG	Kansas	1	1
ARNG	Kentucky	3	3
ARNG	Louisiana	3	3
ARNG	Maine	3	3

Command	Installation	Number of INRMPs	
POM		FY19/20	FY21
ARNG	Maryland	0	0
ARNG	Massachusetts	2	2
ARNG	Michigan	2	2
ARNG	Minnesota	2	2
ARNG	Mississippi	2	2
ARNG	Missouri	5	5
ARNG	Montana	2	2
ARNG	Nebraska	3	3
ARNG	Nevada	1	0
ARNG	New Hampshire	0	1
ARNG	New Jersey	1	1
ARNG	New Mexico	4	4
ARNG	New York	3	2
ARNG	North Carolina	1	1
ARNG	North Dakota	3	3
ARNG	Ohio	2	1
ARNG	Oklahoma	1	1
ARNG	Oregon	3	2
ARNG	Pennsylvania	1	1
ARNG	Puerto Rico	1	1
ARNG	Rhode Island	1	1
ARNG	South Carolina	2	2
ARNG	South Dakota	2	2
ARNG	Tennessee	3	2
ARNG	Texas	4	4
ARNG	Utah	2	2
ARNG	Vermont	2	2
ARNG	Virgin Islands	0	0
ARNG	Virginia	1	1
ARNG	Washington	1	1
ARNG	West Virginia	1	1
ARNG	Wisconsin	1	0

Command	Installation	Number of INRMPs	
POM		FY19/20	FY21
ARNG	Wyoming	4	4
USAR	63rd RSC	1	1
USAR	81st RSC	0	0
USAR	88th RSC	2	2
USAR	99th RSC	1	1
USAR	9th MSC	0	0
USAR	Fort Buchanan	1	1
USAR	Fort Devens	1	1
USAR	Fort Hunter Liggett (includes Camp Parks)	1	1
USAR	Fort McCoy	1	1
AMC	MOT Concord	0	1
AMC	MOT Sunny Point	1	1

Section U. Number of Threatened and Endangered Species (TES)

The number of TES per installation were reported by DAIM-ISE, 30 December 2015 and 18 May 2018 (POM FY20 and FY21, respectively).

Tables 74 and 75 list the number of occurrences of TES that are not Red-Cockaded Woodpecker (RCW) or Northern Long Eared Bat (NLEB) by command and installation respectively. TES species were based on their scientific name and counted based on their presence onsite or contiguous with a True or False (T/F) indicator. They were not counted twice if reported at an installation as both onsite and contiguous. These counts were reduced further based on SME interviews.

Table 74. TES (excluding RCW and NLEB).

Command	TES Count (No RCW or NLEB)	
POM	FY20	FY21
IMCOM	319	263
ARNG	178	145
USAR	32	42
AMC	16	14
Total	545	464

Table 75. TES (excluding RCW and NLEB) by installation.

Command	Installation	TES Count (No RCW or NLEB)	
POM		FY20	FY21
IMCOM	Aberdeen Proving Ground	2	2
IMCOM	Adelphi	0	0
IMCOM	Carlisle Barracks	2	1
IMCOM	Detroit Arsenal	0	0
IMCOM	Dugway	2	2
IMCOM	Fort A. P. Hill	3	5
IMCOM	Fort Belvoir	6	4
IMCOM	Fort Benning	3	6
IMCOM	Fort Bliss	4	3
IMCOM	Fort Bragg	4	5
IMCOM	Fort Campbell	2	3

Command	Installation	TES Count (No RCW or NLEB)	
POM		FY20	FY21
IMCOM	Fort Carson	2	2
IMCOM	Fort Detrick	0	0
IMCOM	Fort Drum	1	2
IMCOM	Fort Gordon	2	2
IMCOM	Fort Greely	0	0
IMCOM	Fort Hamilton	0	0
IMCOM	Fort Hood	3	3
IMCOM	Fort Huachuca	17	11
IMCOM	Fort Irwin	2	2
IMCOM	Fort Jackson	2	3
IMCOM	Fort Knox	2	3
IMCOM	Fort Leavenworth	1	1
IMCOM	Fort Lee	0	1
IMCOM	Fort Leonard Wood	3	5
IMCOM	Fort Lewis McChord (JBLM)	15	13
IMCOM	Fort Meade	0	2
IMCOM	Fort Polk	0	1
IMCOM	Fort Riley	3	4
IMCOM	Fort Rucker	9	6
IMCOM	Fort Sill	1	0
IMCOM	Fort Stewart (Hunter AAF)	5	7
IMCOM	Fort Wainwright	0	0
IMCOM	Joint Base Myer-Henderson Hall	0	0
IMCOM	Kwajalein Atoll	0	0
IMCOM	Picatinny	2	0
IMCOM	Presidio of Monterey	5	5
IMCOM	Redstone Arsenal	6	5
IMCOM	Rock Island Arsenal	3	4
IMCOM	USAG Ansbach	0	0
IMCOM	USAG Bavaria - Garmish	0	0
IMCOM	USAG Bavaria - Grafenwoer	0	0

Command	Installation	TES Count (No RCW or NLEB)	
POM		FY20	FY21
IMCOM	USAG Bavaria - Hohenfels	0	0
IMCOM	USAG Benelux	0	0
IMCOM	USAG Daegu	0	0
IMCOM	USAG Hawaii	190	137
IMCOM	USAG Humphreys	0	0
IMCOM	USAG Italy	0	0
IMCOM	USAG Japan	0	0
IMCOM	USAG Miami	0	0
IMCOM	USAG Natick	0	0
IMCOM	USAG Red Cloud	0	0
IMCOM	USAG Rheinland-Pfalz	0	0
IMCOM	USAG Rheinland-Pfalz - Baumholder	0	0
IMCOM	USAG Stuttgart	0	0
IMCOM	USAG Weisbaden	0	0
IMCOM	USAG Yongsan	0	0
IMCOM	West Point	4	5
IMCOM	White Sands	12	7
IMCOM	Yuma Proving Ground	1	1
ARNG	Alabama	4	6
ARNG	Alaska	0	0
ARNG	Arizona	2	3
ARNG	Arkansas	2	3
ARNG	California	12	10
ARNG	Colorado	0	0
ARNG	Connecticut	0	2
ARNG	Delaware	0	0
ARNG	District of Columbia	0	0
ARNG	Florida	5	5
ARNG	Georgia	0	0
ARNG	Guam Territory	0	0
ARNG	Hawaii	24	11

Command	Installation	TES Count (No RCW or NLEB)	
POM		FY20	FY21
ARNG	Idaho	0	1
ARNG	Illinois	2	2
ARNG	Indiana	3	7
ARNG	Iowa	1	2
ARNG	Kansas	0	0
ARNG	Kentucky	0	0
ARNG	Louisiana	0	2
ARNG	Maine	2	4
ARNG	Maryland	1	1
ARNG	Massachusetts	0	2
ARNG	Michigan	2	0
ARNG	Minnesota	1	4
ARNG	Mississippi	3	4
ARNG	Missouri	7	5
ARNG	Montana	0	0
ARNG	Nebraska	2	4
ARNG	Nevada	2	4
ARNG	New Hampshire	3	2
ARNG	New Jersey	3	4
ARNG	New Mexico	11	4
ARNG	New York	1	0
ARNG	North Carolina	0	1
ARNG	North Dakota	19	5
ARNG	Ohio	0	3
ARNG	Oklahoma	1	4
ARNG	Oregon	11	5
ARNG	Pennsylvania	0	5
ARNG	Puerto Rico	5	3
ARNG	Rhode Island	0	1
ARNG	South Carolina	2	3
ARNG	South Dakota	0	2

Command	Installation	TES Count (No RCW or NLEB)	
POM		FY20	FY21
ARNG	Tennessee	2	3
ARNG	Texas	32	5
ARNG	Utah	1	1
ARNG	Vermont	2	2
ARNG	Virgin Islands	0	1
ARNG	Virginia	7	6
ARNG	Washington	0	0
ARNG	West Virginia	2	3
ARNG	Wisconsin	0	0
ARNG	Wyoming	1	0
USAR	63rd RSC	13	12
USAR	81st RSC	5	5
USAR	88th RSC	0	11
USAR	99th RSC	0	0
USAR	9th MSC	0	0
USAR	Fort Buchanan	2	0
USAR	Fort Devens	0	0
USAR	Fort Hunter Liggett (includes Camp Parks)	11	10
USAR	Fort McCoy	1	4
AMC	MOT Concord	9	8
AMC	MOT Sunny Point	7	6

Tables 76 and 77 indicate the number of RCW (*Picoides borealis*) by command and installation, respectively. The count of RCW was sorted by its scientific name as many regional names were present in the reported data.

Table 76. RCW counts by command.

Command	RCW Count		
POM	FY19	FY20	FY21
IMCOM	6	6	6
ARNG	4	2	4
USAR	-	-	-
AMC	1	1	1
Total	11	9	11

Table 77. RCW counts by installation.

Command	Installation	RCW Count		
POM		FY19	FY20	FY21
IMCOM	Aberdeen Proving Ground	0	0	0
IMCOM	Adelphi	0	0	0
IMCOM	Carlisle Barracks	0	0	0
IMCOM	Detroit Arsenal	0	0	0
IMCOM	Dugway	0	0	0
IMCOM	Fort A. P. Hill	0	0	0
IMCOM	Fort Belvoir	0	0	0
IMCOM	Fort Benning	1	1	1
IMCOM	Fort Bliss	0	0	0
IMCOM	Fort Bragg	1	1	1
IMCOM	Fort Campbell	0	0	0
IMCOM	Fort Carson	0	0	0
IMCOM	Fort Detrick	0	0	0
IMCOM	Fort Drum	0	0	0
IMCOM	Fort Gordon	1	1	1
IMCOM	Fort Greely	0	0	0
IMCOM	Fort Hamilton	0	0	0
IMCOM	Fort Hood	0	0	0
IMCOM	Fort Huachuca	0	0	0

Command	Installation	RCW Count		
POM		FY19	FY20	FY21
IMCOM	Fort Irwin	0	0	0
IMCOM	Fort Jackson	1	1	1
IMCOM	Fort Knox	0	0	0
IMCOM	Fort Leavenworth	0	0	0
IMCOM	Fort Lee	0	0	0
IMCOM	Fort Leonard Wood	0	0	0
IMCOM	Fort Lewis McChord (JBLM)	0	0	0
IMCOM	Fort Meade	0	0	0
IMCOM	Fort Polk	1	1	1
IMCOM	Fort Riley	0	0	0
IMCOM	Fort Rucker	0	0	0
IMCOM	Fort Sill	0	0	0
IMCOM	Fort Stewart (Hunter AAF)	1	1	1
IMCOM	Fort Wainwright	0	0	0
IMCOM	Joint Base Myer-Henderson Hall	0	0	0
IMCOM	Kwajalein Atoll	0	0	0
IMCOM	Picatinny	0	0	0
IMCOM	Presidio of Monterey	0	0	0
IMCOM	Redstone Arsenal	0	0	0
IMCOM	Rock Island Arsenal	0	0	0
IMCOM	USAG Ansbach	0	0	0
IMCOM	USAG Bavaria - Garmish	0	0	0
IMCOM	USAG Bavaria - Grafenwoer	0	0	0
IMCOM	USAG Bavaria - Hohenfels	0	0	0
IMCOM	USAG Benelux	0	0	0
IMCOM	USAG Daegu	0	0	0
IMCOM	USAG Hawaii	0	0	0
IMCOM	USAG Humphreys	0	0	0
IMCOM	USAG Italy	0	0	0
IMCOM	USAG Japan	0	0	0
IMCOM	USAG Miami	0	0	0
IMCOM	USAG Natick	0	0	0

Command	Installation	RCW Count		
POM		FY19	FY20	FY21
IMCOM	USAG Red Cloud	0	0	0
IMCOM	USAG Rheinland-Pfalz	0	0	0
IMCOM	USAG Rheinland-Pfalz - Baumholder	0	0	0
IMCOM	USAG Stuttgart	0	0	0
IMCOM	USAG Weisbaden	0	0	0
IMCOM	USAG Yongsan	0	0	0
IMCOM	West Point	0	0	0
IMCOM	White Sands	0	0	0
IMCOM	Yuma Proving Ground	0	0	0
ARNG	Alabama	0	0	0
ARNG	Alaska	0	0	0
ARNG	Arizona	0	0	0
ARNG	Arkansas	0	0	0
ARNG	California	0	0	0
ARNG	Colorado	0	0	0
ARNG	Connecticut	0	0	0
ARNG	Delaware	0	0	0
ARNG	District of Columbia	0	0	0
ARNG	Florida	1	1	1
ARNG	Georgia	0	0	0
ARNG	Guam Territory	0	0	0
ARNG	Hawaii	0	0	0
ARNG	Idaho	0	0	0
ARNG	Illinois	0	0	0
ARNG	Indiana	0	0	0
ARNG	Iowa	0	0	0
ARNG	Kansas	0	0	0
ARNG	Kentucky	0	0	0
ARNG	Louisiana	1	0	1
ARNG	Maine	0	0	0
ARNG	Maryland	0	0	0
ARNG	Massachusetts	0	0	0

Command	Installation	RCW Count		
POM		FY19	FY20	FY21
ARNG	Michigan	0	0	0
ARNG	Minnesota	0	0	0
ARNG	Mississippi	1	0	1
ARNG	Missouri	0	0	0
ARNG	Montana	0	0	0
ARNG	Nebraska	0	0	0
ARNG	Nevada	0	0	0
ARNG	New Hampshire	0	0	0
ARNG	New Jersey	0	0	0
ARNG	New Mexico	0	0	0
ARNG	New York	0	0	0
ARNG	North Carolina	0	0	0
ARNG	North Dakota	0	0	0
ARNG	Ohio	0	0	0
ARNG	Oklahoma	0	0	0
ARNG	Oregon	0	0	0
ARNG	Pennsylvania	0	0	0
ARNG	Puerto Rico	0	0	0
ARNG	Rhode Island	0	0	0
ARNG	South Carolina	1	1	1
ARNG	South Dakota	0	0	0
ARNG	Tennessee	0	0	0
ARNG	Texas	0	0	0
ARNG	Utah	0	0	0
ARNG	Vermont	0	0	0
ARNG	Virgin Islands	0	0	0
ARNG	Virginia	0	0	0
ARNG	Washington	0	0	0
ARNG	West Virginia	0	0	0
ARNG	Wisconsin	0	0	0
ARNG	Wyoming	0	0	0
USAR	63rd RSC	0	0	0

Command	Installation	RCW Count		
POM		FY19	FY20	FY21
USAR	81st RSC	0	0	0
USAR	88th RSC	0	0	0
USAR	99th RSC	0	0	0
USAR	9th MSC	0	0	0
USAR	Fort Buchanan	0	0	0
USAR	Fort Devens	0	0	0
USAR	Fort Hunter Liggett (includes Camp Parks)	0	0	0
USAR	Fort McCoy	0	0	0
AMC	MOT Concord	0	0	0
AMC	MOT Sunny Point	1	1	1

NLEB counts were determined based on its scientific name (*Myotis septentrionalis*) and counted by limiting “onsite” to only one onsite count and did count twice if it was reported as present both onsite and contiguous. Tables 78 and 79 indicate the counts of NLEB by command and installation, respectively.

Table 78. NLEB by command.

Command	NLEB Count		
POM	FY19	FY20	FY21
IMCOM	12	12	12
ARNG	37	37	32
USAR	4	4	4
AMC	0	0	0
Total	53	53	48

Table 79. NLEB by installation.

Command	Installation	NLEB Count		
POM		FY19	FY20	FY21
IMCOM	Aberdeen Proving Ground	0	0	0
IMCOM	Adelphi	0	0	0
IMCOM	Carlisle Barracks	0	0	0
IMCOM	Detroit Arsenal	0	0	0
IMCOM	Dugway	0	0	0
IMCOM	Fort A. P. Hill	0	0	0
IMCOM	Fort Belvoir	1	1	1
IMCOM	Fort Benning	1	1	1
IMCOM	Fort Bliss	0	0	0
IMCOM	Fort Bragg	0	0	0
IMCOM	Fort Campbell	0	0	0
IMCOM	Fort Carson	1	1	1
IMCOM	Fort Detrick	0	0	0
IMCOM	Fort Drum	0	0	0
IMCOM	Fort Gordon	1	1	1
IMCOM	Fort Greely	0	0	0
IMCOM	Fort Hamilton	0	0	0
IMCOM	Fort Hood	0	0	0
IMCOM	Fort Huachuca	0	0	0
IMCOM	Fort Irwin	0	0	0
IMCOM	Fort Jackson	0	0	0
IMCOM	Fort Knox	1	1	1
IMCOM	Fort Leavenworth	0	0	1
IMCOM	Fort Lee	0	0	1
IMCOM	Fort Leonard Wood	1	1	0
IMCOM	Fort Lewis McChord (JBLM)	0	0	0
IMCOM	Fort Meade	1	1	1
IMCOM	Fort Polk	0	0	0
IMCOM	Fort Riley	0	0	0
IMCOM	Fort Rucker	1	1	1
IMCOM	Fort Sill	0	0	0

Command	Installation	NLEB Count		
POM		FY19	FY20	FY21
IMCOM	Fort Stewart (Hunter AAF)	0	0	0
IMCOM	Fort Wainwright	0	0	0
IMCOM	Joint Base Myer-Henderson Hall	0	0	0
IMCOM	Kwajalein Atoll	0	0	0
IMCOM	Picatinny	1	1	0
IMCOM	Presidio of Monterey	0	0	0
IMCOM	Redstone Arsenal	1	1	1
IMCOM	Rock Island Arsenal	1	1	1
IMCOM	USAG Ansbach	0	0	0
IMCOM	USAG Bavaria - Garmish	0	0	0
IMCOM	USAG Bavaria - Grafenwoer	0	0	0
IMCOM	USAG Bavaria - Hohenfels	1	1	1
IMCOM	USAG Benelux	0	0	0
IMCOM	USAG Daegu	0	0	0
IMCOM	USAG Hawaii	0	0	0
IMCOM	USAG Humphreys	0	0	0
IMCOM	USAG Italy	0	0	0
IMCOM	USAG Japan	0	0	0
IMCOM	USAG Miami	0	0	0
IMCOM	USAG Natick	0	0	0
IMCOM	USAG Red Cloud	0	0	0
IMCOM	USAG Rheinland-Pfalz	0	0	0
IMCOM	USAG Rheinland-Pfalz - Baumholder	0	0	0
IMCOM	USAG Stuttgart	0	0	0
IMCOM	USAG Weisbaden	0	0	0
IMCOM	USAG Yongsan	0	0	0
IMCOM	West Point	0	0	0
IMCOM	White Sands	0	0	0
IMCOM	Yuma Proving Ground	0	0	0
ARNG	Alabama	0	0	0
ARNG	Alaska	0	0	0
ARNG	Arizona	0	0	0

Command	Installation	NLEB Count		
POM		FY19	FY20	FY21
ARNG	Arkansas	0	0	0
ARNG	California	1	1	1
ARNG	Colorado	0	0	0
ARNG	Connecticut	1	1	1
ARNG	Delaware	0	0	0
ARNG	District of Columbia	0	0	0
ARNG	Florida	0	0	1
ARNG	Georgia	0	0	0
ARNG	Guam Territory	0	0	0
ARNG	Hawaii	0	0	0
ARNG	Idaho	0	0	0
ARNG	Illinois	0	0	0
ARNG	Indiana	2	2	1
ARNG	Iowa	2	2	1
ARNG	Kansas	1	1	1
ARNG	Kentucky	1	1	0
ARNG	Louisiana	2	2	1
ARNG	Maine	0	0	1
ARNG	Maryland	2	2	2
ARNG	Massachusetts	1	1	1
ARNG	Michigan	2	2	1
ARNG	Minnesota	2	2	2
ARNG	Mississippi	1	1	1
ARNG	Missouri	0	0	0
ARNG	Montana	3	3	2
ARNG	Nebraska	0	0	0
ARNG	Nevada	1	1	1
ARNG	New Hampshire	0	0	0
ARNG	New Jersey	1	1	1
ARNG	New Mexico	1	1	1
ARNG	New York	0	0	0
ARNG	North Carolina	2	2	1

Command	Installation	NLEB Count		
POM		FY19	FY20	FY21
ARNG	North Dakota	0	0	0
ARNG	Ohio	3	3	1
ARNG	Oklahoma	3	3	2
ARNG	Oregon	0	0	1
ARNG	Pennsylvania	0	0	0
ARNG	Puerto Rico	1	1	1
ARNG	Rhode Island	0	0	1
ARNG	South Carolina	0	0	0
ARNG	South Dakota	0	0	1
ARNG	Tennessee	2	2	1
ARNG	Texas	0	0	0
ARNG	Utah	0	0	0
ARNG	Vermont	0	0	1
ARNG	Virgin Islands	1	1	1
ARNG	Virginia	0	0	0
ARNG	Washington	1	1	1
ARNG	West Virginia	0	0	0
ARNG	Wisconsin	0	0	0
ARNG	Wyoming	0	0	0
USAR	63rd RSC	0	0	0
USAR	81st RSC	0	0	0
USAR	88th RSC	0	0	0
USAR	99th RSC	0	0	0
USAR	9th MSC	1	1	1
USAR	Fort Buchanan	0	0	0
USAR	Fort Devens	2	2	2
USAR	Fort Hunter Liggett (includes Camp Parks)	0	0	0
USAR	Fort McCoy	0	0	0
AMC	MOT Concord	0	0	0
AMC	MOT Sunny Point	1	1	1

Section V. installations with Bald and Golden Eagles

Table 80 indicates the installations with Bald and Golden Eagle permits (BEGPA). Tables 81 and 82 indicate the number of installations with Bald and Golden Eagle permits by command and installation, respectively. The installations with Bald and Golden Eagles populations were as reported by DAIM-ISE, 30 December 2015, EQ Data Call, second half FY17, and DAIM-ISE May 2018 (POM FY19, FY20, FY21, respectively). In POM FY21, installations were defaulted to a T/F value rather than allowing values greater than 1 for a single installation. This may be disputed by installations that are discontinuous.

Table 80. Installations with Bald and Golden Eagles permits.

Command	Installation
IMCOM	Aberdeen Proving Ground
IMCOM	Dugway Proving Ground
IMCOM	White Sands Missile Range

Table 81. Installations with Bald and Golden Eagles by command.

Command	Installations with Bald and Golden Eagles		
POM	FY19	FY20	FY21
IMCOM	13	16	15
ARNG	22	21	21
USAR	0	0	-
AMC	1	2	2
Total	36	39	38

Table 82. Installations with Bald and Golden Eagles by installation.

Command	Installation	Installations with Bald and Golden Eagles		
		FY19	FY20	FY21
POM				
IMCOM	Aberdeen Proving Ground	0	0	0
IMCOM	Adelphi	0	0	0
IMCOM	Carlisle Barracks	0	0	0
IMCOM	Detroit Arsenal	0	0	0
IMCOM	Dugway	1	1	1
IMCOM	Fort A. P. Hill	0	0	0
IMCOM	Fort Belvoir	1	1	1
IMCOM	Fort Benning	0	0	0
IMCOM	Fort Bliss	1	1	1
IMCOM	Fort Bragg	0	0	0
IMCOM	Fort Campbell	0	1	1
IMCOM	Fort Carson	0	0	0
IMCOM	Fort Detrick	0	0	0
IMCOM	Fort Drum	0	0	0
IMCOM	Fort Gordon	1	1	1
IMCOM	Fort Greely	0	0	0
IMCOM	Fort Hamilton	0	0	0
IMCOM	Fort Hood	0	0	0
IMCOM	Fort Huachuca	0	0	0
IMCOM	Fort Irwin	0	0	0
IMCOM	Fort Jackson	0	0	0
IMCOM	Fort Knox	1	1	1
IMCOM	Fort Leavenworth	1	1	1
IMCOM	Fort Lee	0	0	0
IMCOM	Fort Leonard Wood	0	0	0
IMCOM	Fort Lewis McChord (JBLM)	1	2	1
IMCOM	Fort Meade	0	0	0
IMCOM	Fort Polk	0	0	0
IMCOM	Fort Riley	1	1	1
IMCOM	Fort Rucker	1	1	1
IMCOM	Fort Sill	0	0	0

Command	Installation	Installations with Bald and Golden Eagles		
POM		FY19	FY20	FY21
IMCOM	Fort Stewart (Hunter AAF)	1	1	1
IMCOM	Fort Wainwright	0	0	0
IMCOM	Joint Base Myer-Henderson Hall	0	0	0
IMCOM	Kwajalein Atoll	0	0	0
IMCOM	Picatinny	0	1	1
IMCOM	Presidio of Monterey	1	1	1
IMCOM	Redstone Arsenal	0	0	0
IMCOM	Rock Island Arsenal	1	1	1
IMCOM	USAG Ansbach	0	0	0
IMCOM	USAG Bavaria - Garmish	0	0	0
IMCOM	USAG Bavaria - Grafenwoer	0	0	0
IMCOM	USAG Bavaria - Hohenfels	0	0	0
IMCOM	USAG Benelux	0	0	0
IMCOM	USAG Daegu	0	0	0
IMCOM	USAG Hawaii	0	0	0
IMCOM	USAG Humphreys	0	0	0
IMCOM	USAG Italy	0	0	0
IMCOM	USAG Japan	0	0	0
IMCOM	USAG Miami	0	0	0
IMCOM	USAG Natick	0	0	0
IMCOM	USAG Red Cloud	0	0	0
IMCOM	USAG Rheinland-Pfalz	0	0	0
IMCOM	USAG Rheinland-Pfalz - Baumholder	0	0	0
IMCOM	USAG Stuttgart	0	0	0
IMCOM	USAG Weisbaden	0	0	0
IMCOM	USAG Yongsan	0	0	0
IMCOM	West Point	1	1	1
IMCOM	White Sands	0	0	0
IMCOM	Yuma Proving Ground	0	0	0
ARNG	Alabama	0	0	0
ARNG	Alaska	0	0	0
ARNG	Arizona	1	1	1

Command	Installation	Installations with Bald and Golden Eagles		
POM		FY19	FY20	FY21
ARNG	Arkansas	1	1	1
ARNG	California	1	1	1
ARNG	Colorado	0	0	0
ARNG	Connecticut	0	0	0
ARNG	Delaware	0	0	0
ARNG	District of Columbia	0	0	0
ARNG	Florida	1	1	1
ARNG	Georgia	0	0	0
ARNG	Guam Territory	0	0	0
ARNG	Hawaii	0	0	0
ARNG	Idaho	1	1	1
ARNG	Illinois	1	1	1
ARNG	Indiana	1	1	1
ARNG	Iowa	0	0	0
ARNG	Kansas	0	0	0
ARNG	Kentucky	0	0	0
ARNG	Louisiana	0	0	0
ARNG	Maine	0	0	0
ARNG	Maryland	0	0	0
ARNG	Massachusetts	0	0	0
ARNG	Michigan	1	1	1
ARNG	Minnesota	1	1	1
ARNG	Mississippi	0	0	0
ARNG	Missouri	1	1	1
ARNG	Montana	0	0	0
ARNG	Nebraska	1	1	1
ARNG	Nevada	0	0	0
ARNG	New Hampshire	0	0	0
ARNG	New Jersey	0	0	0
ARNG	New Mexico	0	0	0
ARNG	New York	1	1	1
ARNG	North Carolina	0	0	0

Command	Installation	Installations with Bald and Golden Eagles		
POM		FY19	FY20	FY21
ARNG	North Dakota	0	0	0
ARNG	Ohio	1	1	1
ARNG	Oklahoma	0	0	0
ARNG	Oregon	1	1	1
ARNG	Pennsylvania	1	1	1
ARNG	Puerto Rico	0	0	0
ARNG	Rhode Island	0	0	0
ARNG	South Carolina	1	1	1
ARNG	South Dakota	0	0	0
ARNG	Tennessee	0	0	0
ARNG	Texas	1	0	0
ARNG	Utah	1	1	1
ARNG	Vermont	0	0	0
ARNG	Virgin Islands	0	0	0
ARNG	Virginia	1	1	1
ARNG	Washington	1	1	1
ARNG	West Virginia	1	1	1
ARNG	Wisconsin	0	0	0
ARNG	Wyoming	1	1	1
USAR	63rd RSC	0	0	0
USAR	81st RSC	0	0	0
USAR	88th RSC	0	0	0
USAR	99th RSC	0	0	0
USAR	9th MSC	0	0	0
USAR	Fort Buchanan	0	0	0
USAR	Fort Devens	0	0	0
USAR	Fort Hunter Liggett (includes Camp Parks)	0	0	0
USAR	Fort McCoy	0	0	0
AMC	MOT Concord	0	1	1
AMC	MOT Sunny Point	1	1	1

SECTION W. Number of Emergency Planning and Community Right-to-Know Act (EPCRA) Section 313 Form R Reports

Tables 83 and 84 summarize the number of EPCRA Section 313 Form R reports by command and installation, as reported by United States Environmental Protection Agency reporting, CY14 (POM FY19) and United States Environmental Protection Agency reporting, CY15 (POM FY20).

Table 83. Number of EPCRA Section 313 Form R reports by command.

Command	EPCRA Section 313 Form R Reports	
	FY20	FY21
IMCOM	153	155
ARNG	79	82
USAR	6	7
AMC	-	-
Total	238	244

Table 84. Number of EPCRA Section 313 Form R reports by installation.

Command	Installation	EPCRA Section 313 Form R Reports	
		FY20	FY21
IMCOM	Aberdeen Proving Ground	2	5
IMCOM	Adelphi	0	0
IMCOM	Carlisle Barracks	0	0
IMCOM	Detroit Arsenal	0	0
IMCOM	Dugway	0	2
IMCOM	Fort A. P. Hill	4	6
IMCOM	Fort Belvoir	0	2
IMCOM	Fort Benning	7	5
IMCOM	Fort Bliss	15	6
IMCOM	Fort Bragg	10	12
IMCOM	Fort Campbell	2	3
IMCOM	Fort Carson	7	6
IMCOM	Fort Detrick	3	3
IMCOM	Fort Drum	5	5

Command	Installation	EPCRA Section 313 Form R Reports	
POM		FY20	FY21
IMCOM	Fort Gordon	2	1
IMCOM	Fort Greely	0	0
IMCOM	Fort Hamilton	0	0
IMCOM	Fort Hood	3	3
IMCOM	Fort Huachuca	0	1
IMCOM	Fort Irwin	12	11
IMCOM	Fort Jackson	4	3
IMCOM	Fort Knox	5	6
IMCOM	Fort Leavenworth	0	0
IMCOM	Fort Lee	1	1
IMCOM	Fort Leonard Wood	4	3
IMCOM	Fort Lewis McChord (JBLM)	10	11
IMCOM	Fort Meade	1	2
IMCOM	Fort Polk	3	3
IMCOM	Fort Riley	5	4
IMCOM	Fort Rucker	3	3
IMCOM	Fort Sill	6	6
IMCOM	Fort Stewart (Hunter AAF)	5	7
IMCOM	Fort Wainwright	12	16
IMCOM	Joint Base Myer-Henderson Hall	2	2
IMCOM	Kwajalein Atoll	0	0
IMCOM	Picatinny	0	0
IMCOM	Presidio of Monterey	0	0
IMCOM	Redstone Arsenal	1	1
IMCOM	Rock Island Arsenal	2	0
IMCOM	USAG Ansbach	0	0
IMCOM	USAG Bavaria - Garmish	0	0
IMCOM	USAG Bavaria - Grafenwoer	0	0
IMCOM	USAG Bavaria - Hohenfels	0	0
IMCOM	USAG Benelux	0	0
IMCOM	USAG Daegu	0	0
IMCOM	USAG Hawaii	9	9

Command	Installation	EPCRA Section 313 Form R Reports	
POM		FY20	FY21
IMCOM	USAG Humphreys	0	0
IMCOM	USAG Italy	0	0
IMCOM	USAG Japan	0	0
IMCOM	USAG Miami	0	0
IMCOM	USAG Natick	0	0
IMCOM	USAG Red Cloud	0	0
IMCOM	USAG Rheinland-Pfalz	0	0
IMCOM	USAG Rheinland-Pfalz - Baumholder	0	0
IMCOM	USAG Stuttgart	0	0
IMCOM	USAG Weisbaden	0	0
IMCOM	USAG Yongsan	0	0
IMCOM	West Point	3	3
IMCOM	White Sands	1	2
IMCOM	Yuma Proving Ground	4	2
ARNG	Alabama	2	1
ARNG	Alaska	0	0
ARNG	Arizona	2	3
ARNG	Arkansas	5	4
ARNG	California	4	4
ARNG	Colorado	0	0
ARNG	Connecticut	0	0
ARNG	Delaware	0	1
ARNG	District of Columbia	0	0
ARNG	Florida	3	3
ARNG	Georgia	1	1
ARNG	Guam Territory	0	0
ARNG	Hawaii	0	0
ARNG	Idaho	4	4
ARNG	Illinois	1	1
ARNG	Indiana	2	2
ARNG	Iowa	3	3
ARNG	Kansas	0	0

Command	Installation	EPCRA Section 313 Form R Reports	
POM		FY20	FY21
ARNG	Kentucky	1	1
ARNG	Louisiana	0	2
ARNG	Maine	1	1
ARNG	Maryland	0	0
ARNG	Massachusetts	1	1
ARNG	Michigan	5	5
ARNG	Minnesota	3	2
ARNG	Mississippi	5	6
ARNG	Missouri	3	4
ARNG	Montana	2	2
ARNG	Nebraska	1	1
ARNG	Nevada	0	0
ARNG	New Hampshire	0	0
ARNG	New Jersey	0	0
ARNG	New Mexico	0	0
ARNG	New York	1	1
ARNG	North Carolina	1	1
ARNG	North Dakota	0	0
ARNG	Ohio	3	3
ARNG	Oklahoma	1	1
ARNG	Oregon	2	1
ARNG	Pennsylvania	3	2
ARNG	Puerto Rico	1	1
ARNG	Rhode Island	1	0
ARNG	South Carolina	0	0
ARNG	South Dakota	0	0
ARNG	Tennessee	2	2
ARNG	Texas	4	4
ARNG	Utah	1	1
ARNG	Vermont	3	3
ARNG	Virgin Islands	0	0
ARNG	Virginia	6	6

Command	Installation	EPCRA Section 313 Form R Reports	
		FY20	FY21
POM			
ARNG	Washington	0	0
ARNG	West Virginia	1	1
ARNG	Wisconsin	0	0
ARNG	Wyoming	0	3
USAR	63rd RSC	0	0
USAR	81st RSC	0	0
USAR	88th RSC	0	0
USAR	99th RSC	1	2
USAR	9th MSC	0	0
USAR	Fort Buchanan	0	0
USAR	Fort Devens	1	1
USAR	Fort Hunter Liggett (includes Camp Parks)	2	2
USAR	Fort McCoy	2	2
AMC	MOT Concord	0	0
AMC	MOT Sunny Point	0	0

Section X. Number of Underground Storage Tanks (UST) and Above-Ground Storage Tanks (AST)

The number of UST reported as status code “active” in HQIIS under Category Codes 12410, 12411, 12440, 12450, 12460, 12480, 41123, 41131, 41141, and 41181 and the number of AST reported as status code “active” in HQIIS in Category Codes 41120, 41121, 41130, 41140, 41160, and 41180, as of August 2016 (POM FY19) and June 2017 (POM FY20). Tables 85 and 86 summarize tank counts by command and installation, respectively.

Table 85. Storage tanks by command.

Command	Number of Storage Tanks					
	UST	AST	UST	AST	UST	AST
POM	FY19		FY20		FY21	
IMCOM	343	130	387	133	390	142
ARNG	16	4	16	3	16	2
USAR	213	32	203	30	193	30
AMC	1	-	1	-	1	-
Total	573	166	607	166	600	174

Table 86. Storage tanks by installation.

Command	Installation	Number of UST	Number of AST	Number of UST	Number of AST	Number of UST	Number of AST
POM		FY19		FY20		FY21	
IMCOM	Aberdeen Proving Ground	15	0	17	1	17	1
IMCOM	Adelphi	0	0	0	0	0	0
IMCOM	Carlisle Barracks	0	0	0	0	0	0
IMCOM	Detroit Arsenal	3	0	3	0	3	0
IMCOM	Dugway	0	6	0	2	3	2
IMCOM	Fort A. P. Hill	0	10	0	10	0	10
IMCOM	Fort Belvoir	16	3	16	3	17	3
IMCOM	Fort Benning	38	0	47	0	39	3
IMCOM	Fort Bliss	9	15	9	15	19	15
IMCOM	Fort Bragg	5	0	5	0	5	0
IMCOM	Fort Campbell	15	15	16	17	17	22
IMCOM	Fort Carson	7	1	7	1	9	1
IMCOM	Fort Detrick	4	0	2	0	5	1

Command	Installation	Number of UST	Number of AST	Number of UST	Number of AST	Number of UST	Number of AST
POM		FY19		FY20		FY21	
IMCOM	Fort Drum	0	0	2	0	3	0
IMCOM	Fort Gordon	2	1	2	1	9	1
IMCOM	Fort Greely	2	1	2	1	2	1
IMCOM	Fort Hamilton	0	0	0	0	0	0
IMCOM	Fort Hood	1	3	1	3	1	3
IMCOM	Fort Huachuca	9	0	9	0	9	0
IMCOM	Fort Irwin	0	5	0	5	0	5
IMCOM	Fort Jackson	2	0	2	0	2	0
IMCOM	Fort Knox	0	0	0	0	0	3
IMCOM	Fort Leavenworth	3	0	3	0	3	0
IMCOM	Fort Lee	9	9	8	9	8	9
IMCOM	Fort Leonard Wood	2	2	8	4	6	2
IMCOM	Fort Lewis McChord (JBLM)	12	1	12	1	13	1
IMCOM	Fort Meade	0	0	2	3	2	3
IMCOM	Fort Polk	0	0	2	0	4	0
IMCOM	Fort Riley	7	4	7	4	7	4
IMCOM	Fort Rucker	1	3	1	3	1	3
IMCOM	Fort Sill	2	0	2	0	2	0
IMCOM	Fort Stewart (Hunter AAF)	0	6	0	6	0	6
IMCOM	Fort Wainwright	10	0	9	0	10	0
IMCOM	Joint Base Myer-Henderson Hall	7	0	11	0	11	0
IMCOM	Kwajalein Atoll	0	16	0	15	0	14
IMCOM	Picatinny	0	0	0	0	0	0
IMCOM	Presidio of Monterey	0	0	0	0	0	0
IMCOM	Redstone Arsenal	5	1	5	1	5	1
IMCOM	Rock Island Arsenal	0	1	0	0	0	0
IMCOM	USAG Ansbach	30	0	30	0	30	0
IMCOM	USAG Bavaria - Garmish	0	0	0	0	0	0
IMCOM	USAG Bavaria - Grafenwoer	4	0	5	0	5	0
IMCOM	USAG Bavaria - Hohenfels	11	9	11	9	11	9
IMCOM	USAG Benelux	2	0	9	0	5	0
IMCOM	USAG Daegu	3	1	3	2	3	2

Command	Installation	Number of UST	Number of AST	Number of UST	Number of AST	Number of UST	Number of AST
POM		FY19		FY20		FY21	
IMCOM	USAG Hawaii	10	2	10	2	10	2
IMCOM	USAG Humphreys	0	0	0	0	0	0
IMCOM	USAG Italy	11	0	11	0	11	0
IMCOM	USAG Japan	9	0	22	0	23	0
IMCOM	USAG Miami	0	0	0	0	0	0
IMCOM	USAG Natick	3	0	3	0	1	0
IMCOM	USAG Red Cloud	6	2	6	2	4	2
IMCOM	USAG Rheinland-Pfalz	17	0	14	0	13	0
IMCOM	USAG Rheinland-Pfalz - Baumholder	1	0	1	0	2	0
IMCOM	USAG Stuttgart	0	0	0	0	0	0
IMCOM	USAG Weisbaden	26	0	29	0	20	0
IMCOM	USAG Yongsan	7	4	7	4	7	4
IMCOM	West Point	7	0	7	0	7	0
IMCOM	White Sands	10	9	9	9	6	9
IMCOM	Yuma Proving Ground	0	0	0	0	0	0
ARNG	Alabama	4	0	4	0	3	0
ARNG	Alaska	0	0	0	0	0	0
ARNG	Arizona	2	3	2	3	2	3
ARNG	Arkansas	1	1	1	1	0	1
ARNG	California	17	0	17	0	17	0
ARNG	Colorado	0	0	0	0	0	0
ARNG	Connecticut	0	0	0	0	0	0
ARNG	Delaware	0	0	0	0	0	0
ARNG	District of Columbia	0	0	0	0	0	0
ARNG	Florida	5	4	2	4	2	4
ARNG	Georgia	0	0	0	0	0	0
ARNG	Guam Territory	0	0	0	0	0	0
ARNG	Hawaii	0	1	0	1	0	1
ARNG	Idaho	3	0	3	0	3	0
ARNG	Illinois	28	1	28	1	25	1
ARNG	Indiana	0	0	0	0	4	0

Command	Installation	Number of UST	Number of AST	Number of UST	Number of AST	Number of UST	Number of AST
POM		FY19		FY20		FY21	
ARNG	Iowa	21	0	21	0	21	0
ARNG	Kansas	0	0	0	0	0	0
ARNG	Kentucky	3	0	3	0	3	0
ARNG	Louisiana	0	2	0	2	0	2
ARNG	Maine	4	0	3	0	3	0
ARNG	Maryland	6	0	1	0	0	0
ARNG	Massachusetts	0	0	0	0	0	0
ARNG	Michigan	17	1	17	1	17	1
ARNG	Minnesota	7	7	7	7	7	7
ARNG	Mississippi	1	0	1	0	0	0
ARNG	Missouri	2	0	2	0	2	0
ARNG	Montana	2	1	2	1	2	1
ARNG	Nebraska	1	0	1	0	1	0
ARNG	Nevada	0	0	0	0	0	0
ARNG	New Hampshire	1	0	1	0	1	0
ARNG	New Jersey	1	0	1	0	1	0
ARNG	New Mexico	0	1	0	1	0	1
ARNG	New York	0	0	0	0	0	0
ARNG	North Carolina	1	2	1	0	1	0
ARNG	North Dakota	3	0	3	0	3	0
ARNG	Ohio	8	0	8	0	4	0
ARNG	Oklahoma	0	0	0	0	0	0
ARNG	Oregon	0	0	0	0	0	0
ARNG	Pennsylvania	21	0	24	0	24	0
ARNG	Puerto Rico	3	2	3	2	3	2
ARNG	Rhode Island	0	0	0	0	0	0
ARNG	South Carolina	10	0	9	0	9	0
ARNG	South Dakota	0	0	1	0	1	0
ARNG	Tennessee	0	0	0	0	0	0
ARNG	Texas	1	0	0	0	0	0
ARNG	Utah	6	0	6	0	5	0
ARNG	Vermont	0	1	0	1	0	1

Command	Installation	Number of UST	Number of AST	Number of UST	Number of AST	Number of UST	Number of AST
POM		FY19		FY20		FY21	
ARNG	Virgin Islands	0	0	0	0	0	0
ARNG	Virginia	20	0	17	0	15	0
ARNG	Washington	0	1	0	1	0	1
ARNG	West Virginia	0	0	0	0	0	0
ARNG	Wisconsin	12	4	12	4	12	4
ARNG	Wyoming	2	0	2	0	2	0
USAR	63rd RSC	0	0	0	0	0	0
USAR	81st RSC	2	0	2	0	2	0
USAR	88th RSC	0	2	0	1	0	0
USAR	99th RSC	3	2	3	2	3	2
USAR	9th MSC	0	0	0	0	0	0
USAR	Fort Buchanan	2	0	2	0	2	0
USAR	Fort Devens	0	0	0	0	0	0
USAR	Fort Hunter Liggett (includes Camp Parks)	3	0	3	0	3	0
USAR	Fort McCoy	6	0	6	0	6	0
AMC	MOT Concord	0	0	0	0	0	0
AMC	MOT Sunny Point	1	0	1	0	1	0

Section Y. Number of Buildings Built before 1978 and 1981

The following are the number of buildings built before 1978 and before 1981 for each installation, as reported in HQIIS, August 2016, June 2017, and February 2018 (POM FY 19, 20, and 21). Tables 87 and 88 summarize the buildings by command and installation, respectively.

Table 87. Summary by command of buildings built before 1978 and 1981.

Command	Buildings Built before 1978			Buildings Built before 1981		
POM	FY19	FY20	FY21	FY19	FY20	FY21
IMCOM	38,818	43,026	46,379	35,783	39,880	44,179
ARNG	47,789	46,981	12,710	44,258	43,410	12,102
USAR	7,089	6,634	2,176	6,649	6,223	2,102
AMC	407	507	170	350	436	123
Total	94,103	97,148	61,435	87,040	89,949	58,506

Table 88. Buildings built before 1978 and 1981.

Command	Installation	Buildings Built before 1978			Buildings Built before 1981		
POM		FY19	FY20	FY21	FY19	FY20	FY21
IMCOM	Aberdeen Proving Ground	925	935	889	941	951	902
IMCOM	Adelphi	106	106	59	113	113	61
IMCOM	Carlisle Barracks	399	379	109	402	382	110
IMCOM	Detroit Arsenal	93	92	61	96	95	62
IMCOM	Dugway	377	431	305	391	445	309
IMCOM	Fort A. P. Hill	305	284	162	372	351	228
IMCOM	Fort Belvoir	572	549	618	600	584	662
IMCOM	Fort Benning	766	819	1712	824	919	1755
IMCOM	Fort Bliss	1521	1480	1644	1537	1503	1661
IMCOM	Fort Bragg	1224	1126	2518	1312	1212	2561
IMCOM	Fort Campbell	601	613	1671	676	688	1777
IMCOM	Fort Carson	678	686	844	742	748	887
IMCOM	Fort Detrick	226	153	241	237	164	253
IMCOM	Fort Drum	351	307	179	362	311	181
IMCOM	Fort Gordon	645	601	697	673	622	705
IMCOM	Fort Greely	105	105	78	122	122	83
IMCOM	Fort Hamilton	155	133	45	155	133	45

Command	Installation	Buildings Built before 1978			Buildings Built before 1981		
POM		FY19	FY20	FY21	FY19	FY20	FY21
IMCOM	Fort Hood	1358	1362	2827	1548	1585	2936
IMCOM	Fort Huachuca	453	475	502	708	712	549
IMCOM	Fort Irwin	191	190	138	191	190	138
IMCOM	Fort Jackson	708	684	389	738	710	396
IMCOM	Fort Knox	909	846	1137	976	940	1167
IMCOM	Fort Leavenworth	237	249	499	239	251	501
IMCOM	Fort Lee	312	230	225	333	244	235
IMCOM	Fort Leonard Wood	819	801	1202	964	940	1286
IMCOM	Fort Lewis McChord (JBLM)	2928	1335	4456	3057	1446	4509
IMCOM	Fort Meade	211	223	931	223	234	936
IMCOM	Fort Polk	502	533	361	728	753	1000
IMCOM	Fort Riley	626	635	844	675	684	875
IMCOM	Fort Rucker	656	647	566	705	697	601
IMCOM	Fort Sill	1183	1171	1096	1249	1233	1117
IMCOM	Fort Stewart (Hunter AAF)	1114	1084	1103	1247	1187	1313
IMCOM	Fort Wainwright	382	414	293	432	462	304
IMCOM	Joint Base Myer-Henderson Hall	285	319	172	292	326	177
IMCOM	Kwajalein Atoll	697	681	452	721	706	457
IMCOM	Picatinny	592	591	785	650	649	792
IMCOM	Presidio of Monterey	177	140	1036	183	143	1043
IMCOM	Redstone Arsenal	1717	1771	986	1783	1832	1008
IMCOM	Rock Island Arsenal	219	187	121	221	190	121
IMCOM	USAG Ansbach	96	553	329	130	600	337
IMCOM	USAG Bavaria - Garmish	14	132	70	14	133	70
IMCOM	USAG Bavaria - Grafenwoer	613	1853	900	753	2004	945
IMCOM	USAG Bavaria - Hohenfels	224	726	368	252	759	371
IMCOM	USAG Benelux	91	316	172	99	330	177
IMCOM	USAG Daegu	534	513	304	583	560	342
IMCOM	USAG Hawaii	1157	1154	1598	1199	1196	1616
IMCOM	USAG Humphreys	279	173	182	299	192	200
IMCOM	USAG Italy	662	693	531	817	856	656
IMCOM	USAG Japan	472	930	441	516	1030	485

Command	Installation	Buildings Built before 1978			Buildings Built before 1981		
POM		FY19	FY20	FY21	FY19	FY20	FY21
IMCOM	USAG Miami	0	0	0	0	1	2
IMCOM	USAG Natick	143	139	95	152	148	97
IMCOM	USAG Red Cloud	789	782	530	847	840	556
IMCOM	USAG Rheinland-Pfalz	923	2285	1906	981	2343	1926
IMCOM	USAG Rheinland-Pfalz - Baumholder	164	701	413	181	719	418
IMCOM	USAG Stuttgart	184	726	404	208	753	408
IMCOM	USAG Weisbaden	132	648	439	145	655	443
IMCOM	USAG Yongsan	753	997	796	828	1080	839
IMCOM	West Point	630	636	602	676	696	622
IMCOM	White Sands	2056	2002	1791	2118	2060	1802
IMCOM	Yuma Proving Ground	542	554	355	602	614	364
ARNG	Alabama	767	770	192	947	1017	226
ARNG	Alaska	83	83	63	88	88	66
ARNG	Arizona	1597	1637	951	1648	1679	960
ARNG	Arkansas	1531	1796	415	1766	2116	441
ARNG	California	3199	3141	921	3239	3182	927
ARNG	Colorado	118	99	16	155	121	18
ARNG	Connecticut	233	211	48	279	257	57
ARNG	Delaware	252	250	73	285	281	77
ARNG	District of Columbia	39	39	2	57	57	2
ARNG	Florida	2380	2240	356	2505	2363	407
ARNG	Georgia	812	806	180	818	812	184
ARNG	Guam Territory	40	40	30	40	40	30
ARNG	Hawaii	114	126	90	124	141	95
ARNG	Idaho	438	420	41	487	467	49
ARNG	Illinois	1032	1101	79	1154	1242	87
ARNG	Indiana	523	525	220	562	564	293
ARNG	Iowa	1698	1844	199	1796	1951	207
ARNG	Kansas	287	285	52	294	292	54
ARNG	Kentucky	765	759	79	879	865	88
ARNG	Louisiana	1284	1222	790	1624	1540	879
ARNG	Maine	366	329	48	419	383	53

Command	Installation	Buildings Built before 1978			Buildings Built before 1981		
POM		FY19	FY20	FY21	FY19	FY20	FY21
ARNG	Maryland	439	416	115	508	485	121
ARNG	Massachusetts	632	625	191	638	631	193
ARNG	Michigan	1442	1234	332	1500	1289	352
ARNG	Minnesota	1748	1669	988	1850	1765	1019
ARNG	Mississippi	4140	4032	763	4315	4207	783
ARNG	Missouri	742	688	162	784	716	162
ARNG	Montana	518	496	79	546	524	84
ARNG	Nebraska	440	440	180	458	458	180
ARNG	Nevada	237	232	28	237	232	28
ARNG	New Hampshire	556	510	38	564	517	40
ARNG	New Jersey	564	559	114	607	601	116
ARNG	New Mexico	37	36	7	60	59	13
ARNG	New York	566	552	143	603	581	146
ARNG	North Carolina	438	438	123	465	465	130
ARNG	North Dakota	358	341	233	361	344	235
ARNG	Ohio	2020	1973	1125	2056	2009	1135
ARNG	Oklahoma	567	555	194	602	588	202
ARNG	Oregon	680	702	130	836	842	140
ARNG	Pennsylvania	2501	2409	602	2569	2526	609
ARNG	Puerto Rico	989	1061	278	1087	1141	281
ARNG	Rhode Island	384	372	79	426	414	81
ARNG	South Carolina	1126	1004	104	1383	1251	125
ARNG	South Dakota	221	210	55	273	261	62
ARNG	Tennessee	673	658	114	875	858	131
ARNG	Texas	965	826	198	1059	875	204
ARNG	Utah	538	500	85	585	535	94
ARNG	Vermont	366	394	93	415	444	100
ARNG	Virgin Islands	4	4	1	4	4	1
ARNG	Virginia	921	919	381	942	942	392
ARNG	Washington	177	174	68	192	190	76
ARNG	West Virginia	289	285	69	290	286	69
ARNG	Wisconsin	1267	1219	110	1306	1257	111

Command	Installation	Buildings Built before 1978			Buildings Built before 1981		
POM		FY19	FY20	FY21	FY19	FY20	FY21
ARNG	Wyoming	155	154	75	227	226	95
USAR	63rd RSC	699	596	109	792	691	121
USAR	81st RSC	1041	1010	232	1135	1088	251
USAR	88th RSC	1821	1709	300	1967	1843	321
USAR	99th RSC	1439	1302	261	1507	1368	268
USAR	9th MSC	34	19	3	36	19	3
USAR	Fort Buchanan	207	206	162	210	209	163
USAR	Fort Devens	128	128	51	142	142	55
USAR	Fort Hunter Liggett (includes Camp Parks)	283	263	138	294	276	144
USAR	Fort McCoy	997	990	846	1006	998	850
AMC	MOT Concord	138	198	78	176	247	121
AMC	MOT Sunny Point	212	238	45	231	260	49

Section Z. Installations with Solid Waste Permits

The following installations hold Solid Waste Permits as reported in the EQ data call, 2Q FY15 (POM FY19) and first half FY17 (POM FY20). Tables 89 and 90 summarize the number of solid waste permits by command and installation, respectively.

Table 89. Number of installations with a solid waste permit by command.

Command	Solid Waste Permits	
POM	FY19	FY20/21
IMCOM	34	34
ARNG	8	9
USAR	2	2
AMC	0	0
Total	44	45

Table 90. Number of solid waste permits by installation.

Command	Installation	Solid Waste Permits	
POM		FY19	FY20/21
IMCOM	Aberdeen Proving Ground	3	3
IMCOM	Adelphi	0	0
IMCOM	Carlisle Barracks	0	0
IMCOM	Detroit Arsenal	0	0
IMCOM	Dugway	1	1
IMCOM	Fort A. P. Hill	2	2
IMCOM	Fort Belvoir	4	4
IMCOM	Fort Benning	2	2
IMCOM	Fort Bliss	1	1
IMCOM	Fort Bragg	2	2
IMCOM	Fort Campbell	1	1
IMCOM	Fort Carson	0	0
IMCOM	Fort Detrick	2	2
IMCOM	Fort Drum	0	0
IMCOM	Fort Gordon	6	6
IMCOM	Fort Greely	2	2
IMCOM	Fort Hamilton	0	0

Command	Installation	Solid Waste Permits	
POM		FY19	FY20/21
IMCOM	Fort Hood	1	1
IMCOM	Fort Huachuca	0	0
IMCOM	Fort Irwin	2	2
IMCOM	Fort Jackson	0	0
IMCOM	Fort Knox	3	3
IMCOM	Fort Leavenworth	1	1
IMCOM	Fort Lee	0	0
IMCOM	Fort Leonard Wood	3	3
IMCOM	Fort Lewis McChord (JBLM)	5	5
IMCOM	Fort Meade	2	2
IMCOM	Fort Polk	0	0
IMCOM	Fort Riley	6	6
IMCOM	Fort Rucker	0	0
IMCOM	Fort Sill	3	3
IMCOM	Fort Stewart (Hunter AAF)	4	4
IMCOM	Fort Wainwright	1	1
IMCOM	Joint Base Myer-Henderson Hall	0	0
IMCOM	Kwajalein Atoll	1	1
IMCOM	Picatinny	0	0
IMCOM	Presidio of Monterey	0	0
IMCOM	Redstone Arsenal	1	1
IMCOM	Rock Island Arsenal	0	0
IMCOM	USAG Ansbach	3	3
IMCOM	USAG Bavaria - Garmish	0	0
IMCOM	USAG Bavaria - Grafenwoer	1	1
IMCOM	USAG Bavaria - Hohenfels	2	2
IMCOM	USAG Benelux	1	1
IMCOM	USAG Daegu	0	0
IMCOM	USAG Hawaii	0	0
IMCOM	USAG Humphreys	0	0
IMCOM	USAG Italy	0	0
IMCOM	USAG Japan	1	1

Command	Installation	Solid Waste Permits	
POM		FY19	FY20/21
IMCOM	USAG Miami	0	0
IMCOM	USAG Natick	0	0
IMCOM	USAG Red Cloud	0	0
IMCOM	USAG Rheinland-Pfalz	0	0
IMCOM	USAG Rheinland-Pfalz - Baumholder	1	1
IMCOM	USAG Stuttgart	1	1
IMCOM	USAG Weisbaden	0	0
IMCOM	USAG Yongsan	0	0
IMCOM	West Point	2	2
IMCOM	White Sands	1	1
IMCOM	Yuma Proving Ground	1	1
ARNG	Alabama	0	0
ARNG	Alaska	0	0
ARNG	Arizona	0	0
ARNG	Arkansas	1	1
ARNG	California	1	1
ARNG	Colorado	0	0
ARNG	Connecticut	0	0
ARNG	Delaware	0	0
ARNG	District of Columbia	0	0
ARNG	Florida	0	0
ARNG	Georgia	0	0
ARNG	Guam Territory	0	0
ARNG	Hawaii	0	0
ARNG	Idaho	0	0
ARNG	Illinois	0	0
ARNG	Indiana	0	0
ARNG	Iowa	0	0
ARNG	Kansas	0	0
ARNG	Kentucky	1	1
ARNG	Louisiana	0	0
ARNG	Maine	0	0

Command	Installation	Solid Waste Permits	
POM		FY19	FY20/21
ARNG	Maryland	0	1
ARNG	Massachusetts	0	0
ARNG	Michigan	0	0
ARNG	Minnesota	4	4
ARNG	Mississippi	1	1
ARNG	Missouri	0	0
ARNG	Montana	0	0
ARNG	Nebraska	3	3
ARNG	Nevada	0	0
ARNG	New Hampshire	0	0
ARNG	New Jersey	0	0
ARNG	New Mexico	0	0
ARNG	New York	0	0
ARNG	North Carolina	0	0
ARNG	North Dakota	1	1
ARNG	Ohio	0	0
ARNG	Oklahoma	0	0
ARNG	Oregon	0	0
ARNG	Pennsylvania	0	0
ARNG	Puerto Rico	0	0
ARNG	Rhode Island	0	0
ARNG	South Carolina	0	0
ARNG	South Dakota	0	0
ARNG	Tennessee	0	0
ARNG	Texas	0	0
ARNG	Utah	0	0
ARNG	Vermont	0	0
ARNG	Virgin Islands	0	0
ARNG	Virginia	2	2
ARNG	Washington	0	0
ARNG	West Virginia	0	0
ARNG	Wisconsin	0	0

Command	Installation	Solid Waste Permits	
POM		FY19	FY20/21
ARNG	Wyoming	0	0
USAR	63rd RSC	0	0
USAR	81st RSC	0	0
USAR	88th RSC	0	0
USAR	99th RSC	0	0
USAR	9th MSC	0	0
USAR	Fort Buchanan	0	0
USAR	Fort Devens	0	0
USAR	Fort Hunter Liggett (includes Camp Parks)	1	1
USAR	Fort McCoy	1	1
AMC	MOT Concord	0	0
AMC	MOT Sunny Point	0	0

Section AA. Number of Solid Waste Landfills

Category Code 83410 is listed as a Sanitary Landfill. A Sanitary Landfill is defined as a site used for the disposal of solid waste material, other than hazardous waste. The following are the number of solid waste landfills per installation, reported in HQIIS as status “active” and “caretaker” and recorded under Category Code 83410, as of August 2016, June 2017, and February 2018 (POM FY 19, 20, and 21). The numbers recorded under the column FY21* are corrected per interviews with IMCOM. Tables 91 and 92 summarize the solid waste landfill counts by command and by installation, respectively.

Table 91. Summary by command of the number of solid waste landfills.

Command	Number of Solid Waste Landfills			
POM	FY19	FY20	FY21	FY21*
IMCOM	31	31	43	32
ARNG	2	3	3	3
USAR	2	2	2	2
AMC	0	0	0	0
Total	35	36	48	37

Table 92. The number of solid waste landfills by installation.

Command	Installation	Number of Solid Waste Landfills			
POM		FY19	FY20	FY21	FY21*
IMCOM	Aberdeen Proving Ground	1	1	10	1
IMCOM	Adelphi	0	0	0	0
IMCOM	Carlisle Barracks	0	0	0	0
IMCOM	Detroit Arsenal	0	0	0	0
IMCOM	Dugway	1	1	1	1
IMCOM	Fort A. P. Hill	0	0	0	0
IMCOM	Fort Belvoir	0	0	0	0
IMCOM	Fort Benning	1	1	1	1
IMCOM	Fort Bliss	1	1	1	1
IMCOM	Fort Bragg	3	3	3	3
IMCOM	Fort Campbell	1	1	1	1
IMCOM	Fort Carson	0	0	0	0

Command	Installation	Number of Solid Waste Landfills			
POM		FY19	FY20	FY21	FY21*
IMCOM	Fort Detrick	1	1	1	1
IMCOM	Fort Drum	0	0	0	0
IMCOM	Fort Gordon	1	1	1	1
IMCOM	Fort Greely	1	1	1	1
IMCOM	Fort Hamilton	0	0	0	0
IMCOM	Fort Hood	1	1	2	1
IMCOM	Fort Huachuca	0	0	0	0
IMCOM	Fort Irwin	1	1	1	1
IMCOM	Fort Jackson	1	1	1	1
IMCOM	Fort Knox	1	1	1	1
IMCOM	Fort Leavenworth	0	0	0	0
IMCOM	Fort Lee	0	0	0	0
IMCOM	Fort Leonard Wood	0	0	0	0
IMCOM	Fort Lewis McChord (JBLM)	2	2	2	2
IMCOM	Fort Meade	1	1	1	1
IMCOM	Fort Polk	2	2	2	2
IMCOM	Fort Riley	1	1	1	1
IMCOM	Fort Rucker	0	0	0	0
IMCOM	Fort Sill	2	2	2	2
IMCOM	Fort Stewart (Hunter AAF)	1	1	1	1
IMCOM	Fort Wainwright	1	1	1	1
IMCOM	Joint Base Myer-Henderson Hall	0	0	0	0
IMCOM	Kwajalein Atoll	0	0	0	0
IMCOM	Picatinny	0	0	0	0
IMCOM	Presidio of Monterey	0	0	0	0
IMCOM	Redstone Arsenal	1	0	1	1
IMCOM	Rock Island Arsenal	0	0	1	0
IMCOM	USAG Ansbach	0	0	0	0
IMCOM	USAG Bavaria - Garmish	0	0	0	0
IMCOM	USAG Bavaria - Grafenwoer	2	2	2	2
IMCOM	USAG Bavaria - Hohenfels	0	1	1	0
IMCOM	USAG Benelux	0	0	0	0

Command	Installation	Number of Solid Waste Landfills			
POM		FY19	FY20	FY21	FY21*
IMCOM	USAG Daegu	0	0	0	0
IMCOM	USAG Hawaii	0	0	0	0
IMCOM	USAG Humphreys	0	0	0	0
IMCOM	USAG Italy	0	0	0	0
IMCOM	USAG Japan	0	1	1	1
IMCOM	USAG Miami	0	0	0	0
IMCOM	USAG Natick	0	0	0	0
IMCOM	USAG Red Cloud	0	0	0	0
IMCOM	USAG Rheinland-Pfalz	0	0	0	0
IMCOM	USAG Rheinland-Pfalz - Baumholder	0	0	0	0
IMCOM	USAG Stuttgart	0	0	0	0
IMCOM	USAG Weisbaden	0	0	0	0
IMCOM	USAG Yongsan	0	0	0	0
IMCOM	West Point	1	1	0	1
IMCOM	White Sands	1	0	1	1
IMCOM	Yuma Proving Ground	1	1	1	1
ARNG	Alabama	0	0	0	0
ARNG	Alaska	0	0	0	0
ARNG	Arizona	0	0	0	0
ARNG	Arkansas	0	0	0	0
ARNG	California	0	0	0	0
ARNG	Colorado	0	0	0	0
ARNG	Connecticut	0	0	0	0
ARNG	Delaware	0	0	0	0
ARNG	District of Columbia	0	0	0	0
ARNG	Florida	0	0	0	0
ARNG	Georgia	0	0	0	0
ARNG	Guam Territory	0	0	0	0
ARNG	Hawaii	0	0	0	0
ARNG	Idaho	0	0	0	0
ARNG	Illinois	0	0	0	0
ARNG	Indiana	0	0	0	0

Command	Installation	Number of Solid Waste Landfills			
POM		FY19	FY20	FY21	FY21*
ARNG	Iowa	0	0	0	0
ARNG	Kansas	0	0	0	0
ARNG	Kentucky	0	0	0	0
ARNG	Louisiana	0	0	0	0
ARNG	Maine	0	0	0	0
ARNG	Maryland	0	0	0	0
ARNG	Massachusetts	0	0	0	0
ARNG	Michigan	0	0	0	0
ARNG	Minnesota	1	1	1	1
ARNG	Mississippi	1	1	1	1
ARNG	Missouri	0	0	0	0
ARNG	Montana	0	0	0	0
ARNG	Nebraska	0	0	0	0
ARNG	Nevada	0	0	0	0
ARNG	New Hampshire	0	0	0	0
ARNG	New Jersey	0	0	0	0
ARNG	New Mexico	0	0	0	0
ARNG	New York	0	0	0	0
ARNG	North Carolina	0	0	0	0
ARNG	North Dakota	0	0	0	0
ARNG	Ohio	0	0	0	0
ARNG	Oklahoma	0	0	0	0
ARNG	Oregon	0	0	0	0
ARNG	Pennsylvania	0	0	0	0
ARNG	Puerto Rico	0	0	0	0
ARNG	Rhode Island	0	0	0	0
ARNG	South Carolina	0	0	0	0
ARNG	South Dakota	0	0	0	0
ARNG	Tennessee	0	0	0	0
ARNG	Texas	0	0	0	0
ARNG	Utah	0	0	0	0
ARNG	Vermont	0	1	1	1

Command	Installation	Number of Solid Waste Landfills			
POM		FY19	FY20	FY21	FY21*
ARNG	Virgin Islands	0	0	0	0
ARNG	Virginia	0	0	0	0
ARNG	Washington	0	0	0	0
ARNG	West Virginia	0	0	0	0
ARNG	Wisconsin	0	0	0	0
ARNG	Wyoming	0	0	0	0
USAR	63rd RSC	0	0	0	0
USAR	81st RSC	0	0	0	0
USAR	88th RSC	0	0	0	0
USAR	99th RSC	0	0	0	0
USAR	9th MSC	0	0	0	0
USAR	Fort Buchanan	0	0	0	0
USAR	Fort Devens	0	0	0	0
USAR	Fort Hunter Liggett (includes Camp Parks)	1	1	1	1
USAR	Fort McCoy	1	1	1	1
AMC	MOT Concord	0	0	0	0
AMC	MOT Sunny Point	0	0	0	0

Section BB. Installations with Hazardous Waste Permits

Tables 93 and 94 indicate the number of installations that hold Hazardous Waste Permits as reported in the EQ data call CY15 (POM FY19) and first half FY17 (POM FY20) per command and installation, respectively.

Table 93. Number of installations with hazardous waste permits by command.

Command	Installations with Hazardous Waste Permits	
	FY19	FY20/21
IMCOM	14	11
ARNG	0	0
USAR	0	0
AMC	0	0
Total	14	11

Table 94. Hazardous waste permits by installation.

Command	Installation	Installations with Hazardous Waste Permits	
POM		FY19	FY20/21
IMCOM	Aberdeen Proving Ground	3	3
IMCOM	Adelphi	1	1
IMCOM	Carlisle Barracks	0	0
IMCOM	Detroit Arsenal	0	0
IMCOM	Dugway	1	1
IMCOM	Fort A. P. Hill	0	0
IMCOM	Fort Belvoir	1	1
IMCOM	Fort Benning	0	0
IMCOM	Fort Bliss	2	0
IMCOM	Fort Bragg	0	0
IMCOM	Fort Campbell	0	0
IMCOM	Fort Carson	1	1
IMCOM	Fort Detrick	0	0
IMCOM	Fort Drum	0	0
IMCOM	Fort Gordon	1	1
IMCOM	Fort Greely	0	0

Command	Installation	Installations with Hazardous Waste Permits	
		FY19	FY20/21
POM			
IMCOM	Fort Hamilton	0	0
IMCOM	Fort Hood	0	0
IMCOM	Fort Huachuca	0	0
IMCOM	Fort Irwin	0	0
IMCOM	Fort Jackson	1	1
IMCOM	Fort Knox	1	0
IMCOM	Fort Leavenworth	0	0
IMCOM	Fort Lee	0	0
IMCOM	Fort Leonard Wood	0	0
IMCOM	Fort Lewis McChord (JBLM)	0	0
IMCOM	Fort Meade	0	0
IMCOM	Fort Polk	1	0
IMCOM	Fort Riley	1	0
IMCOM	Fort Rucker	0	0
IMCOM	Fort Sill	0	0
IMCOM	Fort Stewart (Hunter AAF)	1	1
IMCOM	Fort Wainwright	0	0
IMCOM	Joint Base Myer-Henderson Hall	0	0
IMCOM	Kwajalein Atoll	0	0
IMCOM	Picatinny	2	2
IMCOM	Presidio of Monterey	0	0
IMCOM	Redstone Arsenal	1	1
IMCOM	Rock Island Arsenal	0	0
IMCOM	USAG Ansbach	0	0
IMCOM	USAG Bavaria - Garmish	0	0
IMCOM	USAG Bavaria - Grafenwoer	0	0
IMCOM	USAG Bavaria - Hohenfels	0	0
IMCOM	USAG Benelux	0	0
IMCOM	USAG Daegu	0	0
IMCOM	USAG Hawaii	0	0
IMCOM	USAG Humphreys	0	0
IMCOM	USAG Italy	0	0

Command	Installation	Installations with Hazardous Waste Permits	
POM		FY19	FY20/21
IMCOM	USAG Japan	0	0
IMCOM	USAG Miami	0	0
IMCOM	USAG Natick	0	0
IMCOM	USAG Red Cloud	0	0
IMCOM	USAG Rheinland-Pfalz	0	0
IMCOM	USAG Rheinland-Pfalz - Baumholder	0	0
IMCOM	USAG Stuttgart	0	0
IMCOM	USAG Weisbaden	0	0
IMCOM	USAG Yongsan	0	0
IMCOM	West Point	0	0
IMCOM	White Sands	0	1
IMCOM	Yuma Proving Ground	0	0
ARNG	Alabama	0	0
ARNG	Alaska	0	0
ARNG	Arizona	0	0
ARNG	Arkansas	0	0
ARNG	California	0	0
ARNG	Colorado	0	0
ARNG	Connecticut	0	0
ARNG	Delaware	0	0
ARNG	District of Columbia	0	0
ARNG	Florida	0	0
ARNG	Georgia	0	0
ARNG	Guam Territory	0	0
ARNG	Hawaii	0	0
ARNG	Idaho	0	0
ARNG	Illinois	0	0
ARNG	Indiana	0	0
ARNG	Iowa	0	0
ARNG	Kansas	0	0
ARNG	Kentucky	0	0
ARNG	Louisiana	0	0

Command	Installation	Installations with Hazardous Waste Permits	
		FY19	FY20/21
POM			
ARNG	Maine	0	0
ARNG	Maryland	0	0
ARNG	Massachusetts	0	0
ARNG	Michigan	0	0
ARNG	Minnesota	0	0
ARNG	Mississippi	0	0
ARNG	Missouri	0	0
ARNG	Montana	0	0
ARNG	Nebraska	0	0
ARNG	Nevada	0	0
ARNG	New Hampshire	0	0
ARNG	New Jersey	0	0
ARNG	New Mexico	0	0
ARNG	New York	0	0
ARNG	North Carolina	0	0
ARNG	North Dakota	0	0
ARNG	Ohio	0	0
ARNG	Oklahoma	0	0
ARNG	Oregon	0	0
ARNG	Pennsylvania	0	0
ARNG	Puerto Rico	0	0
ARNG	Rhode Island	0	0
ARNG	South Carolina	0	0
ARNG	South Dakota	0	0
ARNG	Tennessee	0	0
ARNG	Texas	0	0
ARNG	Utah	0	0
ARNG	Vermont	0	0
ARNG	Virgin Islands	0	0
ARNG	Virginia	0	0
ARNG	Washington	0	0
ARNG	West Virginia	0	0

Command	Installation	Installations with Hazardous Waste Permits	
		FY19	FY20/21
POM			
ARNG	Wisconsin	0	0
ARNG	Wyoming	0	0
USAR	63rd RSC	0	0
USAR	81st RSC	0	0
USAR	88th RSC	0	0
USAR	99th RSC	0	0
USAR	9th MSC	0	0
USAR	Fort Buchanan	0	0
USAR	Fort Devens	0	0
USAR	Fort Hunter Liggett (includes Camp Parks)	0	0
USAR	Fort McCoy	0	0
AMC	MOT Concord	0	0
AMC	MOT Sunny Point	0	0

Section CC. Installations with Subpart X Permitted Facilities

Table 95 summarizes the number of installations that hold RCRA Subpart X permits as reported in the EQ data call, CY15 (POM FY19) and first half FY17 (POM FY20 and FY21) by command. The installations with Subpart X permitted facilities are listed in Table 96.

Table 95. Installations with subpart x permitted facilities by command.

Command	Number of Installations
IMCOM	7
ARNG	0
USAR	0
AMC	0
Total	7

Table 96. Installations with subpart x permitted facilities.

Command	Installation
IMCOM	Aberdeen Proving Ground
IMCOM	Fort Carson
IMCOM	Fort Polk
IMCOM	Kwajalein Atoll
IMCOM	Picatinny Arsenal
IMCOM	Redstone Arsenal
IMCOM	Yuma Proving Ground

Section DD. Number and Type of Installation Storm Water Permits

Tables 97 and 98 indicate the number and types of storm water permits by command and by installation, respectively, as reported in the EQ data call, 2Q FY15 (POM FY19) and first half FY17 (POM FY20 and FY21).

Table 97. Storm water permits by command.

Command	Number of MS4 Permits		Number of Industrial Storm water Permits	
POM	FY19	FY20/21	FY19	FY20/21
IMCOM	32	38	149	199
ARNG	6	11	144	156
USAR	8	8	88	112
AMC	0	0	3	3
Total	46	57	384	470

Table 98. Storm water permits by installation.

Command	Installation	Number of MS4 Permits		Number of Industrial Storm water Permits	
		FY19	FY20/21	FY19	FY20/21
IMCOM	Aberdeen Proving Ground	0	0	6	5
IMCOM	Adelphi	1	1	0	0
IMCOM	Carlisle Barracks	0	0	2	2
IMCOM	Detroit Arsenal	1	1	0	0
IMCOM	Dugway	0	0	0	0
IMCOM	Fort A. P. Hill	0	0	2	2
IMCOM	Fort Belvoir	2	2	1	1
IMCOM	Fort Benning	1	1	1	1
IMCOM	Fort Bliss	1	2	1	3
IMCOM	Fort Bragg	0	1	3	2
IMCOM	Fort Campbell	2	2	3	3
IMCOM	Fort Carson	1	1	3	4
IMCOM	Fort Detrick	1	1	6	4
IMCOM	Fort Drum	1	1	1	2
IMCOM	Fort Gordon	1	3	1	5
IMCOM	Fort Greely	0	0	1	1
IMCOM	Fort Hamilton	1	1	1	23

Command	Installation	Number of MS4 Permits		Number of Industrial Storm water Permits	
POM		FY19	FY20/21	FY19	FY20/21
IMCOM	Fort Hood	1	1	1	1
IMCOM	Fort Huachuca	0	0	1	1
IMCOM	Fort Irwin	0	0	0	0
IMCOM	Fort Jackson	1	1	1	1
IMCOM	Fort Knox	0	0	1	1
IMCOM	Fort Leavenworth	0	0	0	0
IMCOM	Fort Lee	1	1	7	7
IMCOM	Fort Leonard Wood	1	1	5	5
IMCOM	Fort Lewis McChord (JBLM)	1	1	4	3
IMCOM	Fort Meade	1	1	0	5
IMCOM	Fort Polk	1	1	1	1
IMCOM	Fort Riley	0	0	2	1
IMCOM	Fort Rucker	0	0	6	6
IMCOM	Fort Sill	0	0	2	2
IMCOM	Fort Stewart (Hunter AAF)	2	2	3	5
IMCOM	Fort Wainwright	0	0	0	1
IMCOM	Joint Base Myer-Henderson Hall	1	1	1	1
IMCOM	Kwajalein Atoll	0	0	0	0
IMCOM	Picatinny	0	0	2	2
IMCOM	Presidio of Monterey	1	1	0	0
IMCOM	Redstone Arsenal	1	1	2	3
IMCOM	Rock Island Arsenal	0	0	1	1
IMCOM	USAG Ansbach	0	0	12	13
IMCOM	USAG Bavaria - Garmish	0	0	1	1
IMCOM	USAG Bavaria - Grafenwoer	0	0	44	45
IMCOM	USAG Bavaria - Hohenfels	0	0	0	0
IMCOM	USAG Benelux	0	0	0	0
IMCOM	USAG Daegu	0	0	0	6
IMCOM	USAG Hawaii	6	7	0	2
IMCOM	USAG Humphreys	0	0	0	0
IMCOM	USAG Italy	0	0	4	4
IMCOM	USAG Japan	0	0	9	9

Command	Installation	Number of MS4 Permits		Number of Industrial Storm water Permits	
POM		FY19	FY20/21	FY19	FY20/21
IMCOM	USAG Miami	0	0	0	0
IMCOM	USAG Natick	1	1	0	0
IMCOM	USAG Red Cloud	0	0	0	0
IMCOM	USAG Rheinland-Pfalz	0	0	1	1
IMCOM	USAG Rheinland-Pfalz - Baumholder	0	0	0	0
IMCOM	USAG Stuttgart	0	0	1	5
IMCOM	USAG Weisbaden	0	0	0	1
IMCOM	USAG Yongsan	0	0	0	0
IMCOM	West Point	0	1	2	2
IMCOM	White Sands	0	0	0	0
IMCOM	Yuma Proving Ground	0	0	3	5
ARNG	Alabama	0	0	2	2
ARNG	Alaska	0	0	0	1
ARNG	Arizona	0	0	1	1
ARNG	Arkansas	0	0	2	2
ARNG	California	0	0	5	5
ARNG	Colorado	0	0	0	0
ARNG	Connecticut	0	0	6	4
ARNG	Delaware	0	0	1	1
ARNG	District of Columbia	0	0	0	0
ARNG	Florida	0	0	0	0
ARNG	Georgia	0	0	2	3
ARNG	Guam Territory	0	0	0	0
ARNG	Hawaii	5	5	1	2
ARNG	Idaho	0	0	1	2
ARNG	Illinois	0	0	8	8
ARNG	Indiana	0	0	2	2
ARNG	Iowa	0	0	3	3
ARNG	Kansas	0	0	0	0
ARNG	Kentucky	0	0	2	2
ARNG	Louisiana	0	0	2	2
ARNG	Maine	0	0	4	9

Command	Installation	Number of MS4 Permits		Number of Industrial Storm water Permits	
POM		FY19	FY20/21	FY19	FY20/21
ARNG	Maryland	1	4	0	1
ARNG	Massachusetts	0	0	0	0
ARNG	Michigan	0	0	16	12
ARNG	Minnesota	0	0	1	9
ARNG	Mississippi	0	0	7	7
ARNG	Missouri	0	0	4	6
ARNG	Montana	0	0	1	1
ARNG	Nebraska	0	0	1	0
ARNG	Nevada	0	0	1	1
ARNG	New Hampshire	0	0	0	0
ARNG	New Jersey	0	0	0	0
ARNG	New Mexico	0	0	0	0
ARNG	New York	0	0	1	1
ARNG	North Carolina	0	0	2	4
ARNG	North Dakota	0	0	13	4
ARNG	Ohio	0	0	1	1
ARNG	Oklahoma	0	0	1	1
ARNG	Oregon	0	0	2	3
ARNG	Pennsylvania	0	0	1	1
ARNG	Puerto Rico	0	0	4	4
ARNG	Rhode Island	0	0	4	5
ARNG	South Carolina	0	0	2	3
ARNG	South Dakota	0	0	1	1
ARNG	Tennessee	0	0	2	2
ARNG	Texas	0	0	4	4
ARNG	Utah	0	0	3	3
ARNG	Vermont	0	0	4	3
ARNG	Virgin Islands	0	0	1	1
ARNG	Virginia	0	0	8	12
ARNG	Washington	0	2	1	2
ARNG	West Virginia	0	0	12	12
ARNG	Wisconsin	0	0	0	0

Command	Installation	Number of MS4 Permits		Number of Industrial Storm water Permits	
POM		FY19	FY20/21	FY19	FY20/21
ARNG	Wyoming	0	0	4	3
USAR	63rd RSC	0	0	11	11
USAR	81st RSC	2	2	10	23
USAR	88th RSC	0	0	42	44
USAR	99th RSC	5	5	19	18
USAR	9th MSC	0	0	0	0
USAR	Fort Buchanan	1	1	0	7
USAR	Fort Devens	0	0	0	3
USAR	Fort Hunter Liggett (includes Camp Parks)	0	0	2	2
USAR	Fort McCoy	0	0	4	4
AMC	MOT Concord	0	0	1	1
AMC	MOT Sunny Point	0	0	2	2

SECTION EE. Number of Maneuver Area Acres

HQIIS Catcodes 17710 Maneuver/Training Land, Light Forces, 17711 Maneuver/Training Land, Amphibious forces, 17720 Maneuver/Training Land, Heavy Forces were used to determine maneuver area acres. Tables 99 and 100 indicate the number of maneuver area acres as reported in HQIIS, August 2016, June 2017, and February 2018 (POM FY 19, 20, and 21) by command and by installation, respectively.

Table 99. Summary by command total maneuver acres.

Command	Number of Maneuver Area Acres		
POM	FY19	FY20	FY21
IMCOM	4,082,062	4,100,725	4,095,144
ARNG	1,256,813	1,255,298	1,297,938
USAR	215,395	215,395	287,386
AMC	-	-	7
Total	5,554,270	5,571,418	5,680,475

Table 100. The number of maneuver area acres by installation.

Command	Installation	Number of Maneuver Area Acres		
POM		FY19	FY20	FY21
IMCOM	Aberdeen Proving Ground	2645	2645	2645
IMCOM	Adelphi	0	0	0
IMCOM	Carlisle Barracks	0	0	0
IMCOM	Detroit Arsenal	0	0	0
IMCOM	Dugway	81073	81073	81073
IMCOM	Fort A. P. Hill	40395	63050	63050
IMCOM	Fort Belvoir	18	18	635
IMCOM	Fort Benning	104728	104900	98604
IMCOM	Fort Bliss	493575	493591	493591
IMCOM	Fort Bragg	106221	106221	106221
IMCOM	Fort Campbell	63594	63594	63594
IMCOM	Fort Carson	159828	159828	159828
IMCOM	Fort Detrick	0	0	0
IMCOM	Fort Drum	66990	279	0
IMCOM	Fort Gordon	35360	35364	35364

Command	Installation	Number of Maneuver Area Acres		
POM		FY19	FY20	FY21
IMCOM	Fort Greely	0	0	0
IMCOM	Fort Hamilton	0	0	0
IMCOM	Fort Hood	124738	124738	124738
IMCOM	Fort Huachuca	55791	55952	55958
IMCOM	Fort Irwin	320141	320141	320141
IMCOM	Fort Jackson	14893	14913	14999
IMCOM	Fort Knox	45110	45110	45215
IMCOM	Fort Leavenworth	0	0	0
IMCOM	Fort Lee	1358	1358	1358
IMCOM	Fort Leonard Wood	85386	85680	85764
IMCOM	Fort Lewis McChord (JBLM)	387016	387016	387016
IMCOM	Fort Meade	0	0	0
IMCOM	Fort Polk	197398	228273	228278
IMCOM	Fort Riley	70128	70128	70128
IMCOM	Fort Rucker	38866	38866	38866
IMCOM	Fort Sill	48535	49826	49826
IMCOM	Fort Stewart (Hunter AAF)	210155	207055	207083
IMCOM	Fort Wainwright	1268001	1268001	1268001
IMCOM	Joint Base Myer-Henderson Hall	0	0	0
IMCOM	Kwajalein Atoll	0	0	0
IMCOM	Picatinny	0	0	0
IMCOM	Presidio of Monterey	0	0	0
IMCOM	Redstone Arsenal	7675	0	0
IMCOM	Rock Island Arsenal	0	0	0
IMCOM	USAG Ansbach	1737	2037	2037
IMCOM	USAG Bavaria - Garmish	0	0	0
IMCOM	USAG Bavaria - Grafenwoer	175	175	175
IMCOM	USAG Bavaria - Hohenfels	0	38839	38839
IMCOM	USAG Benelux	0	70	70
IMCOM	USAG Daegu	0	0	0
IMCOM	USAG Hawaii	37206	37206	37266
IMCOM	USAG Humphreys	0	0	0

Command	Installation	Number of Maneuver Area Acres		
POM		FY19	FY20	FY21
IMCOM	USAG Italy	0	0	0
IMCOM	USAG Japan	0	0	0
IMCOM	USAG Miami	0	0	0
IMCOM	USAG Natick	0	0	0
IMCOM	USAG Red Cloud	355	355	355
IMCOM	USAG Rheinland-Pfalz	0	0	0
IMCOM	USAG Rheinland-Pfalz - Baumholder	3	239	239
IMCOM	USAG Stuttgart	0	1097	1097
IMCOM	USAG Weisbaden	57	176	179
IMCOM	USAG Yongsan	0	0	0
IMCOM	West Point	11604	11604	11604
IMCOM	White Sands	8	8	8
IMCOM	Yuma Proving Ground	1299	1299	1299
ARNG	Alabama	15808	15808	15808
ARNG	Alaska	14199	14199	14199
ARNG	Arizona	44370	44369	44369
ARNG	Arkansas	85149	77064	77268
ARNG	California	40420	40420	40420
ARNG	Colorado	0	0	0
ARNG	Connecticut	1862	1862	1862
ARNG	Delaware	229	229	229
ARNG	District of Columbia	0	0	0
ARNG	Florida	49588	49588	49807
ARNG	Georgia	1821	1821	1821
ARNG	Guam Territory	0	0	0
ARNG	Hawaii	403	428	428
ARNG	Idaho	101271	120886	134519
ARNG	Illinois	34396	33937	7721
ARNG	Indiana	0	0	26216
ARNG	Iowa	29230	29241	29241
ARNG	Kansas	0	0	0
ARNG	Kentucky	11462	11510	11510

Command	Installation	Number of Maneuver Area Acres		
POM		FY19	FY20	FY21
ARNG	Louisiana	27494	27725	29352
ARNG	Maine	142708	142776	142776
ARNG	Maryland	1848	1848	1848
ARNG	Massachusetts	10979	10979	11003
ARNG	Michigan	129663	129663	129663
ARNG	Minnesota	46204	46095	45045
ARNG	Mississippi	110766	110248	110248
ARNG	Missouri	8402	8402	9306
ARNG	Montana	32809	32809	18292
ARNG	Nebraska	5955	5955	5955
ARNG	Nevada	1893	1893	1893
ARNG	New Hampshire	3989	3989	284
ARNG	New Jersey	75	75	75
ARNG	New Mexico	12613	12613	12758
ARNG	New York	1450	1445	1597
ARNG	North Carolina	0	0	3705
ARNG	North Dakota	13655	13547	13547
ARNG	Ohio	18043	18043	18043
ARNG	Oklahoma	20497	20497	20497
ARNG	Oregon	21678	21678	56978
ARNG	Pennsylvania	11079	10994	12491
ARNG	Puerto Rico	11319	11319	11319
ARNG	Rhode Island	1858	1858	432
ARNG	South Carolina	1663	1663	783
ARNG	South Dakota	9999	4325	10499
ARNG	Tennessee	3167	3167	3167
ARNG	Texas	41056	34587	34587
ARNG	Utah	16917	16917	17551
ARNG	Vermont	10814	10814	10814
ARNG	Virgin Islands	0	0	0
ARNG	Virginia	28840	28840	28840
ARNG	Washington	0	0	0

Command	Installation	Number of Maneuver Area Acres		
POM		FY19	FY20	FY21
ARNG	West Virginia	3386	3386	3386
ARNG	Wisconsin	141	141	141
ARNG	Wyoming	75645	75645	75645
USAR	63rd RSC	200	200	1727
USAR	81st RSC	197	197	244
USAR	88th RSC	7465	7465	7592
USAR	99th RSC	544	544	544
USAR	9th MSC	99	99	99
USAR	Fort Buchanan	0	0	0
USAR	Fort Devens	2967	2967	2977
USAR	Fort Hunter Liggett (includes Camp Parks)	157615	157615	157615
USAR	Fort McCoy	46308	46308	116588
AMC	MOT Concord	0	0	0
AMC	MOT Sunny Point	0	0	7

Section FF. Installations with Facility Response Plans (FRP)

The following installations meet the storage capacity to require a Facility Response Plan as reported in HQIIS, August 2016 (POM FY19) and June 2017 (POM FY20). For POM FY21, the data download was done through Data.gov. (<https://hifld-dhs-gii.opendata.arcgis.com/>) as a search on “facility response plan,” download date March 2018. Table 101 summarizes the number of facility response plans by command and table 102 lists the plans and their ID numbers.

Table 101. Summary by command facility response plan.

Command	Facility Response Plans		
POM	FY19	FY20	FY21
IMCOM	10	10	11
ARNG	1	1	0
USAR	0	0	0
AMC	0	0	0
Total	11	11	11

Table 102. Installations with facility response plans.

Command	Installation	# Solid Waste Landfills			City	ST	Facility Response Plan ID
POM		FY19	FY20	FY21			
IMCOM	Aberdeen Proving Ground	0	0	1	HARFORD	MD	MDFRP044
IMCOM	Fort Belvoir	1	1	0			
IMCOM	Fort Bragg	1	1	1	CUMBERLAND	NC	FRP04NC298
IMCOM	Fort Campbell	1	1	1	CHRISTIAN	KY	FRP04KY230
IMCOM	Fort Carson	0	0	1	EL PASO	CO	FRP-8-CO-00033
IMCOM	Fort Detrick	0	0	1	FREDERICK	MD	MDFRP060
IMCOM	Fort Gordon	0	0	1	RICHMOND	GA	FRP04GA480
IMCOM	Fort Hood	1	1	1		TX	FRP-06-TX-00661
IMCOM	Fort Lee	1	1	1	PRINCE GEORGE	VA	VAFRP031
IMCOM	Fort Leonard Wood	0	0	1	PULASKI	MO	FRP07A0133

Command	Installation	# Solid Waste Landfills			City	ST	Facility Response Plan ID
POM		FY19	FY20	FY21			
IMCOM	Fort Lewis McChord (JBLM)	1	1	1		WA	FRP000146
IMCOM	Fort Stewart (Hunter AAF)	1	1	1	LIBERTY	GA	FRP04GA425
IMCOM	Kwajalein Atoll	1	1	0			
IMCOM	USAG Daegu	1	1	0			
IMCOM	USAG Japan	1	1	0			
ARNG	Missouri	1	1	0			

Section GG. Number of Federally Owned Wastewater Treatment Plants

HQIS includes four categories that include wastewater treatment plants: 83110 PRIMARY WASTE WATER TREATMENT, 83112 SECONDARY WASTE WATER TREATMENT, 83113 ADVANCED WASTE WATER TREATMENT, and 83140 INDUSTRIAL WASTE WATER TREATMENT PLANT. The EQRM only utilizes 83110, 83112, and 83113. In this POM all facilities with more than three waste water treatment plants were defaulted to three. Tables 103 and 104 indicate the number of wastewater treatment plants reported in HQIS in August 2016, June 2017, and February 2018 (POM FY 19, 20, and 21, respectively) by command and installation, respectively.

Table 103. Summary by command number of federally owned wastewater treatment plants.

Command	# Wastewater Treatment Plants		
POM	FY19	FY20	FY21
IMCOM	141	123	55
ARNG	32	25	25
USAR	5	4	4
AMC	3	-	-
Total	181	152	84

Table 104. Number of federally owned wastewater treatment plants.

Command	Installation	# Wastewater Treatment Plants		
POM		FY19	FY20	FY21
IMCOM	Aberdeen Proving Ground	19	17	3
IMCOM	Adelphi	0	0	0
IMCOM	Carlisle Barracks	0	0	0
IMCOM	Detroit Arsenal	0	0	0
IMCOM	Dugway	4	2	3
IMCOM	Fort A. P. Hill	0	0	1
IMCOM	Fort Belvoir	0	0	0
IMCOM	Fort Benning	1	1	1
IMCOM	Fort Bliss	0	0	0
IMCOM	Fort Bragg	5	2	0
IMCOM	Fort Campbell	0	0	2

Command	Installation	# Wastewater Treatment Plants		
POM		FY19	FY20	FY21
IMCOM	Fort Carson	9	5	1
IMCOM	Fort Detrick	10	8	3
IMCOM	Fort Drum	0	0	0
IMCOM	Fort Gordon	0	0	0
IMCOM	Fort Greely	0	0	0
IMCOM	Fort Hamilton	0	0	0
IMCOM	Fort Hood	1	1	1
IMCOM	Fort Huachuca	2	2	1
IMCOM	Fort Irwin	0	1	1
IMCOM	Fort Jackson	0	0	0
IMCOM	Fort Knox	0	0	0
IMCOM	Fort Leavenworth	0	0	0
IMCOM	Fort Lee	0	0	0
IMCOM	Fort Leonard Wood	18	18	3
IMCOM	Fort Lewis McChord (JBLM)	21	19	3
IMCOM	Fort Meade	0	0	0
IMCOM	Fort Polk	0	0	0
IMCOM	Fort Riley	3	3	3
IMCOM	Fort Rucker	0	0	2
IMCOM	Fort Sill	0	0	0
IMCOM	Fort Stewart (Hunter AAF)	2	2	2
IMCOM	Fort Wainwright	0	0	0
IMCOM	Joint Base Myer-Henderson Hall	0	0	0
IMCOM	Kwajalein Atoll	6	6	3
IMCOM	Picatinny	0	0	0
IMCOM	Presidio of Monterey	0	0	0
IMCOM	Redstone Arsenal	0	0	0
IMCOM	Rock Island Arsenal	0	0	0
IMCOM	USAG Ansbach	0	0	0
IMCOM	USAG Bavaria - Garmish	0	0	0
IMCOM	USAG Bavaria - Grafenwoer	4	5	3
IMCOM	USAG Bavaria - Hohenfels	1	1	1

Command	Installation	# Wastewater Treatment Plants		
POM		FY19	FY20	FY21
IMCOM	USAG Benelux	0	0	0
IMCOM	USAG Daegu	1	1	2
IMCOM	USAG Hawaii	2	2	2
IMCOM	USAG Humphreys	8	0	0
IMCOM	USAG Italy	1	3	3
IMCOM	USAG Japan	0	2	0
IMCOM	USAG Miami	0	0	0
IMCOM	USAG Natick	0	0	0
IMCOM	USAG Red Cloud	13	13	3
IMCOM	USAG Rheinland-Pfalz	0	0	0
IMCOM	USAG Rheinland-Pfalz - Baumholder	0	0	0
IMCOM	USAG Stuttgart	0	0	0
IMCOM	USAG Weisbaden	0	0	0
IMCOM	USAG Yongsan	4	4	3
IMCOM	West Point	3	3	3
IMCOM	White Sands	2	2	2
IMCOM	Yuma Proving Ground	1	0	0
ARNG	Alabama	0	0	0
ARNG	Alaska	0	0	0
ARNG	Arizona	3	3	3
ARNG	Arkansas	2	2	2
ARNG	California	1	1	1
ARNG	Colorado	0	0	0
ARNG	Connecticut	0	0	0
ARNG	Delaware	0	0	0
ARNG	District of Columbia	0	0	0
ARNG	Florida	2	2	2
ARNG	Georgia	0	0	0
ARNG	Guam Territory	0	0	0
ARNG	Hawaii	0	0	0
ARNG	Idaho	0	0	0
ARNG	Illinois	0	1	1

Command	Installation	# Wastewater Treatment Plants		
POM		FY19	FY20	FY21
ARNG	Indiana	1	1	1
ARNG	Iowa	0	0	0
ARNG	Kansas	0	0	0
ARNG	Kentucky	0	0	0
ARNG	Louisiana	1	1	2
ARNG	Maine	0	0	0
ARNG	Maryland	1	1	1
ARNG	Massachusetts	0	0	0
ARNG	Michigan	1	1	1
ARNG	Minnesota	1	1	1
ARNG	Mississippi	10	2	2
ARNG	Missouri	0	0	0
ARNG	Montana	0	0	0
ARNG	Nebraska	1	1	1
ARNG	Nevada	1	1	1
ARNG	New Hampshire	0	0	0
ARNG	New Jersey	0	0	0
ARNG	New Mexico	0	0	0
ARNG	New York	0	0	0
ARNG	North Carolina	0	0	0
ARNG	North Dakota	0	0	0
ARNG	Ohio	1	1	1
ARNG	Oklahoma	0	0	0
ARNG	Oregon	2	2	2
ARNG	Pennsylvania	2	2	2
ARNG	Puerto Rico	1	1	1
ARNG	Rhode Island	1	1	0
ARNG	South Carolina	0	0	0
ARNG	South Dakota	0	0	0
ARNG	Tennessee	0	0	0
ARNG	Texas	0	0	0
ARNG	Utah	0	0	0

Command	Installation	# Wastewater Treatment Plants		
POM		FY19	FY20	FY21
ARNG	Vermont	0	0	0
ARNG	Virgin Islands	0	0	0
ARNG	Virginia	0	0	0
ARNG	Washington	0	0	0
ARNG	West Virginia	0	0	0
ARNG	Wisconsin	0	0	0
ARNG	Wyoming	0	0	0
USAR	63rd RSC	2	2	2
USAR	81st RSC	0	0	0
USAR	88th RSC	0	0	0
USAR	99th RSC	1	1	1
USAR	9th MSC	0	0	0
USAR	Fort Buchanan	0	0	0
USAR	Fort Devens	0	0	0
USAR	Fort Hunter Liggett (includes Camp Parks)	1	0	0
USAR	Fort McCoy	1	1	1
AMC	MOT Concord	0	0	0
AMC	MOT Sunny Point	3	0	0

Section HH. Number and Types of Installation Drinking Water Systems

The only potable water treatment systems included in the EQRM are CATCODE 84110 WATER TREATMENT PLANT, Water Treatment Facility, which is described as a facility for treating raw water in order to make it safe for drinking. Other CATCODES associated with potable water such as 84125 FILTER PLANT FACILITY, 84130 WATER WELL, POTABLE, 84141 PUMP STATION, POTABLE, and 84150 CHLORINATOR FACILITY are not included.

For POM FY21, the Real Property Interest Type Names included in the data set were fee simple ownership (FEE) (which includes all assets held by the U.S. Government), Government/Private Agreement, and Owned by State or Local Government (ONST). If the other two categories were not included, the water treatment system count would have been 25 with only 3 belonging to the National Guard and all other facilities falling under IMCOM (shown as FY21*).

Table 105 summarizes the number of drinking water systems and Table 106 lists the system type by command. Tables 107 and 108 list the number of drinking water systems and system type by installation.

The number of drinking water systems by installation was reported in HQIIS under Interest Type “FEE” and an operational status “active”, HQIIS in August 2016, June 2017 and February 2018 (POM FY 19, 20, and 21, respectively).

The types of drinking water systems by installations are reported in the EQ data call FY15 second half and FY17 first half for POM FY 19 and POM 20/21, respectively. These data are summarized in Table 106 below and listed individually in the Table 108.

Table 105. Summary by command number of federally owned potable water treatment systems.

Command	Number of Federally Owned Potable Water Treatment Systems			
	FY19	FY20	FY21*	FY21
IMCOM	25	19	22	26
ARNG	8	8	3	9
USAR	0	0	0	0
AMC	0	0	0	0
Total	33	27	25	35

Table 106. Summary by command number of federally owned potable water systems by type.

Command	Community Water System		Transient Non-Community Water System		Non-Transient Non-Community Water System	
	FY19	FY20/21	FY19	FY20/21	FY19	FY20/21
IMCOM	121	123	25	30	49	27
ARNG	12	23	23	7	36	8
USAR	3	1	1	-	5	3
AMC	0	-	0	-	0	-
Total	136	147	49	37	90	38

Table 107. Number of federally owned potable water treatment systems.

Command	Installation	Number of Federally Owned Potable Water Treatment Systems			
POM		FY19	FY20	FY21*	FY21
IMCOM	Aberdeen Proving Ground	0	0	0	0
IMCOM	Adelphi	0	0	0	0
IMCOM	Carlisle Barracks	0	0	0	0
IMCOM	Detroit Arsenal	2	2	2	2
IMCOM	Dugway	1	0	0	0
IMCOM	Fort A. P. Hill	0	0	0	0
IMCOM	Fort Belvoir	0	0	0	0
IMCOM	Fort Benning	1	1	1	2
IMCOM	Fort Bliss	0	0	0	0
IMCOM	Fort Bragg	0	0	0	0
IMCOM	Fort Campbell	0	0	0	0
IMCOM	Fort Carson	0	0	0	0
IMCOM	Fort Detrick	8	4	4	4
IMCOM	Fort Drum	0	0	1	1
IMCOM	Fort Gordon	0	0	0	0
IMCOM	Fort Greely	0	0	0	0
IMCOM	Fort Hamilton	0	0	0	0
IMCOM	Fort Hood	0	0	0	0
IMCOM	Fort Huachuca	0	0	0	0
IMCOM	Fort Irwin	0	0	0	1
IMCOM	Fort Jackson	2	2	1	1
IMCOM	Fort Knox	0	0	0	0
IMCOM	Fort Leavenworth	0	0	0	0
IMCOM	Fort Lee	0	0	0	0

Command	Installation	Number of Federally Owned Potable Water Treatment Systems			
POM		FY19	FY20	FY21*	FY21
IMCOM	Fort Leonard Wood	1	1	1	1
IMCOM	Fort Lewis McChord (JBLM)	0	0	2	2
IMCOM	Fort Meade	0	0	0	0
IMCOM	Fort Polk	0	0	0	1
IMCOM	Fort Riley	1	1	1	1
IMCOM	Fort Rucker	0	0	0	0
IMCOM	Fort Sill	0	0	0	1
IMCOM	Fort Stewart (Hunter AAF)	0	0	0	0
IMCOM	Fort Wainwright	0	0	0	0
IMCOM	Joint Base Myer-Henderson Hall	0	0	0	0
IMCOM	Kwajalein Atoll	1	1	1	1
IMCOM	Picatinny	0	0	0	0
IMCOM	Presidio of Monterey	0	0	0	0
IMCOM	Redstone Arsenal	0	0	0	0
IMCOM	Rock Island Arsenal	1	1	1	1
IMCOM	USAG Ansbach	0	0	0	0
IMCOM	USAG Bavaria - Garmish	0	0	0	0
IMCOM	USAG Bavaria - Grafenwoer	0	0	0	0
IMCOM	USAG Bavaria - Hohenfels	0	0	0	0
IMCOM	USAG Benelux	0	0	0	0
IMCOM	USAG Daegu	1	1	2	2
IMCOM	USAG Hawaii	1	1	1	1
IMCOM	USAG Humphreys	0	0	0	0
IMCOM	USAG Italy	1	1	1	1
IMCOM	USAG Japan	0	0	0	0
IMCOM	USAG Miami	0	0	0	0
IMCOM	USAG Natick	0	0	0	0
IMCOM	USAG Red Cloud	0	0	0	0
IMCOM	USAG Rheinland-Pfalz	0	0	0	0
IMCOM	USAG Rheinland-Pfalz - Baumholder	0	0	0	0
IMCOM	USAG Stuttgart	0	0	0	0
IMCOM	USAG Weisbaden	0	0	0	0
IMCOM	USAG Yongsan	0	0	0	0
IMCOM	West Point	3	3	3	3
IMCOM	White Sands	1	0	0	0

Command	Installation	Number of Federally Owned Potable Water Treatment Systems			
POM		FY19	FY20	FY21*	FY21
IMCOM	Yuma Proving Ground	0	0	0	0
ARNG	Alabama	0	0	0	0
ARNG	Alaska	0	0	0	0
ARNG	Arizona	2	2	1	2
ARNG	Arkansas	0	0	0	1
ARNG	California	0	0	0	0
ARNG	Colorado	0	0	0	0
ARNG	Connecticut	0	0	0	0
ARNG	Delaware	0	0	0	0
ARNG	District of Columbia	0	0	0	0
ARNG	Florida	0	0	0	0
ARNG	Georgia	0	0	0	0
ARNG	Guam Territory	0	0	0	0
ARNG	Hawaii	0	0	0	0
ARNG	Idaho	0	0	0	0
ARNG	Illinois	0	0	0	0
ARNG	Indiana	0	0	0	0
ARNG	Iowa	1	1	0	1
ARNG	Kansas	0	0	0	0
ARNG	Kentucky	0	0	0	0
ARNG	Louisiana	0	0	0	0
ARNG	Maine	0	0	0	0
ARNG	Maryland	0	0	0	0
ARNG	Massachusetts	0	0	0	0
ARNG	Michigan	0	0	0	0
ARNG	Minnesota	1	1	0	1
ARNG	Mississippi	1	1	0	1
ARNG	Missouri	0	0	0	0
ARNG	Montana	0	0	0	0
ARNG	Nebraska	1	1	1	1
ARNG	Nevada	0	0	0	0
ARNG	New Hampshire	0	0	0	0
ARNG	New Jersey	0	0	0	0
ARNG	New Mexico	0	0	0	0
ARNG	New York	0	0	0	0
ARNG	North Carolina	0	0	0	0

Command	Installation	Number of Federally Owned Potable Water Treatment Systems			
POM		FY19	FY20	FY21*	FY21
ARNG	North Dakota	0	0	0	0
ARNG	Ohio	0	0	0	0
ARNG	Oklahoma	1	1	1	1
ARNG	Oregon	1	1	0	1
ARNG	Pennsylvania	0	0	0	0
ARNG	Puerto Rico	0	0	0	0
ARNG	Rhode Island	0	0	0	0
ARNG	South Carolina	0	0	0	0
ARNG	South Dakota	0	0	0	0
ARNG	Tennessee	0	0	0	0
ARNG	Texas	0	0	0	0
ARNG	Utah	0	0	0	0
ARNG	Vermont	0	0	0	0
ARNG	Virgin Islands	0	0	0	0
ARNG	Virginia	0	0	0	0
ARNG	Washington	0	0	0	0
ARNG	West Virginia	0	0	0	0
ARNG	Wisconsin	0	0	0	0
ARNG	Wyoming	0	0	0	0
USAR	63rd RSC	0	0	0	0
USAR	81st RSC	0	0	0	0
USAR	88th RSC	0	0	0	0
USAR	99th RSC	0	0	0	0
USAR	9th MSC	0	0	0	0
USAR	Fort Buchanan	0	0	0	0
USAR	Fort Devens	0	0	0	0
USAR	Fort Hunter Liggett (includes Camp Parks)	0	0	0	0
USAR	Fort McCoy	0	0	0	0
AMC	MOT Concord	0	0	0	0
AMC	MOT Sunny Point	0	0	0	0

Table 108. Types of drinking water systems by installation.

Command	Installation	Community Water System		Transient Non-Community Water System		Non-Transient Non-Community Water System	
		FY19	FY20/21	FY19	FY20/21	FY19	FY20/21
IMCOM	Aberdeen Proving Ground	1	1	0	0	0	0
IMCOM	Adelphi	0	1	0	0	0	0
IMCOM	Carlisle Barracks	1	0	0	0	0	0
IMCOM	Detroit Arsenal	0	1	0	0	0	0
IMCOM	Dugway	1	0	0	0	2	0
IMCOM	Fort A. P. Hill	0	1	0	6	0	2
IMCOM	Fort Belvoir	0	1	0	0	4	0
IMCOM	Fort Benning	2	0	0	0	1	0
IMCOM	Fort Bliss	1	3	0	2	0	3
IMCOM	Fort Bragg	0	0	0	0	0	1
IMCOM	Fort Campbell	0	1	0	0	0	0
IMCOM	Fort Carson	0	1	0	0	0	0
IMCOM	Fort Detrick	2	0	0	0	0	0
IMCOM	Fort Drum	2	0	0	3	0	0
IMCOM	Fort Gordon	0	1	4	0	0	0
IMCOM	Fort Greely	0	4	0	0	1	0
IMCOM	Fort Hamilton	0	1	0	0	0	0
IMCOM	Fort Hood	0	2	0	2	0	2
IMCOM	Fort Huachuca	2	0	0	0	0	0
IMCOM	Fort Irwin	1	0	0	0	0	1
IMCOM	Fort Jackson	0	1	0	0	0	0
IMCOM	Fort Knox	2	3	0	0	0	0
IMCOM	Fort Leavenworth	0	1	0	0	0	0
IMCOM	Fort Lee	0	1	0	0	0	0
IMCOM	Fort Leonard Wood	3	0	0	0	1	0
IMCOM	Fort Lewis McChord (JBLM)	2	0	3	0	3	0
IMCOM	Fort Meade	0	1	0	0	0	0
IMCOM	Fort Polk	0	0	0	0	0	0
IMCOM	Fort Riley	1	0	1	0	1	0

Command POM	Installation	Community Water System		Transient Non-Community Water System		Non-Transient Non-Community Water System	
		FY19	FY20/21	FY19	FY20/21	FY19	FY20/21
IMCOM	Fort Rucker	0	1	0	10	0	0
IMCOM	Fort Sill	0	1	0	2	0	0
IMCOM	Fort Stewart (Hunter AAF)	2	0	11	0	2	0
IMCOM	Fort Wainwright	0	5	0	2	0	0
IMCOM	Joint Base Myer-Henderson Hall	0	1	0	0	0	0
IMCOM	Kwajalein Atoll	3	0	0	0	0	0
IMCOM	Picatinny	1	0	0	0	0	0
IMCOM	Presidio of Monterey	0	1	0	0	2	0
IMCOM	Redstone Arsenal	2	0	0	0	0	0
IMCOM	Rock Island Arsenal	1	0	0	0	0	0
IMCOM	USAG Ansbach	7	7	0	0	0	0
IMCOM	USAG Bavaria - Garmish	3	3	0	0	0	0
IMCOM	USAG Bavaria - Grafenwoer	5	6	0	0	0	0
IMCOM	USAG Bavaria - Hohenfels	1	1	0	0	0	0
IMCOM	USAG Benelux	8	8	0	0	0	0
IMCOM	USAG Daegu	5	3	0	0	4	4
IMCOM	USAG Hawaii	3	3	0	0	0	1
IMCOM	USAG Humphreys	2	0	0	0	0	0
IMCOM	USAG Italy	8	9	1	1	0	0
IMCOM	USAG Japan	8	6	0	0	8	6
IMCOM	USAG Miami	0	1	0	0	0	0
IMCOM	USAG Natick	0	1	0	0	0	0
IMCOM	USAG Red Cloud	10	6	0	0	7	6
IMCOM	USAG Rheinland-Pfalz	2	1	0	0	0	0

Command	Installation	Community Water System		Transient Non-Community Water System		Non-Transient Non-Community Water System	
POM		FY19	FY20/21	FY19	FY20/21	FY19	FY20/21
IMCOM	USAG Rheinland-Pfalz - Baumholder	10	0	0	0	2	0
IMCOM	USAG Stuttgart	9	9	0	0	0	0
IMCOM	USAG Weisbaden	0	25	0	2	0	1
IMCOM	USAG Yongsan	4	0	2	0	6	0
IMCOM	West Point	3	0	2	0	1	0
IMCOM	White Sands	2	0	0	0	1	0
IMCOM	Yuma Proving Ground	1	0	1	0	3	0
ARNG	Alabama	0	1	0	0	0	0
ARNG	Alaska	0	0	1	0	0	0
ARNG	Arizona	0	0	0	0	4	0
ARNG	Arkansas	2	0	0	0	0	0
ARNG	California	1	2	1	0	0	0
ARNG	Colorado	0	0	0	0	0	0
ARNG	Connecticut	0	0	0	0	0	0
ARNG	Delaware	0	0	0	0	0	0
ARNG	District of Columbia	0	0	0	0	0	0
ARNG	Florida	1	0	0	0	0	0
ARNG	Georgia	0	1	0	0	0	0
ARNG	Guam Territory	0	2	0	0	0	0
ARNG	Hawaii	0	0	0	0	0	0
ARNG	Idaho	0	0	0	0	2	0
ARNG	Illinois	0	1	0	0	0	0
ARNG	Indiana	2	1	2	0	1	0
ARNG	Iowa	1	0	0	0	0	0
ARNG	Kansas	0	0	0	0	0	0
ARNG	Kentucky	0	0	0	0	0	2
ARNG	Louisiana	2	3	0	0	0	0
ARNG	Maine	0	2	1	0	0	0
ARNG	Maryland	0	0	0	0	4	0

Command	Installation	Community Water System		Transient Non-Community Water System		Non-Transient Non-Community Water System	
POM		FY19	FY20/21	FY19	FY20/21	FY19	FY20/21
ARNG	Massachusetts	0	1	0	0	0	0
ARNG	Michigan	0	0	0	0	5	0
ARNG	Minnesota	0	0	1	0	1	0
ARNG	Mississippi	0	0	0	0	1	2
ARNG	Missouri	0	0	0	0	0	3
ARNG	Montana	0	0	0	0	1	0
ARNG	Nebraska	0	0	1	0	1	0
ARNG	Nevada	0	1	0	0	0	0
ARNG	New Hampshire	0	0	1	0	0	0
ARNG	New Jersey	0	0	5	0	0	0
ARNG	New Mexico	0	0	0	0	0	0
ARNG	New York	0	0	0	0	1	0
ARNG	North Carolina	0	0	1	0	0	0
ARNG	North Dakota	1	0	0	0	0	0
ARNG	Ohio	0	0	0	0	0	0
ARNG	Oklahoma	0	0	0	0	1	0
ARNG	Oregon	0	0	0	0	2	0
ARNG	Pennsylvania	1	0	0	0	0	0
ARNG	Puerto Rico	1	0	0	0	1	0
ARNG	Rhode Island	0	0	0	0	1	0
ARNG	South Carolina	0	0	0	0	2	0
ARNG	South Dakota	0	0	0	0	0	0
ARNG	Tennessee	0	0	0	0	0	0
ARNG	Texas	0	0	0	0	0	0
ARNG	Utah	0	2	0	0	2	0
ARNG	Vermont	0	4	0	0	0	0
ARNG	Virgin Islands	0	0	0	0	4	0
ARNG	Virginia	0	0	1	0	0	0
ARNG	Washington	0	0	0	0	1	0
ARNG	West Virginia	0	0	0	0	0	0
ARNG	Wisconsin	0	0	1	0	0	0
ARNG	Wyoming	0	2	7	7	1	1
USAR	63rd RSC	0	0	0	0	0	0

Command POM	Installation	Community Water System		Transient Non-Community Water System		Non-Transient Non-Community Water System	
		FY19	FY20/21	FY19	FY20/21	FY19	FY20/21
USAR	81st RSC	0	0	0	0	0	2
USAR	88th RSC	0	0	0	0	0	0
USAR	99th RSC	0	0	0	0	5	0
USAR	9th MSC	0	0	0	0	0	0
USAR	Fort Buchanan	0	0	0	0	0	1
USAR	Fort Devens	0	0	1	0	0	0
USAR	Fort Hunter Liggett (includes Camp Parks)	1	1	0	0	0	0
USAR	Fort McCoy	2	0	0	0	0	0
AMC	MOT Concord	0	0	0	0	0	0
AMC	MOT Sunny Point	0	0	0	0	0	0

Section II. Geographic Information System (GIS) Data

Past versions of this document contained a full copy of the following document:

OACSIM 2008. "U.S. Army Installation Geospatial Information and Services (IG&S) Data Proponency Common Installation Picture, and Quality Assurance Plans (QAPs)." 15 August.

More information may be found on Army Regulation 115-13 at:

https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/ARN1614_AR115-13_Web_FINAL.pdf

Section JJ. Number of Installation Management Command (IMCOM) Personnel

Department of the Army Civilians (DAC)

The following are the number of Management Decision Package Environmental Quality (VENQ) DAC personnel authorizations, by program per IMCOM installation. Data were obtained from Budget Estimate Submission Program Objective Memorandum (BESPOM) FY20–24, July 2018. Table 109 summarizes IMCOM personnel by pillar. Table 110 indicates personnel for each installation.

Table 109. IMCOM DAC personnel summary for FY21–25.

Command	Compliance	Conservation	P2
POM	FY 21-25	FY 21-25	FY 21-25
IMCOM	421	349	38

Table 110. IMCOM DAC personnel authorizations for FY21–25.

Installation	Compliance					Conservation					P2				
POM FY	21	22	23	24	25	21	22	23	24	25	21	22	23	24	25
Aberdeen Proving Ground	22	22	22	22	22	9	9	9	9	9	0	0	0	0	0
Adelphi	3	3	3	3	3	2	2	2	2	2	0	0	0	0	0
Carlisle Barracks	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0
Detroit Arsenal	3	3	3	3	3	1	1	1	1	1	1	1	1	1	1
Dugway	5	5	5	5	5	6	6	6	6	6	0	0	0	0	0
Fort A. P. Hill	6	6	6	6	6	4	4	4	4	4	0	0	0	0	0

Installation	Compliance					Conservation					P2				
POM FY	21	22	23	24	25	21	22	23	24	25	21	22	23	24	25
Fort Belvoir	10	10	10	10	10	8	8	8	8	8	0	0	0	0	0
Fort Benning	13	13	13	13	13	23	23	23	23	23	1	1	1	1	1
Fort Bliss	10	10	10	10	10	16	16	16	16	16	4	4	4	4	4
Fort Bragg	24	24	24	24	24	19	19	19	19	19	0	0	0	0	0
Fort Campbell	11	11	11	11	11	11	11	11	11	11	0	0	0	0	0
Fort Carson	12	12	12	12	12	21	21	21	21	21	0	0	0	0	0
Fort Detrick	7	7	7	7	7	2	2	2	2	2	0	0	0	0	0
Fort Drum	15	15	15	15	15	11	11	11	11	11	0	0	0	0	0
Fort Gordon	10	10	10	10	10	5	5	5	5	5	0	0	0	0	0
Fort Greely	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fort Hamilton	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
Fort Hood	27	27	27	27	27	21	21	21	21	21	0	0	0	0	0
Fort Huachuca	8	8	8	8	8	6	6	6	6	6	0	0	0	0	0
Fort Irwin	9	9	9	9	9	5	5	5	5	5	1	1	1	1	1
Fort Jackson	5	5	5	5	5	7	7	7	7	7	1	1	1	1	1
Fort Knox	10	10	10	10	10	8	8	8	8	8	1	1	1	1	1
Fort Leavenworth	5	5	5	5	5	3	3	3	3	3	0	0	0	0	0
Fort Lee	5	5	5	5	5	4	4	4	4	4	3	3	3	3	3
Fort Leonard Wood	7	7	7	7	7	4	4	4	4	4	0	0	0	0	0
Fort Lewis McChord (JBLM)	23	23	23	23	23	15	15	15	15	15	5	5	5	5	5
Fort Meade	7	7	7	7	7	3	3	3	3	3	1	1	1	1	1
Fort Polk	14	14	14	14	14	13	13	13	13	13	1	1	1	1	1
Fort Riley	16	16	16	16	16	13	13	13	13	13	1	1	1	1	1
Fort Rucker	8	8	8	8	8	3	3	3	3	3	0	0	0	0	0
Fort Sill	10	10	10	10	10	10	10	10	10	10	3	3	3	3	3
Fort Stewart (Hunter AAF)	14	14	14	14	14	20	20	20	20	20	1	1	1	1	1
Fort Wainwright	7	7	7	7	7	10	10	10	10	10	3	3	3	3	3
Joint Base Myer- Henderson Hall	4	4	4	4	4	1	1	1	1	1	0	0	0	0	0
Kwajalein Atoll	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
Picatinny	10	10	10	10	10	1	1	1	1	1	0	0	0	0	0
Presidio of Monterey	5	5	5	5	5	2	2	2	2	2	1	1	1	1	1

Installation	Compliance					Conservation					P2				
POM FY	21	22	23	24	25	21	22	23	24	25	21	22	23	24	25
Redstone Arsenal	9	9	9	9	9	11	11	11	11	11	0	0	0	0	0
Rock Island Arsenal	5	5	5	5	5	2	2	2	2	2	1	1	1	1	1
USAG Ansbach	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
USAG Bavaria - Garmish	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
USAG Bavaria - Grafenwoer	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
USAG Bavaria - Hohenfels	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
USAG Benelux	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
USAG Daegu	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0
USAG Hawaii	18	18	18	18	18	15	15	15	15	15	1	1	1	1	1
USAG Humphreys	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
USAG Italy	3	3	3	3	3	1	1	1	1	1	1	1	1	1	1
USAG Japan	3	3	3	3	3	2	2	2	2	2	0	0	0	0	0
USAG Miami	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
USAG Natick	4	4	4	4	4	1	1	1	1	1	0	0	0	0	0
USAG Red Cloud	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0
USAG Rheinland-Pfalz	3	3	3	3	3	1	1	1	1	1	0	0	0	0	0
USAG Rheinland-Pfalz - Baumholder	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
USAG Stuttgart	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0
USAG Weisbaden	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
USAG Yongsan	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0
West Point	7	7	7	7	7	8	8	8	8	8	3	3	3	3	3
White Sands	8	8	8	8	8	8	8	8	8	8	3	3	3	3	3
Yuma Proving Ground	8	8	8	8	8	6	6	6	6	6	0	0	0	0	0

Local Nationals (LN)

The following are the number of VENQ LN personnel authorizations, by program per IMCOM installation. Data were obtained from BESPOM FY20–24, July 2018. Table 111 summarizes the personnel by Command and Pillar. Table 112 indicates the number of personnel authorizations for each installation.

Table 111. IMCOM local nationals personnel summary for FY21–25.

Command	Compliance					Conservation					P2				
POM FY	21	22	23	24	25	21	22	23	24	25	21	22	23	24	25
IMCOM (LN)	47	47	47	47	47	25	25	25	25	25	6	6	6	6	6

Table 112. IMCOM local nationals personnel authorizations for fy21–25.

[illegible]

Section KK. Number of Army National Guard (ARNG) Personnel

Federally Reimbursed State Employees (FRSE)

The following are the number of VENQ FRSE personnel authorizations per ARNG installation. Data were obtained from HQDA, December 2016. Tables 113 and 114 summarize the FRSE personnel by command and installation, respectively.

Table 113. FRSE personnel summary for FY21–25.

Command	Compliance	Conservation	P2
POM FY	21-25	21-25	21-25
ARNG (FRSE)	462	218	14

Table 114. ARNG personnel authorizations for FY21–25.

Command	Installation	Compliance	Conservation	P2
POM FY		21-25	21-25	21-25
ARNG	Alabama	12	9	0
ARNG	Alaska	8	2	1
ARNG	Arizona	9	6	0
ARNG	Arkansas	15	9	1
ARNG	California	19	13	1
ARNG	Colorado	7	2	0
ARNG	Connecticut	6	1	0
ARNG	Delaware	3	1	0
ARNG	District of Columbia	4	1	0
ARNG	Florida	14	7	1
ARNG	Georgia	12	2	1
ARNG	Guam Territory	3	1	0
ARNG	Hawaii	11	7	1
ARNG	Idaho	13	5	0
ARNG	Illinois	6	5	0
ARNG	Indiana	12	6	0
ARNG	Iowa	10	2	1
ARNG	Kansas	6	1	0
ARNG	Kentucky	5	8	0
ARNG	Louisiana	7	2	0
ARNG	Maine	4	2	0

Command	Installation	Compliance	Conservation	P2
POM FY		21-25	21-25	21-25
ARNG	Maryland	7	1	0
ARNG	Massachusetts	26	2	0
ARNG	Michigan	7	6	0
ARNG	Minnesota	9	6	1
ARNG	Mississippi	15	8	0
ARNG	Missouri	16	4	1
ARNG	Montana	6	3	0
ARNG	Nebraska	5	2	0
ARNG	Nevada	3	2	0
ARNG	New Hampshire	5	3	0
ARNG	New Jersey	3	1	0
ARNG	New Mexico	6	1	0
ARNG	New York	5	2	0
ARNG	North Carolina	11	3	0
ARNG	North Dakota	5	3	0
ARNG	Ohio	9	5	0
ARNG	Oklahoma	4	6	0
ARNG	Oregon	7	5	0
ARNG	Pennsylvania	18	8	0
ARNG	Puerto Rico	7	1	0
ARNG	Rhode Island	5	0	0
ARNG	South Carolina	9	7	1
ARNG	South Dakota	3	2	0
ARNG	Tennessee	11	5	0
ARNG	Texas	20	9	1
ARNG	Utah	7	8	0
ARNG	Vermont	5	3	0
ARNG	Virgin Islands	3	0	0
ARNG	Virginia	11	8	1
ARNG	Washington	8	1	0
ARNG	West Virginia	8	3	1
ARNG	Wisconsin	5	2	0
ARNG	Wyoming	7	6	1

Section LL. Number of U.S. Army Reserve (USAR) Personnel

Department of the Army Civilians (DAC)

Tables 115 and 116 indicate the number of VENQ DAC personnel authorizations per USAR and USAR installation, respectively. Data were obtained from BESPOM FY20–24, July 2018.

Table 115. USAR DAC Personnel Summary for FY21–25

Command	Compliance	Conservation	P2
POM FY	21-25	21-25	21-25
USAR (DAC)	21	13	7

Table 116. USAR personnel authorizations for FY21–25.

Command	Installation	Compliance					Conservation					P2				
POM FY		21	22	23	24	25	21	22	23	24	25	21	22	23	24	25
USAR	63rd RSC	0	0	0	0	0	0	0	0	0	0	7	7	7	7	7
USAR	81st RSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
USAR	88th RSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
USAR	99th RSC	3	3	3	3	3	1	1	1	1	1	0	0	0	0	0
USAR	9th MSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
USAR	Fort Buchanan	2	2	2	2	2	0	0	0	0	0	0	0	0	0	0
USAR	Fort Devens	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
USAR	Fort Hunter Liggett (inc. Camp Parks)	7	7	7	7	7	5	5	5	5	5	0	0	0	0	0
USAR	Fort McCoy	9	9	9	9	9	7	7	7	7	7	0	0	0	0	0

Tables 117 and 118 indicate the number of VENQ DAC personnel authorizations per AMC and AMC installation, respectively. Data were obtained from BESPOM FY20–24, July 2018.

[illegible][illegible]

Acronyms and Abbreviations

ACSIM	Assistant Chief of Staff for Installation Management
AEDB	Army Environmental Database
AEDB-EQ	Army Environmental Database – Environmental Quality
AMC	Army Materiel Command
AR	Army Regulation
AR 200-1	Army Regulation 200-1, Environmental Protection and Enhancement
ARNG	Army National Guard
ARPA	Archeological Resources Protection Act
AST	aboveground storage tank
BESPOM	Budget Estimate Submission Program Objective Memorandum
BGEPA	Bald and Golden Eagle Protection Act
BMP	best management practice
BOD	biological oxygen demand
CAA	Clean Air Act
CATCODE	category code
CFR	Code of Federal Regulations
COD	chemical oxygen demand
CTYPE	civilian type
CWA	Clean Water Act
CY	calendar year
DAC	Department of the Army Civilian
DAC/FRSE	Department of the Army Civilian/ Federally Reimbursable State Employee
DAIM-ISE	Headquarters Department of Army, Installation Services Directorate, Environmental Division
DASA-CE	Deputy Assistant Secretary of the Army for Cost and Economics

DLA-DS	Defense Logistics Agency – Disposition Services
DoD	Department of Defense
DoDI	Department of Defense Instruction
DOL	Department of Logistics
EAC	engineered activity costs
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EQ	Environmental Quality
EQRM	Environmental Quality Requirements Model
ESA	Endangered Species Act
FEE	Fee simple, ownership interest is held by the U.S. Government
FGS	Final Governing Standards
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FRP	Facility Response Plan
FRSE	Federally Reimbursable State Employee
FY	Fiscal Year
G9	Deputy Chief of Staff, Installation
GFEBs	General Fund Enterprise Business System
GHG	green house gas
GIS	Geographic Information System
GS	graded employee
HQDA	Headquarters, Department of the Army
HQIIS	Headquarters Installation Information System
HWMP	Hazardous Waste: Management Plan
ICP	inductively coupled plasma
ICRMP	Integrated Cultural Resources Management Plan
ICUZ	Installation Compatible Use Zone

II PEG	Installations Program Evaluation Group
IMCOM	Installation Management Command
INRMP	Integrated Natural Resources Management Plan
IP&I	Installation Programs and Initiatives
IPMP	Integrated Pest Management Plan
IT	Information Technology
ITAM	Integrated Training Area Management
LBP	lead-based paint
LN	Local National
MBTA	Migratory Bird Treaty Act
MDEP	Management Decision Package
MILCON	Military Construction
MOT	Military Ocean Terminal
MS4	Municipal Separate Storm Sewer System
MSGP	Multi-Sector General Permit
NAAQS	National Ambient Air Quality Standard
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NEV	Not Evaluated
NHL	National Historic Landmarks
NHPA	National Historic Preservation Act
NLEB	Northern Long Eared Bat
non-RCW	non-Red-Cockaded Woodpecker
NPDES	National Pollutant Discharge Elimination System
NR	National Register
NRE	National Register Eligible
NRHP	National Register of Historic Places

NSR	Non-Source Review
OACSIM	Office of the Assistant Chief of Staff for Installation Management
ODC	other direct cost
ODS	ozone depleting substance
OMA	Operations and Maintenance Army
ONST	owned by state or local government
OP2	oil pollution prevention
P2	Pollution Prevention
PLS	planning level surveys
POL	petroleum-oil-lubricants
POM	Program Objective Memorandum
POTW	publicly owned treatment work
PPB BOS	Planning, Programming, and Budgeting Business Operating System
PPOA	Pollution Prevention Opportunity Assessment
PPOA	Pollution Prevention Opportunity Assessment
PWS	public water system
QA	quality assurance
QC	quality control
RCRA	Resource Conservation and Recovery Act
RCW	Red-Cockaded Woodpecker
RMP	Risk Management Plan
RPA	Real Property Asset
RSC	Regional Support Command
SAR	Species at Risk
SDWA	Safe Drinking Water Act
SME	subject matter experts
SPCC	spill prevention control countermeasures

SWPPP	Storm Water Pollution Prevention Plan
T/F	True/False
TES	Threatened and Endangered Species
TMDL	total maximum daily load
TRI	Toxics Release Inventory
TSCA	Toxic Substances Control Act
TSS	total suspended solids
UCMR3	Third Unregulated Contaminant Monitoring Rule
USACE	U.S. Army Corps of Engineers
USAG	U.S. Army Garrison
USAR	U.S. Army Reserve
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tanks
VENQ	Management Decision Package Environmental Quality
VOC	volatile organic compound
WG	Federal Employee
WWTP	wastewater treatment plant

REPORT DOCUMENTATION PAGE					Form Approved OMB No. 0704-0188	
<p>The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.</p> <p>PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.</p>						
1. REPORT DATE December 2020		2. REPORT TYPE Final Report		3. DATES COVERED (From - To)		
4. TITLE AND SUBTITLE Environmental Quality Requirements Model Program Objective Memorandum Fiscal Years 2021–2025				5a. CONTRACT NUMBER		
				5b. GRANT NUMBER		
				5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S) Heather M. Knotek-Smith and Jeffrey A. Gerald				5d. PROJECT NUMBER A1000-FY20		
				5e. TASK NUMBER		
				5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Environmental Laboratory U.S. Army Engineer Research and Development Center 3909 Halls Ferry Road Vicksburg, MS 39180-6199				8. PERFORMING ORGANIZATION REPORT NUMBER ERDC EL TR-20-10		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Headquarters, Department of the Army DCS, G9 - ATTN: DAIM-ISE 600 Army Pentagon Washington, DC 20310-0600				10. SPONSOR/MONITOR'S ACRONYM(S) HQ DOA		
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.						
13. SUPPLEMENTARY NOTES						
14. ABSTRACT <p>This document describes the methodology used to evaluate the costs incurred by organizations involved in planning, programming, budgeting, and execution of the Army's environmental programs and estimating those costs for future year planning cycles, this model is referred to as the Environmental Quality Requirements Model (EQRM). The EQRM is used to develop the budget positions as presented to Congress to obtain the Operations and Maintenance appropriations. These appropriations fund the Environmental Quality Program which includes Compliance, Conservation and Pollution Prevention requirements.</p> <p>The model encompasses the commands under the funding structure of the Deputy Chief of Staff – G9 Installations which includes the following: Installation Management Command, the Army National Guard, the Army Reserve Command, and the Army Materiel Command.</p>						
15. SUBJECT TERMS Cost—Estimates, Environmental management, Environmental protection, United States, Army—Environmental responsibility--Costs						
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON	
a. REPORT	b. ABSTRACT	c. THIS PAGE			Heather M. Knotek-Smith	
Unclassified	Unclassified	Unclassified	SAR	358	19b. TELEPHONE NUMBER (Include area code) 601-634-4216	