

Military Installations Ranges and Training Areas (MIRTA), California, 2022

Karasaki, S., Pace, C., Cushing, L., Morello-Frosch, R. (2023). Military Installations Ranges and Training Areas (MIRTA). Drinking Water Tool metadata, prepared by the Water Equity Science Shop, UC Berkeley. Contact: cpace@berkeley.edu

File name: PFAS_source_MIRTA.shp

Spatial Reference

Geographic Coordinate System	NAD 1983	Projected Coordinate System	NAD 1983 (Teale) Albers (Meters)
WKID	4269	Projection	3310
Authority	EPSG	Authority	EPSG
Angular Unit	Degree (0.0174532925199433)	Linear Unit	Meters (1.0)
Prime Meridian	Greenwich (0.0)	False Easting	0.00
Datum	D North American 1983	False Northing	-4000000.0
Spheroid	GRS 1980	Central Meridian	-120.0
Semimajor Axis	6378137.0	Standard Parallel 1	34.0
Semiminor Axis	6356752.314140356	Standard Parallel 2	40.5
Inverse Flattening	298.257222101	Latitude of Origin	0.0

Description

This shapefile contains 78 polygons representing military installations, ranges, and training areas in California.

Methods

We downloaded point and polygon data for military installations, ranges, and training areas (MIRTA) from data.gov¹ (downloaded on 9/30/22). We found that the polygon shapefile (n=74) had six less rows than the point shapefile (n=80) for the state of California. We identified the six facilities without polygon boundaries and manually added them using ArcGIS Pro 3.0.2, Google search, and satellite imagery. (We manually drew boundaries for the following systems: CSO Naval Air Station Alameda Air Force Plant 42; CSO Hunters Point Annex; CSO Naval Station Treasure Island; CSO Naval Shipyard (NSY) Mare Island; Site 3 Naval Station Long Beach).

Next, we spatially joined MIRTA boundaries with a layer of other potential groundwater threats (36 airports that were certified at one point in time to use PFAS-containing fire-fighting foam²⁻⁴ and 100 Superfund sites⁵). Eleven MIRTA sites were also listed as Superfund sites (i.e. present in the Superfund Site layer, but with slightly different boundaries). We reconciled boundary differences by using the composite outer boundary of sites cross listed in the MIRTA and Superfund site layer. This resulted in the following changes: we combined Marine Corps Logistics Base (MCLB) Barstow and Yermo Area MIRTA into a single site (new MIRTA site name in this dataset: MCLB Barstow/ Yermo Area); We combined Det Concord (BRAC) and Military Ocean Terminal Concord into a single polygon corresponding to one Superfund site (new MIRTA site name in this dataset: Military Ocean Terminal Concord/Det Concord Base Realignment and Closure (BRAC)/CONCORD Naval Weapons Station). The final number of MIRTA polygons is 78. The following additional polygons were modified and reconciled with Superfund site boundaries: George Air Force Base (AFB)/Southern CA Logistics Airport; McClellan AFB; Riverbank

Army Ammunition Plant; Edwards Air Force Base; March Air Force Base; Marine Corp Base Camp Pendleton; Travis Air Force Base; and CSO Alameda/ALAMEDA Naval Air Station.

Attribute Table

Field Heading	Field Description
FID	ESRI generated field
Shape	Polygon – ESRI generated field
PROGRAM	MIRTA MIRTA/Superfund Site (MIRTA site that is also a Superfund site) MIRTA/P139/Superfund Site (MIRTA site that is also an airport permitted to use Fire Fighting Foam containing PFAS and a Superfund site)
ID	Name (MIRTA) or Superfund Site ID
SITE_NAME	MIRTA Site Name
EXTENT	Describes additional processing steps / details
NOTES	Identifies the military service that has reporting responsibility for the site armed forces reserve (afr), air force national guard (airNationalGuard), army national guard (armyNationalGuard), united states army (usa), us air force (usaf), us army reserve (usar), us marine corp (usmc) us navy (usn)
STATUS	Current operation status of the site (active (act), closed (clsd), closure and realignment effort (care)
NOTES	Indicates intersections with other drinking water threats
Also_contains	Lists additional PFAS sources within boundary (e.g. 1 publicly owned treatment works)
Shape_Length	Length in meters
Shape_Area	Area in square meters

Acknowledgements

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References

1. Military installations, ranges, and training areas. Department of defense. Available online at <https://catalog.data.gov/dataset/military-installations-ranges-and-training-areas>. Updated February 24, 2021. Accessed September 30, 2022.
2. CA.Gov. California Open Data Portal. Caltrans Airport boundaries. Updated 2-16-22. <https://data.ca.gov/dataset/airport-boundaries>.
3. California State Water Board, Department of water quality. Point layer for Airports permitted to use aqueous film forming foam (AFFF). Updated June 27, 2019. <https://gispublic.waterboards.ca.gov/portal/home/item.html?id=79be3add14bc4c32837dbffb13ab9893>.

4. United States Department of Transportation. Federal Aviation Administration, Part 139-Airport Certification. Updated August 3, 2022.
https://www.faa.gov/airports/airport_safety/part139_cert.
5. NPL_Boundaries, FAC-Superfund Site Boundaries (EPA), Zipped file geodatabase. Retrieved from https://catalog.data.gov/dataset/fac-superfund-site-boundaries-epa/resource/4d1edc60-dc8a-4e3d-9bf7-ae59044fa2e4?inner_span=True. Accessed September 30, 2022.