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FORT WAINWRIGHT, TAKU GARDENS (102 COMMUNICATIONS SITE)



Location

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Status: Active **Database Name:** Fort Wainwright Taku Gardens (102 Comm. Site)

Location: Fairbanks **Latitude/Longitude:** See database entry

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Contacts updated: Jan. 14, 2014

Summary updated: March 21, 2014

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DESCRIPTION

Fort Wainwright is located in Interior Alaska, east of the Fairbanks city limits. It was created in 1939 as Ladd Field, and served as an Army cold weather station to test aircraft under arctic conditions. The facility was a strategic part of military efforts during World War II from 1942 until 1945. The U.S. Air Force operated Ladd Field from 1947 until 1961, when the U.S. Army resumed control and renamed it Fort Wainwright.

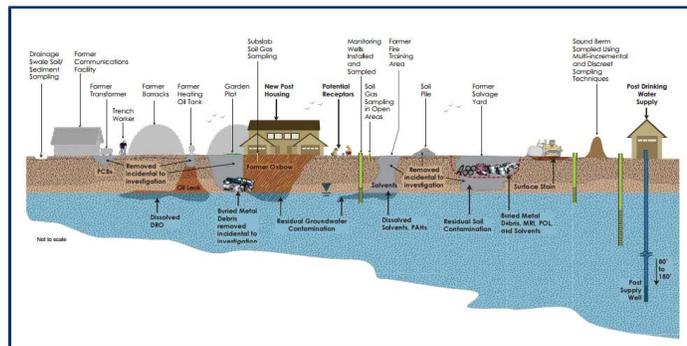
Fort Wainwright was placed on the Environmental Protection Agency's (EPA) National Priorities List of Superfund sites in 1990. Most of the contamination identified at that time is being managed in five operable units under a cooperative Federal Facilities Agreement between the Army, EPA and Alaska Department of Environmental Conservation (DEC), and the remainder is managed under the "Two-Party Agreement" between the Army and DEC.



The Taku Gardens Family Housing development – 110 units in 55 buildings – is shown (above) in the summer of 2013. The construction of the home was completed in 2005, but they were left empty. The roads and utilities were finished in 2011, and the landscaping and exterior work was completed in the summer of 2013. (DEC photo)

The contamination in all the areas has either been treated or removed, is undergoing active treatment, or is being monitored. Information on the cleanup efforts is summarized on the EPA's [Superfund website](#) and DEC's [Contaminated Sites Database](#).

The Taku Gardens site – also known as the Former Communication Site – was added as Operable Unit 6 in 2007 and is being managed under the Federal Facilities Agreement as well.



FORMER COMMUNICATIONS SITE BACKGROUND

The Former Communication Site is located between Alder and Neely roads, east of White Street and west of the Fort Wainwright Power Plant. The Taku Gardens Family Housing development covers 54 acres

The February 2013 conceptual site model (above) for the Taku Gardens site shows the type and location of all potential sources of contamination that were identified in the investigation, and how and where people, plants or animals could have been exposed to that contamination. (Graphic by Jacobs, CH2M Hill)

of the Former Communication Site and includes 110 new housing units in 55 buildings. The buildings were intended for use as family housing for Fort Wainwright military personnel and their families.

The area historically defined as the Former Communication Site has had a history of mixed uses, including the following:

- ▶ Equipment salvage and reclamation.
- ▶ Debris and salvage material disposal in the Chena River oxbow that extends through the site, in trenches in the salvage yard area, and possibly in other depressions.
- ▶ Barracks and company headquarters, extending into the northwest corner of the site.
- ▶ Garden plots.
- ▶ Communications and radar systems.
- ▶ Possible ammunition storage.

A limited number of written records exist that describe the specific activities that occurred at the Former Communication Site over the years.

Much of what is known about the site has been inferred from examining and comparing historical photographs dating from 1947 to the present, the 1958 Fort Wainwright Master Plans, past geographical surveys, and military operations that occurred with similar missions conducted at other locations.

The area was selected for military family housing in 2002 and 2003. Preconstruction geotechnical samples were collected in late 2003 and again in 2004. Geophysical testing completed during that time indicated areas of buried debris near the former salvage yard.



The empty housing development, which covers 54 acres, is shown during the summer of 2013. The whole development was fenced and site access was restricted to limit potential human exposure. (DEC photo)

Work began on the Taku Gardens Family Housing development in mid-2005, when workers installed the foundations and underground utilities for the construction of the residential buildings and two mechanical buildings.

The 110 housing units in the 55 buildings were finished in 2005. The contractor winterized the units by activating the electrical systems, steam mains and glycol heat exchangers. The roads and utilities were completed in 2011. The landscaping and all exterior work was completed in 2013.

PUBLIC HEALTH AND ENVIRONMENTAL CONCERNS

The most significant public health concern to date has been the presence of munitions and chemical contaminants. Contaminants of

concern include PCBs, petroleum compounds, chlorinated compounds, volatile and semi-volatile organics, pesticides and discarded military munitions. The Remedial Investigation – when the necessary data is gathered to determine the type and extent of contamination at the site – was completed December 2010.

INSTITUTIONAL CONTROLS

Institutional Controls are measures to protect people and the environment from exposure to oil or hazardous substances.

Site-specific institutional controls, an important part of managing the contamination at Taku Gardens, were put on the site in November 2007. The Army, EPA and DEC signed an action memorandum Nov. 19, 2007, setting the following institutional controls:

- ▶ The entire housing area was fenced, dated, and locked;
- ▶ Site access was restricted to trained personnel and site workers;
- ▶ Groundwater use was not permitted;
- ▶ Excavation was only allowed for site investigation and with the approval of DEC, EPA and the Department of Defense Explosives Safety Board;
- ▶ No housing at this site was to be released for residential occupancy until the Army, DEC and EPA agreed that it is safe.

The post obtained its drinking water – and still does – from groundwater wells that aren't on the Former Communications Site, and does regular testing to confirm that the water meets all drinking water standards.

CURRENT STATUS

This site has been investigated and managed in accordance with all applicable state regulations and the federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The results from a Preliminary Source Evaluation performed in 2006 indicated that additional investigation of contaminated soil and groundwater was necessary in multiple areas of the site. A Remedial Investigation and Baseline Risk Assessment (RI/RA), as required under CERCLA, was carried out from 2007 through 2010, and the report of the investigation and assessment was completed in December 2010.

A Feasibility Study, completed in July 2011, evaluated five alternatives for the site:

- ▶ Alternative 1 – No action.
- ▶ Alternative Soil 2 – Institutional controls to control the disposition of excavated soil.
- ▶ Alternative Groundwater 2 – Monitored natural attenuation and institutional controls to prohibit groundwater use.
- ▶ Alternative Groundwater 3 – In situ chemical oxidation and institutional controls to prohibit groundwater use.
- ▶ Alternative Groundwater 4 – Permeable reactive barrier, monitored natural attenuation and institutional controls to prohibit groundwater use.

The Army evaluated the above alternatives in its Proposed Plan and Action Memorandum, and worked with the EPA and DEC to review and approve the plan and memorandum in February 2013. The process included a 30-day public comment period and a public meeting in Fairbanks, and identified the alternative or alternatives that best protect human health and the environment. A summary of the Army's responses to the public comments is in the Responsiveness section of the Record of Decision (ROD), which was finalized in January 2014. (See the document in the More Information section below.)

The Army chose two of the alternatives to implement, based on nine CERCLA criteria, and explained them in the Record of Decision:

- ▶ Alternative Soil 2 – Institutional controls to control the excavation of soil. (This alternative was amended to include only soil excavation.)



Some of the discarded military munitions unearthed at the Taku Gardens site are shown in this June 2008 photo. (DEC photo)

- ▶ Alternative Groundwater 2 – Monitored natural attenuation and institutional controls to prohibit groundwater use.

The Army worked with the EPA and DEC when it finalized the Record of Decision – all three agencies have signed it. It documents the fact that the three agencies agree that all necessary CERCLA investigations are complete, and they agree on the remedial actions to be implemented to ensure Taku Gardens is safe for residential occupation. The Record of Decision removed the land-use controls that prohibited the occupancy of the homes, and removed the requirements for fencing and signs.

Yet the Record of Decision kept in place two interim land-use controls that:

- ▶ Restrict soil excavation.
- ▶ Prohibit groundwater use.

The next step, the Remedial Design/Remedial Action (RD/RA) Work Plan, will memorialize those two institutional controls, as well as provide details for additional controls, including a requirement for groundwater monitoring. The Army expects the draft RD/RA Work Plan to be available to EPA and DEC for review in early April 2014.

MORE INFORMATION

- ▶ Record of Decision, Operable Unit 6, Former Communications Site – Final (January 2014), U.S. Army Corps of Engineers, Alaska District:
http://146.63.9.103/applications/spar/ccreports/closedocs/4140_Record%20of%20Decision%20OU6.pdf
- ▶ DEC's Contaminated Sites Database – There are a number of individual contaminated sites on Fort Wainwright, and updates on the status of each is available on DEC's database. (Project managers update the database entries as time allows; they're not always up-to-date.)
 - ▶ For the database entry on Taku Gardens, [click here](#). For a report on the site's institutional controls, click on the picture of the file in the upper right of the database entry.
 - ▶ For all other sites, [click here](#) and choose "Fort Wainwright" in the city drop-down box.
- ▶ The Army's Administrative Record – It includes all documents relating to the site. Go to <http://www.wainwright.army.mil/env/default.html>. At the top of the red tool bar, click on "Restoration," then go to the right-hand tool bar, click on "Restoration News, Announcements & Notices." Then click on the link, "Fort Wainwright Former Communications Site Administrative Record." The list of hyperlinked documents begins on Page 3.
- ▶ DEC's [Glossary/Acronyms](#) link is on the bottom of the Contaminated Sites Program's home page.

General DEC Fact Sheets

- "Cleanup Process for Contaminated Sites," (March 2009) – ([pdf 304K](#))
- "How DEC Makes Cleanup Decisions," (June 2009) – ([pdf 20K](#))
- "Introduction to Groundwater," (June 2009) – ([pdf 412K](#))
- "Understanding Contaminant Concentrations," (June 2009) – ([pdf 164K](#))
- "Department of Defense Cleanups," (June 2009) – ([pdf 59K](#))
- "Environmental Laws and Regulations," (June 2009) – ([pdf 39K](#))
- "Environmental Cleanup Methods," (June 2009) – ([pdf 171K](#))
- "Human Health Risk Assessment," (June 2009) – ([pdf 78K](#))
- "Common Alaska Contaminants and their Sources," (June 2009) – ([pdf 240K](#))



The above February 2013 map shows the location of the site on Fort Wainwright. (Graphic by Jacobs)

[Glossary/Acronyms](#) [Site Map](#) [Commissioner](#) [Public Notices](#) [External Links](#)

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