

Connections: Cleanup and Land Use on Parcel M1 (Settling Ponds Area)

There is a direct connection between the level of cleanup and how land may be used in certain areas of the former Badger Army Ammunition Plant. As allowed under Wisconsin's soil cleanup rules, the U.S. Army integrated anticipated future land use in calculating potential human exposure risk¹ for many of the contaminated sites at Badger.

For the land parcels slated for transfer to the State of Wisconsin, the Army relied on the Wisconsin DNR's application to the National Park Service (Federal Lands to Parks Program) which documents anticipated land use after transfer through the U.S. General Services Administration.

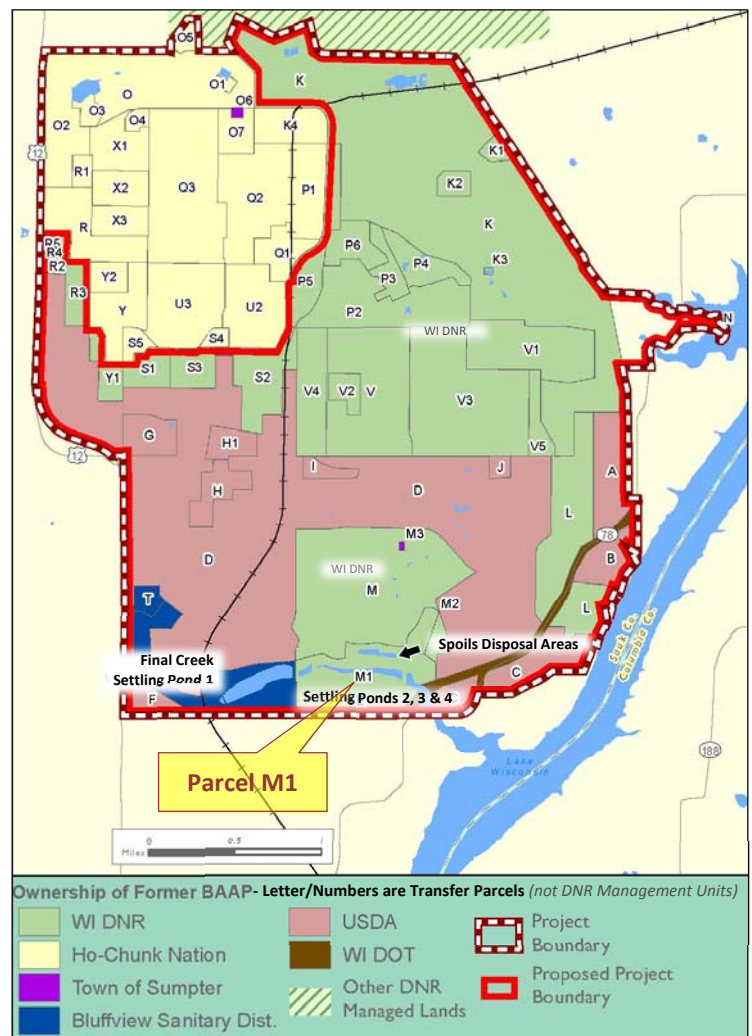
The DNR's application, which was approved by the National Park Service in August of 2004, stipulated that DNR would use the site primarily for conservation and recreation. Activities would include hiking, picnicking, primitive camping, Lake Wisconsin access viewing, prairie, savanna and grassland restoration, environmental education and cultural/historical interpretation.²

Five years later, in November of 2009, the Army asked the DNR – the regulatory agency overseeing cleanup at Badger – to consider a proposal to reduce soil cleanup goals for the contaminated Settling Ponds Area (Final Creek, Settling Ponds and Spoils Disposal Areas).

The proposal would apply to the 166-acre Parcel M1 which contains Settling Ponds 2 and 3, a portion of Settling Pond 4, and Spoils Disposal Areas I, II, III, IV and V which were slated for transfer to the DNR.³ The proposed changes were significant, increasing allowed levels of the carcinogenic explosive 2,6-DNT from 4.29 to 620 mg/kg, for example. Soil cleanup goals for lead would increase from 30 to 500 mg/kg.⁴

"The current and future land use in Parcel M1 is anticipated to be somewhat similar in that human contact with soil is of a short duration (a few hours) and only on occasion (1 to 10 days per year) per individual," the Army wrote. "As stated above, the Army plans to transfer Parcel M1 to the NPS/WDNR for recreational use (e.g., hunting, hiking) [sic] as an extension of Devil's Lake State Park."⁵

"The site is currently thickly vegetated with prairie grasses, trees, and shrubs," the Army added. "The root systems of these plants bind the soil particles beneath the surface and prevent them from becoming airborne or exposed. As stated above, it is not anticipated that the vegetative cover will be disturbed with future land use."⁶



¹ U.S. Army, Draft Revised Remediation Goals Proposal for the Alternative Feasibility Study, Final Creek, Settling Ponds, and Spoils Disposal Areas, Badger Army Ammunition Plant, November 16, 2009.

² WDNR - Application to Acquire Surplus Federal Property to the U.S. Department of Interior, National Park Service, Badger Army Ammunition Plant, Baraboo, Wisconsin, April 2000.

³ U.S. Army, Draft Revised Remediation Goals Proposal for the Alternative Feasibility Study, Final Creek, Settling Ponds, and Spoils Disposal Areas, Badger Army Ammunition Plant, November 16, 2009.

⁴ Citizens for Safe Water Around Badger, CSWAB UPDATE: Soil Contamination Could Trump Future Uses at Badger, February 9, 2010.

⁵ U.S. Army, Draft Revised Remediation Goals Proposal for the Alternative Feasibility Study, Final Creek, Settling Ponds, and Spoils Disposal Areas, Badger Army Ammunition Plant, November 16, 2009.

⁶ U.S. Army, Draft Revised Remediation Goals Proposal for the Alternative Feasibility Study, Final Creek, Settling Ponds, and Spoils Disposal Areas, Badger Army Ammunition Plant, November 16, 2009.

The Army also argued that cleanup levels should be modified because the ground is frozen and snow-covered for approximately four months per year from December through March, reducing the potential for direct human contact with impacted soil. In addition, Devil's Lake State Park, which would manage this area after transfer, has limited hours of access for the public except for camping areas, and the deed restriction language would prohibit camping on these parcels, the Army wrote.⁷

The Army's request prompted discussion between land use planners and remediation specialists within the WDNR as the proposed reduction in cleanup levels was contingent on specific land use assumptions and limitations.

In a July 29, 2010 internal communication, WDNR staff wrote: "I'm sure that some shallow contaminated soil will remain in the Settling Ponds, Final Creek, and the Spoils Disposal Areas...Although the number of days of use assumed for recreational use in contaminant exposure calculations is around 75 and the Army is proposing to use 77 days, there will still be land uses that would be good to avoid. It is hard to imagine the Settling Ponds and Final Creek being used extensively for any designated activity as part of the Sauk Prairie Recreational Area, although I'm guessing that a hiking trail might be acceptable, for example, but more intensive uses such as a campground or an ATV trail where the vegetation would be removed should be avoided."⁸

Less than 2 weeks later, on August 11, 2010, the DNR issued a letter to the U.S. Army at Badger stating that the agency did not object to possible changes in soil cleanup goals based in part on the assumption that future land use of Settling Ponds 2, 3 and 4 and the Spoils Disposal Areas would be "light and infrequent by recreational users, staff and volunteers, and that the areas of soils contamination will remain essentially undisturbed."⁹

In August 2012, the U.S. Army submitted a formal Alternative Feasibility Study for Final Creek, Settling Ponds and Spoils Disposal Areas at Badger seeking final approval for reduced cleanup based on anticipated future land use. The Army identified "an individual or family hiking through the area" as the most likely exposure scenario in its human health risk assessment.

On June 11, 2013, the DNR formally approved modified cleanup goals at the Settling Ponds Area commensurate with the very low-impact activities specified by DNR in land transfer documents – permanently limiting future use to assure the protection of public health. In its response to public comment on the approval, the DNR wrote that prairie restoration has been a "primary objective" of the Department in the Master Planning process for the Sauk Prairie Recreation Area. "Restoration activities will not be prohibited; however there may be some precautions implemented when these activities are conducted," DNR concluded.¹⁰



The former Settling Ponds, located along the installation's southern boundary, were first used in 1942. During active production, they received sanitary and industrial wastewater from the entire Badger facility and surface runoff from the nitroglycerine, rocket paste, and magazine (bunker) areas. Sediments (spoils) removed during dredging operations were placed alongside the ponds. The Settling Ponds area is 67 acres, and the spoils disposal areas cover 21 acres.¹¹ The ponds are now meadow wetlands. Residual soil contaminants include the explosive DNT, nitroglycerine, mercury, lead, aluminum and others.

Citizens for Safe Water Around Badger

www.CSWAB.org

(608)643-3124 info@cswab.org

www.facebook.com/cswab.org

⁷ U.S. Army, Draft Revised Remediation Goals Proposal for the Alternative Feasibility Study, Final Creek, Settling Ponds, and Spoils Disposal Areas, Badger Army Ammunition Plant, November 16, 2009.

⁸ Email communication from Kuehling, Harlan H - DNR to Karr, Craig L - DNR, CC: Pierce, Eileen F - DNR, Subject: Choosing Clean-up Levels for Contaminated Soil in the Settling Ponds Area, Thursday, July 29, 2010 11:50 AM. (Obtained via Wisconsin open records request.)

⁹ WDNR, Remediation and Redevelopment Program, H. Kuehling, correspondence to J. Kenney, Installation Director, U.S. Army, Badger Army Ammunition Plant, August 11, 2010.

¹⁰ WDNR, Final Determination of Feasibility for an Alternative Remedial Strategy for Soil of Final Creek, the Settling ponds, and Spoils Disposal Areas of the Badger Army Ammunition Plant, Public Comments and WDNR Responses, page 8, June 11, 2013.

¹¹ U.S. Army, FY2012, Badger Army Ammunition Plant, Installation Action Plan, page 57.