

November 28, 2011

MEMORANDUM

TO: R. Todd Crutcher, P.E., Engineering Manager, Boise Regional Office

FROM: C. Gary Carroll, P.E., Technical Engineer 1, Boise Regional Office

SUBJECT: Staff Analysis for Permit Modification: Replacement Land Application Site Area for Class C Wastewater to the YMCA Horsethief Camp Wastewater Reuse Permit No. LA-000224-01

PURPOSE

The purpose of this memorandum is to satisfy the requirements of the Idaho rules for the *Recycled Water Rules*, IDAPA 58.01.17.700, for issuing a Wastewater Reuse Permit (WRP) modification.

DISCUSSION

The YMCA Horsethief Camp (YMCA) at Horsethief Reservoir, Idaho has a WRP to land apply Class C wastewater reuse effluent from their wastewater treatment facility (WWTF) at the camp. Up to now, all wastewater treated in the aerated lagoons (LG-022401 and 022402) has been stored in the storage/polishing pond (LG-022403) and no wastewater has been land applied.

On August 29, 2011, the YMCA submitted an application letter and technical report for a permit modification to replace the existing permitted land application site area with another land application site area located nearby. The application letter/technical report with Figures 2A, 2B, and 3A are attached to this memo.

The submitted technical report describes the proposed replacement and discusses the advantages of the proposed land application site area over the existing permitted land application site area. The proposed land application site area is 14.4 acres, which is 6.4 acres larger than the existing permitted 8 acre land application site area, and is located within the existing property boundaries of the YMCA Camp. The advantages of the proposed land application site area are as follows:

- The proposed land application site area is adjacent to the WWTF and will minimize pumping costs.
- The proposed land application site area has a greater separation from the wetland areas (600 ft. vs. 100 ft.)
- The proposed land application site area is larger and will provide more operational flexibility.

There will be no change in the hydraulic loading rate. The application letter indicates the loading rate would be 21.7 in/ac-yr., which is what was proposed in the original wastewater reuse permit application. This is lower than what is allowed by the permit (37.64 in/ac-yr). However, this is not a concern as long as the hydraulic loading rate is not exceeded, because the irrigated vegetation in the land application site area is native forest, rather than a crop to be harvested.

There do not appear to be any concerns with this permit modification.

The other permit modifications that need to be made would be considered minor modifications as described in subsection 700.02 of IDAPA 58.01.17., and are as follows:

- The Application Site Area in Section F (third row) should be changed to “14.4 acres” to match the acreage of the proposed land application site area.
- The units of measurement (MG and Inches) in the columns in Table 1 in Section F – Monthly Hydraulic Loading Rate Limit, need to be reversed. Also, “Inches” should be changed to “Inches/Acre.”
- In Appendix 1 – Environmental Monitoring Serial Numbers, the number of acres for HMU-022401 should be changed to “14.4” to match the acreage of the proposed land application site area.
- In Appendix 2 – Site Maps, new Figures A-3 and A-4, showing the proposed land application site area, should replace the existing figures.

CONCLUSIONS

Since there has been no wastewater applied to the existing permitted land application site area, and there are several advantages to replacing the existing permitted land application site area with the proposed land application site area, there do not appear to be any concerns with the proposed WRP modification.

RECOMMENDATION

Staff recommends the issuance of this permit modification for a 14-day public comment period, which, if issued, would replace the existing permitted land application site area with another, larger land application site area located nearby.

Attachment A

- YMCA Horsethief Camp Wastewater Reuse System Permit Modification Letter and Technical Report
- Technical Report Figures 2A, 2B, and 3A



CH2M HILL
322 E. Front Street
Boise, ID 863703
Tel 208.345.5310
Fax 208.345-5315

August 29, 2011

Valerie Greear
Idaho Department of Environmental Quality
Boise Regional Office
1445 N. Orchard
Boise, ID 83706

Re: Wastewater Reuse Permit, YMCA Horsethief Camp Wastewater Reuse System
Technical Report

Ms. Greear,

The YMCA submitted the *YMCA Horsethief Camp Wastewater Reuse System Technical Report* in January of 2010. Based on further investigation during the 2010/2011 growing season, we would like to modify the approved land application boundary from the municipal wastewater reuse permit LA-000224-01 granted to the YMCA Horsethief Camp. The proposed land application area is closer to the wastewater treatment lagoon than the abandoned land application area and will minimize pumping costs. In addition, the separation distance to known wet areas will be substantially increased with the move. The attached figures show the abandoned land application area and the proposed land application area for all figures supplied in the original *YMCA Horsethief Camp Wastewater Reuse System Technical Report*. The abandoned land application area was 8 acres. The proposed land application area is 14.4 acres. The hydraulic loading rate of 21.7 inches per year will be maintained on the proposed land application area. In addition, the proposed land application system design allows for increased management of the irrigation system. The operator will be able to adjust the irrigation schedule to meet vegetation and soil needs. While the entire site is capable of assimilating 21.7 inches of wastewater each year, increasing the acreage allows the operator to "rest" certain areas or decrease the hydraulic loading based on specific needs of the vegetation and soils in the area. The land application system will be managed to apply a maximum of 21.7 inches of water per year, but some areas may receive a lower hydraulic loading based on the irrigation water management plan and operator judgment.

There were no comments from the first public review period due to the remoteness of the area and very few "neighbors". We are requesting a minimum public review period as the change in the land application area boundary has no impact to the surrounding land owners.

In addition to the requested change to the land application boundary there appears to be an error in Table 1 from the municipal wastewater reuse permit LA-000224-01. Based on our conversation, the 2nd column heading should be over the third column and the 3rd column heading should be placed over the second column.

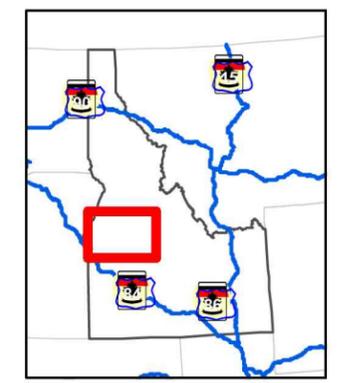
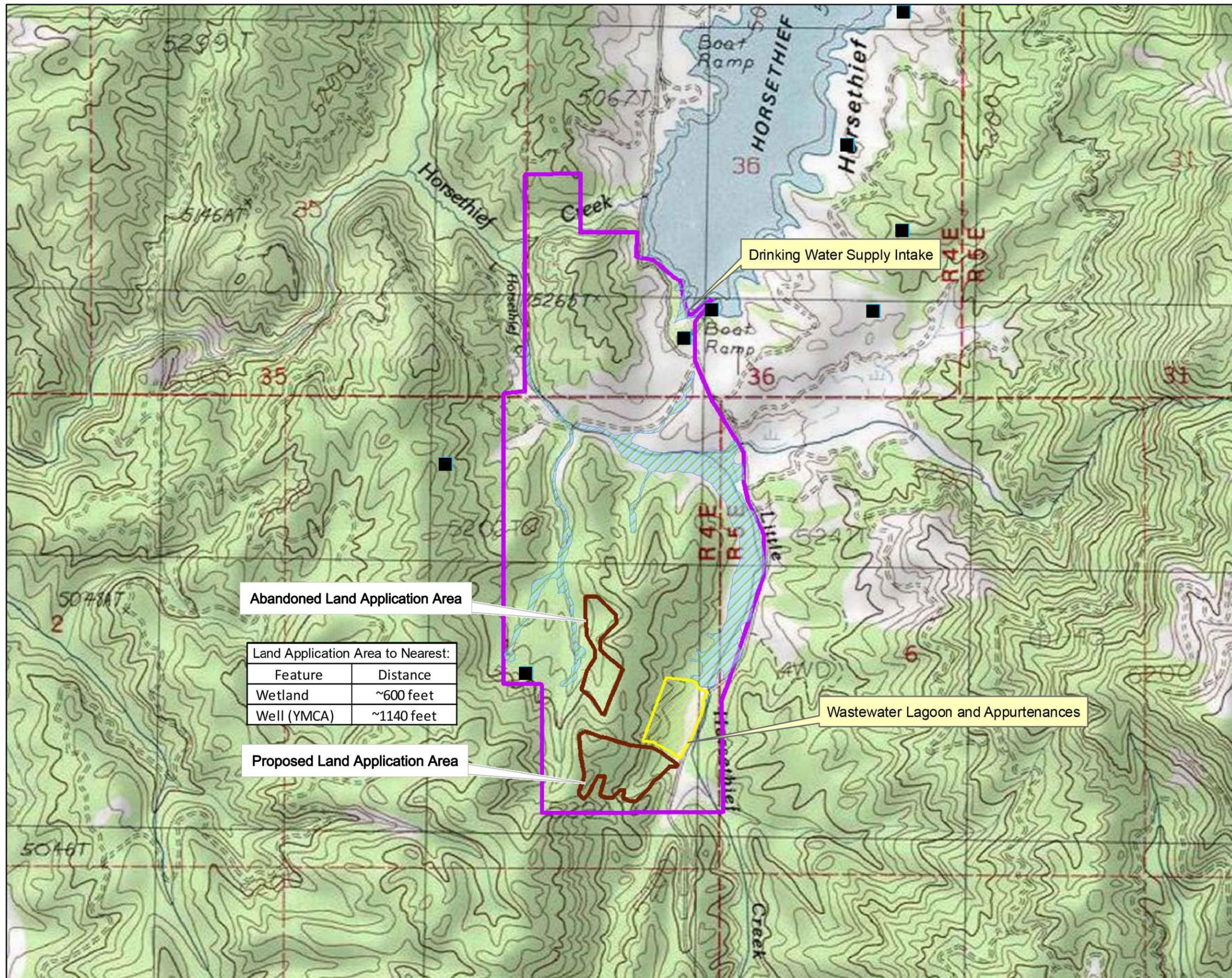
Please contact me with any questions regarding the proposed modification to the *YMCA Horsethief Camp Wastewater Reuse System Technical Report* that was submitted in January of

2010. I appreciate your time and willingness to work with YMCA as we continue to move forward with the land application design on this challenging site.

Best Regards -

Jenifer Beddoes, PE
Project Engineer

cc: Laura Mahan, Director YMCA Horsethief Camp
Betsy Roberts, Project Manager CH2M HILL



Legend

- IDWR Permitted Wells (approximate locations)
- ▨ Wetlands
- Property Boundary
- Proposed Land Application Area
- ▨ Facilities Area

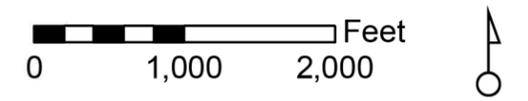
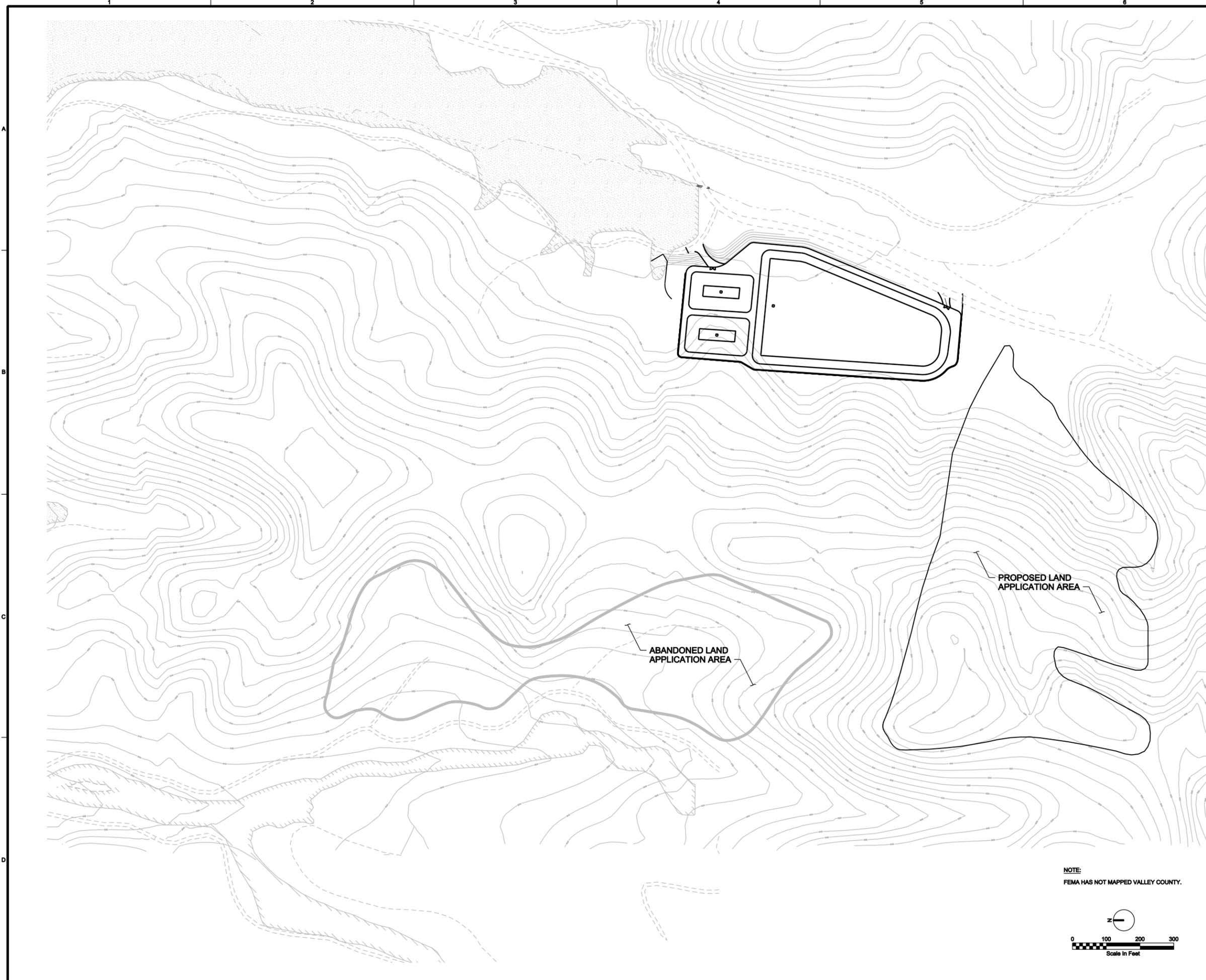


Figure 2A
Vicinity Map



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 675 Main Street, 3rd Floor, Denver, CO 80202
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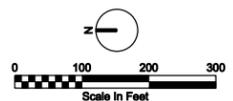
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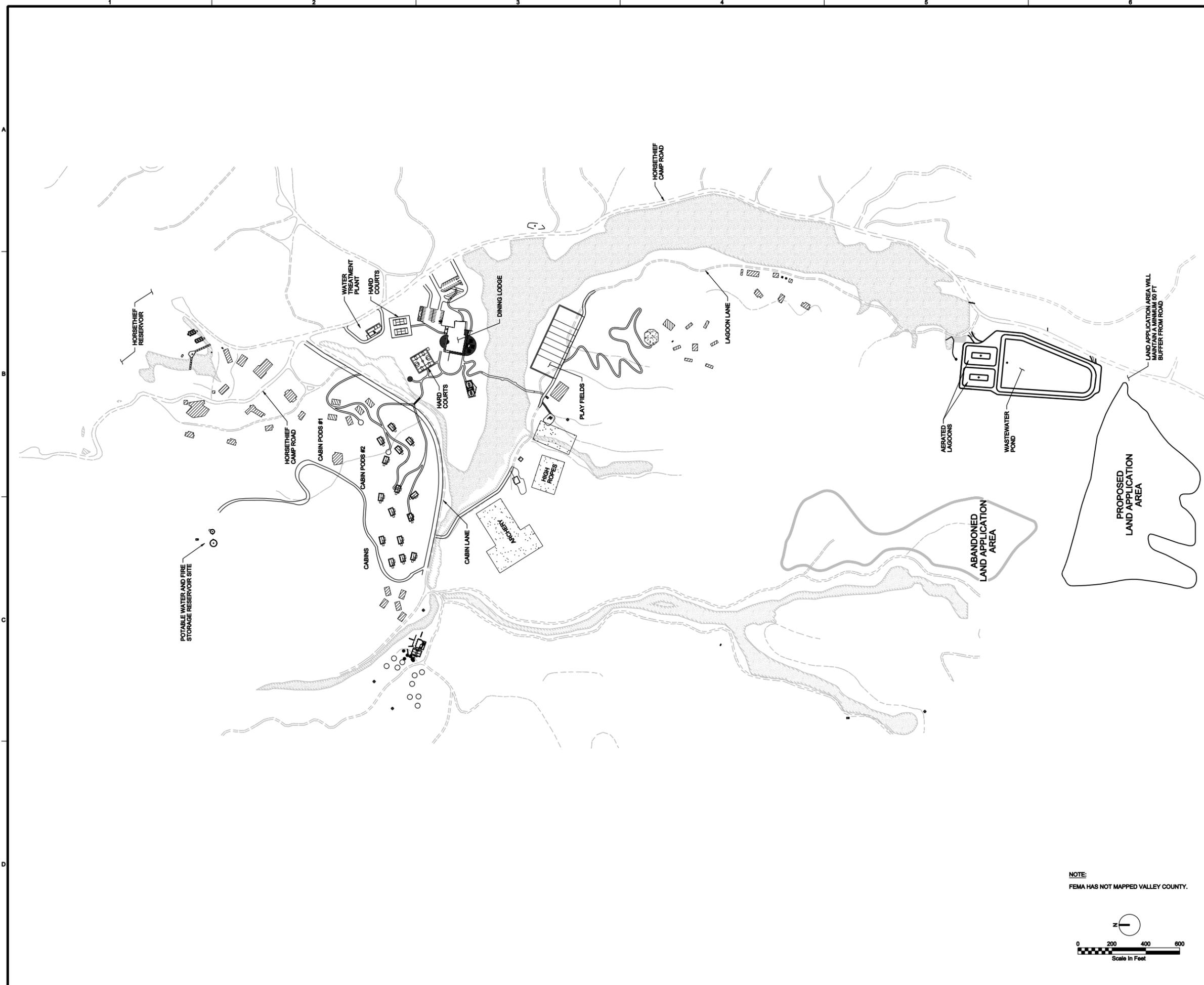
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construction
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Figure 2B
 FACILITY
 SITE MAP

NOTE:
 FEMA HAS NOT MAPPED VALLEY COUNTY.





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Figure 3A
 FACILITY
 SITE MAP