

Coyote Prairie Phase 3 Vernal Pool Construction

As- Built Report

November 6, 2009

Oregon Department of State Lands Permit No: 42724-RF
Army Corps of Engineers Permit No: NWP-1995-1157

Submitted to:

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This memo and attached map (*Coyote Prairie Phase 3 Vernal Pool Plan As-Built Sept. 30, 2009*), document the Coyote Prairie Phase 3 Vernal Pool Construction Project as constructed (as-built). The purpose of the as-built report is to document changes or modifications to the approved project plans. For a complete description of the project proposal refer to the wetland enhancement permit application (Oregon Department of State Lands Permit No: 42724-RF and Army Corps of Engineers Permit No: NWP-1995-1157).

The Coyote Prairie Mitigation Bank site is a 240 acre site located on Cantrell Road south west of Eugene, OR. The site has been in grass seed production since the early 1970s, with both Italian rye grass (*Lolium multiflorum*) and tall fescue (*Schedonorus phoenix*) crops grown on the site. The West Eugene Wetland mitigation bank was approved to implement wetland restoration and enhancement prescriptions at Coyote Prairie in 2006. Based on this approval, Phases 1 and 2 were constructed in 2006 and 2007. In 2009, prior to construction of the next phases, the construction of a series of shallow vegetated pools and swales was proposed to the Bank's Interagency Review Team. As the project involved earthwork not formerly included in the approved Mitigation Improvement Plan, it triggered the need for a wetland enhancement permit. The agencies approved the project proposal to create approximately 8.31 acres of shallow vegetated pools and swales throughout the remaining 164 acres of project site (Phases 3 and 4). The permits were issued in August. Site work in Phase 3 was conducted from September 10 - 16, 2009. No adverse weather conditions (e.g. measurable precipitation) were experienced during the site work period.

It is anticipated that vernal pools within the Phase 4 area will be constructed in the next 2-3 years as the demand for credits warrants.

PROJECT GOALS

The primary goal for the Coyote Prairie wetland mitigation bank site is to establish a mosaic of Willamette Valley wet prairie and associated wetland habitats at the site. The construction of vernal pools and swales at the site is a refinement to the original site restoration plan, specifying

where and how pools, swales and emergent habitat will be interspersed across the site. Specifically, the project actions increase the topographic complexity of the site, increase surface flows, increase surface water ponding (storage) and increase habitat diversity across the site. The wetland enhancement permit application for the project provides more specific information and details on the proposal.

(a) Project Implementation

The approved project plans were partially modified in August to take in to account a protective buffer for rare plants, and additional slope and topography information gathered on the site. Prior to beginning work on the site, a 200 foot protective buffer/work exclusion zone (WEZ) was installed around perimeter of an existing Bradshaw’s lomatium population using wood tree stakes and yellow caution tape on Sept. 9th. The location and size of the WEZ was established as part of an informal consultation with the U.S. Fish and Wildlife Service on the potential impacts of the project’s actions to a Bradshaw’s lomatium population located on the site (refer to TS Number 09-1602; Tails Number: 13420-2009-10-1 30 for a copy of the informal consultation for this project). The location of the 200 foot WEZ required the relocation and redesign of Pools 1 and 4 as depicted on the attached As-Built map. In addition, design refinements in August led to the relocation and size adjustments to Pools 14, 15, 16 and 17. Furthermore, during construction, it was decided that Pool 10 would not be constructed and that a new pool (Pool #30) would be added to the central portion of Phase 3. The decision to add Pool #30 was based on additional site analysis and the adjustment to Pools #s 4, 5 and 6.

Pool #18, listed in Figure #3b of the Joint Permit application, is located in Phase 4 of the project site and will be constructed with the implementation of Phase 4.

The following two tables provide specific information on the modifications.

Table 1: Summary of As-Built Changes to the Coyote Prairie Phase 3 Vernal Pool Construction Project. This table lists all of the changes made to the approved site plans. In general the changes impact the size and location of the pools, while the maximum depth of the pools was largely unaltered.

Table 2: Coyote Prairie Vernal Pool Enhancement Data. This table provides the as-proposed and as-built project data for all pools and swales constructed in Phase 3.

Table 1: Summary of As-Built Changes to the Coyote Prairie Vernal Pool

Construction Project. (This table lists updates to Figure #3b, Vernal Pool Enhancement Data, submitted as part of the Joint Wetland Removal Fill Permit Application – ODSL No. 42724-RF and Army Corps of Engineers No. NWP-1995-1157)

Pool #	Modification or Change
0	A 0.27 acre area north of the pool was re-graded to eliminate a farmer’s drainage ditch which channeled water off the site. Surface flow is now directed toward Pool #0 and released towards the center of the site.
1	Pool #1 was reduced in size and divided into two smaller pools. The new pools are labeled 1 and 31 on the accompanying As-Built map.
2	Pool #2 was reduced in size.
3	No change
4 & Swale	Pool #4 was reduced in size and the swale was realigned to better intersect with the existing slope.
5 & Swale	Pool #5 was reduced in size and designed to discharge across the slope towards pool #6. Pool #5 as constructed is 0.10 acres in size. In addition a 0.25 acre area located up slope of the pool was re-graded to eliminate a drainage ditch and to redirect runoff away from the edge of the site toward pool #5.
6	The size of pool #6 was reduced to shrink the amount of water pooled on the slope. Water to a depth of 6 inches will still be retained in Pool #6.
7	No change, built as proposed. The pool as depicted on the map submitted with the application incorrectly depicts the size of the pool (map error).
8	Built as proposed.
9	Modified within the proposed footprint due to existing slope. This is now a two chamber pool which should allow more water to be retained for a longer period of time.
10	Pool #10 was not constructed due to site conditions.
11	Pool #11 was reduced in size to better fit site conditions (e.g. slope). The max depth of 4 inches did not change.
12	Reduced in size, otherwise built as proposed.

Pool #	Modification or Change
13	This dual chamber pool was built as proposed. The fill mounds are used to retain water within the pools.
14	Pool #14 was relocated and reduced in size.
15	Pool #15 was relocated, reduced in size and reshaped.
16	Pool #16 was relocated, reduced in size and reshaped.
17	Pool #17 was relocated, reduced in size and reshaped.
30	Pool #30 is a new pool not in the original proposal. It was added to capture flows in the center of the site. The 0.24 acre pool is a maximum of 4 inches deep. The excavated native soil around the pool creates a foot print of 0.18 acres.
31	Pool 31 was added to capture any flow that may remain in the drainage ditch running along the edge of the remnant prairie. A 0.08 acre fill footprint effectively blocks the mouth of the ditch preventing flow from discharging into the roadside ditch.

In summary, a total of 19 pools and swales were constructed in Phase 3 of the Coyote Prairie Mitigation Bank site. A total of 5.74 acres were disturbed (fill and pool areas combined). The pools total 3.10 acres while the wetland mounds, and graded areas total 2.64 acres. Drainage ditches were altered in five areas (Pools #0, 1, 4, 5 and 31) to enhance hydrology on the site. Two swale/pool areas (Pools #4 and 5) were constructed to pond surface water and to direct the discharge from the pools towards the center of the site, rather than draining into an agricultural ditch and off the site. This additional surface water will contribute to additional water retention on the site. The site will be seeded this fall (2009). Additional work authorized under the wetland enhancement permits will be implemented with Phase 4 of the project. For further information about this project or the As-Built report, please contact Dal Ollek, Mitigation Bank Coordinator, phone: 541-682-4928.

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Table 2: Coyote Prairie Vernal Pool Enhancement Data

Phase 3 - As-Proposed			Phase 3 - As Built			
Pool_ID	Pool & Fill (acres)	Max. Depth (inches)	Fill Area (acres)	Pool Area (acres)	Max Depth (inches)	Notes
0	0.22	10	0.27	0.22	10	
1	0.38	10	0.14	0.08	10	
2	0.35	8	0.09	0.21	8	
3	0.10	6	0.04	0.08	6	
4	0.61	6	0.25	0.63	6	
5	0.78	8	0.30	0.37	8	
6	0.26	6	0.05	0.10	6	
7	0.02	4	0.10	0.14	4	
8	0.04	4	0.02	0.03	4	
9	0.07	6	0.06	0.05	6	
10	0.13	6	–	–	–	not built
11	0.19	4	0.12	0.03	4	
12	0.38	8	0.27	0.23	8	
13	0.44	12	0.33	0.29	8	
14	0.17	6	0.05	0.04	6	
15	0.16	6	0.16	0.16	6	
16	0.23	8	0.05	0.04	8	
17	0.08	10	0.08	0.05	10	
30	–	–	0.18	0.25	4	new pool
31	–	–	0.08	0.10	4	new pool
As Proposed Total			As Built Total			
4.62			2.64	3.10		
Phase 4 - As-Proposed			Phase 4 – As-Built			
18	0.58	8				
19	0.43	8				
20	0.26	4				
21	0.58	12				
22	0.18	4				
23	0.63	6				
24 existing	3.30	no change				
25 existing	0.60	no change				
26	0.05	10				
27	0.13	4				
28	0.49	8				
29	0.37	6				
As Proposed Total			As Built Total			
7.58 acres			0.00 acres			
Grand Total Phase 3 & 4			Total Phase 3 As-Built			
12.21 acres			5.74 acres			




Phase 4 to be constructed

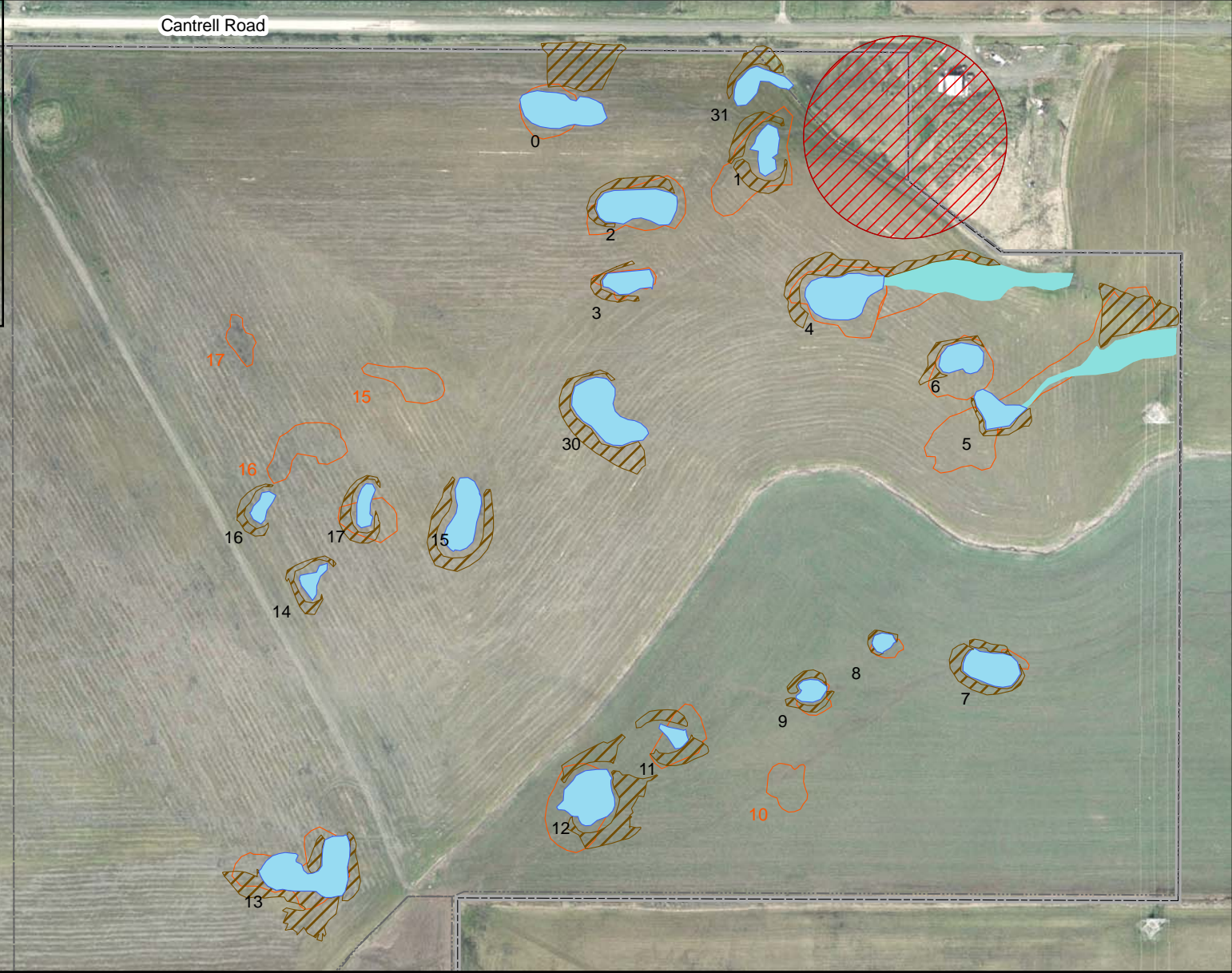
Coyote Prairie Phase 3 Vernal Pool Plan

As-Built Sept. 30, 2009

Legend

Phase 3 As Built: Sept. 2009

-  Pool
-  Swale
-  Fill
-  Pools_As _Approved
-  Work Exclusion Zone



MAP NOTES:

1. Orange polygons and numbers depict locations of pools and swales as submitted with the wetland permit application Aug '09.
2. Blue and aqua colored pools and swales with black numbering depict as built locations.
3. Data collected using a Trimble Geo XM hand held unit.

2008 Color Air Photos

MAP BY: City of Eugene, Public Works\ POSNART
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