One-Horse Slough Wetland Mitigation Bank

Payne Road

Lebanon, Oregon

Long-Term Management Plan

by

The Wetlands Conservancy

and Oregon Wetlands LLC

December 2015
Revised
September 2018

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1. Introduction

A. Purpose of Mitigation Bank Establishment

The One-Horse Slough Mitigation Bank was established by an Agreement (Mitigation Bank Instrument) between the land owner and bank Sponsors Ray Fiori, Marvin Gilmour, and Alton Sullivan (Oregon Wetlands LLC), the Oregon Department of State Lands (DSL), and the U.S. Army Corps of Engineers (USACE) to compensate for unavoidable impacts to aquatic resources. This agreement required the execution of a Long-term Management Plan (LTMP) to sustain the aquatic functions and services provided by the bank in perpetuity. The Bank site consists of 130.48 acres of property (Figure 1) which includes 130.28 acres of wetland and a .20-acre parking area. This LTMP anticipates that the landowner will grant a Conservation Easement and Management Endowment to The Wetlands Conservancy (TWC). The Conservation Easement Agreement and Endowment Agreement are coordinated to be consistent with this LTMP.

B. Purpose of this Long-Term Management Plan

The purpose of this LTMP is to ensure that the conservation values of the One Horse Slough Preserve (Preserve) are managed, monitored, and maintained in perpetuity after all the credits have been sold. This management plan identifies objectives, priorities and tasks necessary to manage and maintain the preserve and is the basis for the endowment. Conservation values, prohibited uses, rights of affected parties, and other provisions are specified in the Conservation Easement Agreement (dated). If conflicts arise between this long-term management plan and the Conservation Easement Agreement, the Conservation Easement supersedes the LTMP. The desired future condition of the preserve is to sustain the restored, created, enhanced, and preserved aquatic functions and natural processes resulting from the mitigation project as enumerated in objectives.

C. Land Management and Responsibilities

TWC shall manage the Preserve property in perpetuity consistent with the Conservation Easement, and the long-term management plan. If the Conservation easement is transferred, these duties shall likewise transfer to the new holder. Long-term management tasks shall be funded through an endowment account owned and managed by TWC exclusively for this purpose. The land owner is responsible for all duties of land ownership not expressly conferred to TWC via the Conservation Easement Agreement and is the party responsible to pay property taxes.

This management plan outlines the long-term site goals, assumed management and stewardship tasks and costs, and a monitoring strategy that requires annual review of both on the ground changes and the long-term management goals. Each year after the annual monitoring, TWC will evaluate if the tasks for the following year and long-term restoration strategies should be revised or adapted.

2. Property Description and Desired Future Condition

A. Project Location

The One-Horse Slough Preserve is located in Linn County, Oregon, approximately two miles northeast of Lebanon, approximately 0.25 miles east of the Brewster-Payne Road intersection, on the east side of the Southern Pacific Railroad in TI2S, R2W, Sec. 1, Tax Lots 201, 2201 and 3900, (440 33' 40", 1220 52' 1").

B. Baseline Conditions

A **Baseline Documentation Report** (BDR) will be completed prior to conveyance of the conservation easement and will be referenced in the easement and the long-term management plan. The BDR includes a detailed description of current conditions of the property at the time of easement conveyance. If the restoration work is not completed at the time the LTMP is executed, then the BDR will be updated upon completion of the activities.

1. HYDROLOGY

Wetland water sources for the preserve are seasonal high groundwater, direct precipitation, and surface runoff from adjacent upslope areas. In addition, water storage and delay are enhanced through establishment of 3 low lying berms and 4 depressional wetlands which further delay runoff and diversify wetland hydroperiods, which are strategically located to capture hydrologic sources with locations illustrated in figure 2.

2. HABITAT

The preserve consists of emergent marsh, wet prairie, forested wetland, and scrub shrub wetland.

3. WILDLIFE

The range of habitats helps to support a diversity of wildlife. Many rare and declining species utilize the site to nest such as the Western meadowlark, Streak horned lark, American bittern, Wilson's phalaropes, and Western bluebirds. The site also hosts an abundance of wintering waterfowl and migrating shore birds, in conjunction with mammals such as black tailed deer, Roosevelt elk, bobcats and coyotes.

4. MAN MADE STRUCTURES

Manmade Infrastructure and features on the property consist of one cable gate, and one culvert both associated with the gravel parking area at the North entrance. Linn County maintains ditches along Payne road and associated culverts, it is the landowner's responsibility to replace approach culverts if necessary which was completed in 2006. There are 3 berms that provide diverse hydroperiods for habitat diversity. Fencing on the perimeter of property is owned and maintained by neighboring land owners. Temporary structures include 5 wildlife blinds. All infrastructure and features are illustrated in figure 2.

C. Aquatic Functions to be conserved

The Long-term management objectives for the One Horse Slough Preserve and Conservation Easement are:

Objective 1
Preserve and enhance the plant communities (wet prairie, emergent marsh, scrub/shrub, and Forested wetland) by maintaining dominance of native plant species characteristic of each community.

Objective 2
Actively manage invasive species to maintain the above communities.

Objective 3
Ensure the site continues to support water storage and purification functions to a similar extent as in the baseline report.

Objective 4
Maintain hydrologic conditions that support diverse wildlife habitats.

Objective 5
Protect and maintain the preserve in perpetuity to protect functions of site from inconsistent land uses.

3. Conservation Threats and Catastrophic Events

A. Conservation Threats

Lands adjacent to the subject property are all zoned as Exclusive Farm Use (EFU). The following tax lot numbers represent all adjoining properties: 12S02W010003800, 12S01W060001401, 12S01W060001300, 12S01W060000300 and 12S02W010000100. In addition, Linn County owns Payne road which encompasses the entire Northern boundary, and Albany-Lebanon Railroad own the rail line that encompasses the entire Western boundary.

Potential *threats to the aquatic functions in the One Horse Slough Wetland Preserve include:*

Invasion by non-native plants such as Himalayan blackberry, reed canarygrass, English ivy, or other invasive species including macro invertebrates and wildlife that are present on neighboring properties or likely to be introduced by wildlife or flooding.

Nutria may undermine the impoundment thus indirectly affect the water table supporting wetlands. (The berms were designed to withstand this threat, and have not been compromised in 8 years of existence, however annual site monitoring will check on the stability and functionality of the impoundment)

Stray livestock could enter through the unfenced boundary.

Dumping of garbage/debris at the pull-out on Payne Road could pose hazards to wildlife or develop into an ongoing maintenance cost.

Sediment or pollutants could enter the site from upslope sources.

Trespass could damage plantings and cause soil erosion.

B. Catastrophic Events

Changes in hydrologic patterns, occurrences and duration as a result of climate change may challenge long-term function of the wetland. Current climate patterns predict the timing of the predominant rainfall is to be somewhat consistent, mostly falling from November through March. Changes in temperature and water regime could introduce new invasive species. The Preserve owners and TWC will not be responsible or liable for any unforeseen natural catastrophic events such as flood, drought, disease, regional pest infestation, etc., determined beyond reasonable control by DSL and USACE. However, the Preserve location outside of the 100-500-year floodplain will greatly limit the risk of flooding.

Wildfire is unlikely to impact the conservation values of the Preserve as these Willamette Valley wetland habitats have evolved with an active fire regime.

4. Management, Maintenance, and Monitoring

A. Resource management

The overall goal of long-term management plan is to sustain the ecological functions and values of the aquatic resources. The One Horse Slough Wetland Preserve provides high quality natural, restored, and/or enhanced habitat for wildlife and contains jurisdictional waters of the United States and the State of Oregon. Individually and collectively, these wetland, wildlife and habitat values comprise the "Conservation Values" of the Preserve.

The management priorities have been set in order to sustain Preserve goals, minimizes long-term workload, and makes best use of time and resources. The highest priority will be given to tasks that have the greatest long-term benefit using available technology and resources.

Invasive plants, trespass damage or garbage dumping and any other potential threats from inconsistent uses will be identified and documented during the annual site monitoring. Adaptive management and specific tasks required to address the priorities below will be identified and scheduled as appropriate. Staff responsible for monitoring and management will have the necessary knowledge and technical skills to recognize any problems and apply appropriate management actions.

Priorities:

1. Repair any vandalism or damage that affects the duration or extent of water in the wetlands.
2. Control invasive plant and animal species before they threaten conservation values.
3. Sustain native wildlife and plant habitats.
4. Enhance habitats.

B. Damage and Vandalism

Any damage or vandalism to topography that affects water flows, structures or gates, will be repaired or replaced to maintain the pre-existing functionality. Each year TWC will conduct a monitoring survey to verify whether all conditions of the easements are being met, and that there have been no encroachments or violations. TWC will inspect all gates and structures and the perimeter of the property to identify any maintenance needs or encroachments. Any litter or trespass damage will be cleaned up

in the same season in which it occurred. Hazard trees that pose a threat to infrastructure or adjacent property may be felled and will be left on site. The expected frequency of repair or replacement for each feature, and the cost, is provided in Table 2 below.

C. Sustaining Native Plant Communities

Vegetation management will be the primary on-going task at the site. Native vegetation should be dominant at the site. Invasive species presence and levels should not threaten conservation values. Any Oregon Department of Agriculture listed Noxious Weeds will be controlled.

Controlling encroachment by non -native invasive species will be done in a variety of ways including physical control such as hand pulling and mowing. Chemical control will include primarily spot herbicide application by hand. In the event of a major invasive weed take over, broadcast spraying of individual areas could be used. Another method for the enhancement of native plant communities and control of invasive species that may be considered is prescribed fire. Any use of fire would comply with the current air quality and land use regulations or restrictions. Native trees and shrubs may need to be controlled to maintain open prairie.

The preferred method of control will be through physical means. However, in the event that control through physical means is not meeting long-term objectives, prescribed fire and herbicides would be the next considered control options.

Each year during the annual review, an evaluation of the effectiveness of any methods or techniques used that year will be made along with a determination to see if there are new species or problems that require special attention. At that time a review of the literature and new techniques or herbicides will be done, to determine the best approach for the following year. The expected frequencies and costs of vegetation management tasks are listed in Table 1 below.

Ultimately, an adaptive management strategy will be used. Such a strategy reassesses priorities for management on a yearly basis, using the following steps;

- Re-order target species based on the likely effects to both target and non-target species.
- Implement the plans and monitor the results of control actions.
- Evaluate the effectiveness of the methods in light of overall site goals and use this information to modify and improve control methods.

D. Sustaining Wildlife Habitats

If habitats for characteristic wildlife are noted to be deteriorating via plant succession, invasion of non-native species, or adverse land uses outside the Preserve boundaries, actions will be identified and taken to restore those habitats or mitigate the conflicts. For example, tree invasion of grassland bird habitat may be reversed by felling the trees or hedgerows may be planted to screen the ponds from a noisy or invasive land use on an adjacent property.

E. Wildlife Habitat Improvements

Opportunities for wildlife habitat improvements consistent with the Conservation Values will be evaluated on an on-going basis and be implemented as needed or as funds are available.

F. Administration & Reporting

TWC will manage the long-term maintenance and stewardship fund prudently to provide ongoing revenue to use for management and maintenance of the property. TWC will conduct annual monitoring and reporting of the conservation values and terms and agreements defined in the conservation easement. The annual report will be signed by the TWC staff conducting the monitoring and the landowner. The annual monitoring report will be filed at the TWC office, with a backup copy at a secure location per the organization's Standards and Practices in accordance with Land Trust Alliance accreditation.

Monitoring to assure the goals and objectives of the management plan are being met will document site changes over time and be used to determine if adjustments to the plan are warranted. The results of the annual monitoring will be kept on file at TWC and be available on request to DSL or USACE.

5. Transfer, Replacement, Amendments, and Notices

This section of the LTMP mirrors the provisions of the Conservation Easement; if there are differences, the signed Easement rules.

A. Transfer

The Conservation Easement provides a method to transfer the Easement to a new holder if that should become necessary. If the Conservation Easement is transferred to a new holder, as approved by DSL and the USACE, then the Endowment account shall also be transferred to ensure the ongoing management of the site according to this Plan. In such case, the new Easement Holder would assume the responsibilities of TWC as an amendment to this Plan by the DSL and the USACE, after consultation with the landowner and new easement holder.

B. Remedies

Remedies available to the Wetlands Conservancy, Owner, and DSL are outlined in the conservation easement.

C. Replacement

The Wetlands Conservancy, Owner, USACE and DSL may meet and confer from time to time, upon written request, to discuss revision of the long-term management plan to better meet management objectives and habitat conservation values of the Preserve. The Corps must agree in writing to any revisions prior to their implementation. Within 60 days of the Corps receiving the proposed final LTMP modifications, the district engineer must notify the preserve owner, long-term steward and IRT members of his intent to approve or disapprove the proposed modification.

D. Amendments

The Wetlands Conservancy, Owner, USACE and DSL may meet and confer from time to time, upon written request, to discuss revision of the long-term management plan to better meet management objectives and habitat conservation values of the Preserve. The Corps must agree in writing to any revisions prior to their implementation.

E. Notices

The USACE and DSL will be given 60-day written notice prior to any proposed modification to this LTMP. Any notices regarding this long-term management plan shall be directed to the parties as follows:

Conservation Easement Holder:
The Wetlands Conservancy
4640 SW Macadam #50
Portland, OR 97239

Owner:
Oregon Wetlands LLC
6001 NW Gilmour Lane
Albany, OR 97321

Regulatory Agencies:
Oregon Department of State Lands
Wetland and Waterways Division
775 Summer St. NE, Suite 100
Salem, OR 97301

U.S. Army Corps of Engineers
CENWP-OD-GP
P.O. Box 2946
Portland, Oregon 97208-2946

6. Funding

A. Funding

TWC has responsibility for the long-term management of the One Horse Slough Preserve. These responsibilities fall into four categories: repair of any vandalism or damage that affects the duration or extent of water in the wetlands, control invasive plant and animal species before they threaten conservation values, sustain and or enhance native wildlife and plant habitats, and administration. Habitat management decisions will be guided by the priorities identified in section 4A. Separating the responsibilities into these four general categories, allows for the maximum flexibility in the use of the endowment fund.

The start date for TWC's responsibility for long-term management begins when the site is released from the mitigation bank agreement (bank closure). Until that time, income shall be reinvested into the endowment. Thereafter, TWC will continue to re-invest interest income to ensure that the long-term maintenance and stewardship fund will continue to provide adequate revenue for site management in perpetuity.

Table 1 contains a summary of the anticipated annual costs of long-term management for the Preserve. These costs include estimates of time and funding needed to conduct the basic monitoring site visits and vegetation management. Long-term management will be paid for with revenues from a One Horse Slough Preserve specified non-wasting account that is administered by TWC.

Table 1. O&M Activities, units, frequency, cost, & Endowment amount

Work Elements	Anticipated Frequency	Target Completion Date	Units	Unit Price	Cost	Divide years	Total Annualized Cost
1. Repair and Maintenance							**$342**
Berm maintenance	Every other year	As needed	3 hours	$80	240	2	$120
Maintain/repair signs, boundary markers, litter, and vandalism	Annual	As needed	5 hours	$40	200		$200
Gate replacement	25 years	As needed	1	$50	50	25	$2
Approach culverts	50 years	As needed	1	$500	500	50	$10
Rock For parking area	30 years	As needed	30 cubic yds	$10	300	30	$10
2. Invasive Species Control							**$920**
Spot spraying invasive species	Annual	Spring/ summer	12 hours	$40	480		$480
Monitoring for invasive species, litter, vandalism, and enhancement opportunities	Annual	Spring/ summer	8 hours	$40	320		$320
Nutria or other invasive wildlife and invertebrate control	Every other year	As needed	6 hours	$40	240	2	$120
3. Sustain/Enhance Native Habitats							**$400**
Mowing to control exotic grasses and forbs, mimic fire	Annual	Fall	5 acres	$60	300		$300
Mowing of woody shrubs to reduce prairie encroachment	Every three years	Fall	5 acres	$60	300	3	$100
4. Administration							**$3,178**
Land trust travel	6 trips/yr	At least quarterly	160 miles/ trip	$0.55/ mile	88/trip 528/yr		$528
Neighbor communications	Annual	As needed	3 hours	$50	150		$150
Reporting, fiscal administration, and project MGT	Annual	Ongoing	50 hours	$50	2,500		$2,500
Legal defense contingency**	10 years				5,000		
	TOTAL ANTICIPATED ANNUAL O&M COSTS						**$4,840**

** The Legal defense payment is a onetime payment of $5,000 that goes into The Wetlands Conservancy's legal defense fund.

Annual costs = $4,840

Rate of return = 7%,

Assume Inflation = 3%

Capitalization Rate = 4 %

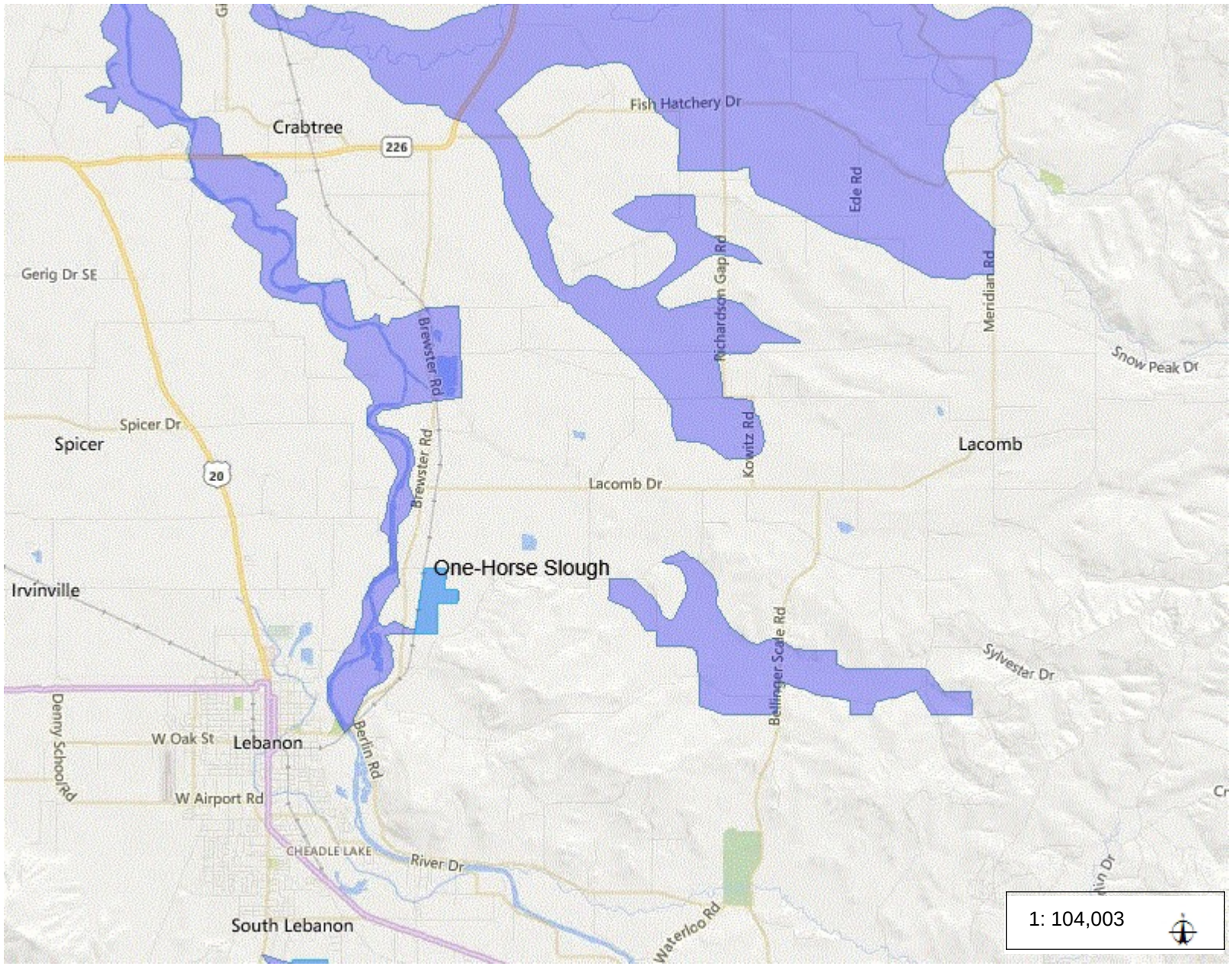
Total Anticipated Annual O&M Endowment = $121,000

Legal defense contingency (Lump Sum) = $5,000

Stewardship Endowment Needed= $126,000.00

Figure 1: Location Map

One-Horse Slough Mitigation Bank



Legend

- Wetland Mitigation Bank
- Willamette Valley Ecoregion Wetland Priority Sites

States & Provinces

- Other States and Provinces
- Oregon

Notes

3.3 0 1.64 3.3 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

This map is a user generated static output from the Oregon Explorer Map Viewer (http://tools.oregonexplorer.info/oe_map_viewer/Viewer.html?Viewer=OE) and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Figure 2: Site plan map with all features and infrastructure labeled