AMAZON CREEK MITIGATION BANK

Junction City, Lane County, Oregon

MEMORANDUM OF AGREEMENT

TO

ESTABLISH A WETLAND MITIGATION BANK

BETWEEN

AMAZON CREEK MITIGATION BANK LLC, SPONSOR

AND

U.S. ARMY CORPS OF ENGINEERS, PORTLAND DISTRICT
OREGON DIVISION OF STATE LANDS
U.S. ENVIRONMENTAL PROTECTION AGENCY
U.S. FISH AND WILDLIFE SERVICE
OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
OREGON DEPARTMENT OF FISH AND WILDLIFE
OREGON DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT
LANE SOIL AND WATER CONSERVATION DISTRICT

AMAZON CREEK MITIGATION BANK Junction City, Lane County, Oregon

Memorandum of Agreement

INTRODUCTION

The parties to this Memorandum of Agreement (the "Agreement") have participated in the development of the Mitigation Banking Instrument (the "Instrument") for the Amazon Creek Mitigation Bank. The Instrument, dated January 20, 2002, contains the details of the mitigation site plan, goals, objectives, performance standards, monitoring and contingency plans, and reference site. By signing this Agreement, the parties approve the Instrument and the mitigation site plan described within it. This Agreement relies upon and supplements the commitments expressed by the bank sponsors in the Instrument.

1. PURPOSE OF THE BANK

The purpose of the bank is to provide compensatory wetland mitigation for anticipated losses to wetland functions and values resulting from activities authorized by permit from the U.S. Army Corps of Engineers ("the Corps") under Section 404 of the Clean Water Act and/or from Oregon Division of State Lands (DSL) under the State Removal-Fill Law. The bank is designed to provide compensatory mitigation for impacts to palustrine emergent, forested, scrub-shrub, semi-permanently flooded and flooded wetland in the slope/flat hydrogeomorphic class within the service area. The Corps and the DSL reserve the right to allow bank use for out-of-kind mitigation on a case-by-case basis, provided that the bank is replacing wetland functions lost on a given project.

2. GOALS

The primary goal of the bank is to convert farmland back to natural wetland resources to enhance diversity, provide wildlife habitat, and support natural wetland functions. The bank will create and restore 40.0 acres of seasonally and semi-permanently flooded, saturated, inundated or ponded palustrine emergent, scrub-shrub and forested habitats. The long term ecological goals of the bank are to restore wetlands as nearly as possible to historical levels of quantity, quality and diversity; to restore habitat for the indigenous wildlife of the area; and to work toward controlling the levels of invasive vegetation at the bank site.

3. MITIGATION BANK SITE

The mitigation bank site is located near Junction City, in Lane County, Oregon (Section 24, Township 16 South, Range 5 West, Tax Lot 503). The site is owned by the Amazon Creek Mitigation Bank, LLC (Mr. David Jampolsky, Managing Member) and is adjacent to approximately 155 acres of wetland being restored with the assistance of the Oregon Department of Fish and Wildlife, the U.S. Fish and Wildlife Service, and the Oregon Watershed Enhancement Board. Amazon Creek runs along the northeast corner of the site. Portions of the site not already created are currently in agricultural ryegrass seed production.

4. SERVICE AREA

The bank's service area is within the Upper Willamette Valley Drainage Basin in an area including Junction City, Veneta, Eugene, Springfield, and Creswell (see Instrument, Figure 2). The service area is also bounded by a maximum elevation of 600 feet mean sea level for the proposed wetland fill site.

5. PERFORMANCE STANDARDS

The performance standards for the mitigation plan are stated in the Instrument in Section 13.0, Goals, Objectives and Performance Standards (pages 12 through 13).

6. MONITORING AND CONTINGENCY PLANS

Monitoring plans are stated in the Instrument in Section 12.0, Monitoring Plan (pages 10 through 11). Contingency Plans are stated in the Instrument in Section 14,0, Contingency Plans (page 14).

The bank sponsor acknowledges its responsibility for completing the necessary actions to ensure success of any required remediation to correct failures to meet mitigation performance standards. The sponsor will provide the necessary financial assurance in the form of an irrevocable letter of credit, or a performance bond in the amount of \$45,000 to allow the Corps and DSL to undertake any such measures which the sponsors failed to or are unable to implement. The letter of credit or performance bond will follow the draft phase reduction described on in Section 18 on page 15 of the Instrument as long as compliance with the Instrument and MOA is maintained.

7. CREDITS

Completion of the mitigation site work as described in the Instrument will result in the establishment of 22.4 credits. These credits will become available for sale by the sponsors of the bank once they are certified in writing by the Corps and DSL. Certification of these credits is dependent upon evidence to be provided by the bank sponsors that the completed work meets the performance standards for vegetation and hydrology, as stated in the Instrument in Section 13.1. Credits may be certified in

increments if the performance standards have not been fully met, but substantial progress toward meeting the standards is evident.

Subject to written approval by the Corps and DSL, up to 30 percent of the total credits may be sold in advance of certification provided that site grading as described in the Instrument in Section 6.2, Design Details, has been completed and the MBRT agrees that the site has a high probability of establishing wetland hydrology. Approval of advance sale of credits will be dependent on evidence provided by the bank sponsor that this requirement has been met. The Corps and DSL will determine the percentage of total credits which may be sold in advance of certification.

In the event of catastrophic acts of nature, such as but not limited to earthquakes, drought, and volcanic activity, which interfere with the sponsors' ability to fulfill the terms of this Agreement and the Instrument, no further credits will be sold unless remediation of the mitigation site is accomplished. Proposed remediation measures are subject to prior approval by the Corps and DSL with the advice of other parties to this Agreement.

8. REPORTS

Monitoring reports will be prepared annually until five years after the sale of the last remaining whole or partial mitigation bank credit. Annual reports describing data collected and activities conducted at the bank site from January 1 through December 31 will be submitted to the Corps and DSL by January 31st of the following year (see Instrument, Section 12.3, Annual Report (page 11). These reports will address progress toward meeting the performance standards and any remedies taken to correct deficiencies that occurred in meeting the standards.

Reports of credits earned, sold and remaining will be prepared annually and submitted to the Corps and DSL along with the monitoring reports. In addition, the Corps and DSL will be notified of each individual credit sale at the time that it occurs, including a copy of the transaction document.

9. EFFECTIVE DATE AND MODIFICATION

This Agreement will become effective when all of the following conditions are met:

- 1. This Agreement is signed by the bank sponsor, the Corps and DSL; and
- 2. A letter of credit or performance bond in the amount of \$45,000 is established by the bank sponsor with terms mutually agreeable to the sponsor, the Corps and DSL; and
- 3. A restrictive covenant with terms mutually agreeable to the sponsor, the Corps and DSL is signed by the owner of the mitigation bank site and is recorded with the Lane County Clerk.

This Agreement will terminate five years after the date the last remaining whole or partial credit is sold by the sponsors of the bank. This Agreement may be terminated earlier only by written agreement signed by the sponsors, the Corps and DSL, after having

sought the advice of the Mitigation Bank Review Team.

This Agreement may be amended only by a written amendment signed by the sponsor, the Corps and DSL after having sought the advice of other parties to this agreement.

10. OBLIGATIONS OF THE PARTIES

<u>Sponsors</u>: The bank sponsor is responsible for implementation, maintenance and remediation of the mitigation site plan as detailed in the Instrument, including but not limited to ensuring the success of the wetland restoration and creation work; reporting the results of annual monitoring of the mitigation site; managing and reporting credit sales and balances; complying with the requirements of local zoning ordinances and land use plans; obtaining any required water rights; and all other requirements of the Instrument.

Authorizing Agencies: The Corps and DSL are responsible for determining when and if credits can be certified and made available for sale; review of all reports submitted by the bank sponsor as required by this Agreement; determining the adequacy of the mitigation site work, the need for remedial measures, and the adequacy of completed remedial measures; undertaking remedial measures when and if the bank sponsor fails to implement the required measures using funds made available by the sponsor through the letter of credit; and for determining when and if mitigation bank credits can be used by permit applicants to satisfy the compensatory mitigation requirements of individual permits. The Corps and DSL will seek the advice of the members of the Mitigation Bank Review Team, composed of the other parties to this agreement, before making the decisions required by this Agreement.

Other Parties: All other parties, by signing this Agreement, accept the terms of this Agreement and the Instrument. These parties constitute the Mitigation Bank Review Team, with the Corps and DSL as co-chairs, and will review all annual reports submitted by the bank sponsor, will participate in meetings and site visits to review the success and operation of the bank, and will advise the Corps and DSL in making decisions required by this Agreement.

11. SIGNATURES

Bank Sponsor:

DAVID JAMPOLSAY

For: Amazon Cheefe Mitigation Bond

March 17, 2002 Date

Authorizing Agencies:

Randall J. Butler

Colonel, Corps of Engineers

District Engineer Portland District 12 Mar 02

Date

Ann Hanus

Director

Oregon Division of State Lands

mas 4, 2002

Date

Amazon Creek Wetland Mitigation Bank Review Team Member

Elbert Moore, Director

Office of Ecosystems and Communities

EPA-Region 10

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4/11/02

Amazon Creek Wetland Mitigation Bank Review Team Member

Kemper M. McMaster, Director Oregon State Office

U.S. Fish and Wildlife Service

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Amazon Creek Wetland Mitigation Bank Review Team Member

Stephanie Hallock, Director	Date
Oregon Department of Environmental Quality	

Amazon Creek Wetland Mitigation Bank Review Team Member

Suzanne Knapp, Regional Supervisor

Oregon Department of Fish and Wildlife

Date

Amazon Creek Mitigation Bank, LLC

92709 Alvadose Road Junction City, Osegon

Wetland Mitigation Bank Final Instrument

Revised

<u>January 20, 2002</u>

Presented to:
 Division of State Lands (DSL)
 U.S. Army Corps of Engineers (ACOE)
 U.S. Environmental Protection Agency (USEPA)
 Oregon Department of Fish and Wildlife (ODFW)
 U.S.Fish and Wildlife Service (USFWS)
 Department of Environmental Quality (DEQ)
 Division of Land Conservation and Development (DLCD)
 East Lane Soil and Water Conservation District (ELSWCD)

Submitted by

Amazon Creek Mitigation Bank, LLC

Prepared by

Adamus Resource Assessment, Inc. Patrick S. Thompson Consulting R.P. Novitzki & Associates, Inc. Amazon Creek Mitigation Bank, LLC

Amazon Creek Mitigation Bank, LLC.

Lane County, Oregon

Wetland Mitigation Bank Final Instrument

Revised

January 20, 2002

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PREAMBLE

PURPOSE

The Amazon Creek Mitigation Bank (Bank) is a wetland mitigation bank established to serve the mitigation needs of any source, public or private. The Bank has been established in accordance with the Oregon Administration Rules for Compensatory Wetland Mitigation Banking (OAR 141-85-400 thru. 141-85-445) and the Federal Interagency Guidelines for Mitigation Banking (20 November 1995).

The purpose of the Bank is to provide compensatory wetland mitigation for anticipated losses in wetland function and values, when on-site mitigation is not possible or when off-site mitigation would prove to be environmentally preferable. Potential buyers must explore alternatives in addition to avoidance and minimization prior to mitigating in the Bank. The creation of this Bank does not allow DSL or ACOE to permit wetland losses through a Joint Removal-Fill Permit in excess of losses that would have been permitted regardless.

SERVICE AREA

The Bank's service area is within the Upper Willamette Valley Drainage Basin in an area including Junction City, Veneta, Eugene, Springfield and Creswell (See Service Area Map -Figure 2). The service area is also bounded by a maximum elevation of 600 feet msl for the proposed wetland fill site.

Although the service area is delineated on a map, this is only a guide for regulatory agencies and perspective Bank purchasers. The final decision for use of this Bank will be made on a case-by-case basis by the DSL Resource Coordinator and the ACOE Regulatory Specialist.

WETLAND TYPES SERVED

The Bank will provide compensatory mitigation for impacts to palustrine emergent, forested, scrub-shrub, semi-permanently flooded and flooded wetland within the service area with a hydrogeomorphic classification of slope/flat.

CREDIT PURCHASE PROCEDURE

In order to use the Bank, approval of the wetland delineation of the property where the wetland impact will occur must be obtained from the Division of State Lands (DSL) and the U.S. Army corps of Engineers (ACOE). A Joint Application for a Removal/Fill Permit from DSL and a Section 404 permit from the ACOE will be required indicating that you wish to purchase credits from the sponsors of the Bank and outlining why mitigation is not feasible or desirable on the project site, and what efforts were taken to locate nearby off site mitigation opportunities other than the Bank. Credit sales and purchases for future anticipated impacts not part of Removal-Fill Permit applications are prohibited. The impact area is subject to the service area criteria described in the Service Area section above. The cost of the credits is negotiated between the sponsors of the Bank and purchaser. After obtaining permission from DSL and the ACOE, the credits are actually purchased from the sponsors of the Bank. When DSL and the ACOE are given proof of credit purchase, the impact project is permitted to proceed.

1.0 INTRODUCTION

The Amazon Creek Mitigation Bank (Bank) is located approximately three and one-half miles southwest of Junction City, Oregon between Alvadore Road and Amazon Creek. The Bank is located in T I6S, R5W, Sec. 24, Tax Lot 503 (Figure 1). The Bank consists of 40.0 acres of restored, created and enhanced wetland. To date, approximately 30 acres of wetland has already been created through diking with the remaining ten acres further enhanced with limited excavation as proposed by the MBRT. The proposed bank is adjacent to approximately 155 acres of restored wetland in the agricultural bottom lands of the Willamette Valley. The site is bordered on all sides by agricultural lands. Amazon Creek runs along the northeast comer of the Bank. The site is owned and managed by Amazon Creek Mitigation Bank, LLC., Mr. David Jampolsky, managing member.

The Bank takes 40 acres of clay and silty clay loam that historically has been in agricultural production since at least 1936, and through minor excavation and construction of low wide levees, recreates wetlands that have long been drained. The resulting wetlands will be a mixture of palustrine emergent and scrub/shrub and forested, seasonally ponded wetlands, with a hydrogeomorphic setting of slope/flat. The majority of the Bank has received a determination of wet prior-converted cropland (Wet-PC), approximately a third is upland and less than an acre is prior converted wetland (PC).

The long term ecological goals of the Bank are to restore wetlands as close as possible to near historical levels of quantity, quality and diversity; to restore the highest quality and diversity of habitat for the indigenous wildlife of the area; to work toward controlling the levels of undesirable invasive vegetation; and to maintain these levels for the long term.

The Bank is located within an agricultural area that is zoned EFU (exclusive farm use) as are all of the adjacent properties. The zoning and comprehensive plan for this area provides for the necessary buffer and long term hydrologic protection that is vital to a wetland mitigation bank, particularly to one of this size.

2.0 DEMONSTRATED NEED AND SERVICE AREA

The Service Area Map (Figure 2) delineates the service area which is within the same major drainage basin as the site, the upper Willamette. This service area is composed primarily of Willamette Valley agricultural lands with a mixture of large to small cities within Lane, Linn and Benton Counties, the most notable of which are Eugene, Springfield, Junction City, Coburg, Veneta and Harrisburg. The vast majority of the service area (90%) is within Lane County. The service area is based on soils, watershed and ecoregion boundaries, and elevation, as well as identifiable wetland mitigation needs. It is roughly bounded on the east by the Cascade foothills; on the south by the Hill Creek; to the west by the Coast foothills; and extends north to the upper Willamette drainage basin boundary. The service area is also bounded by a maximum elevation for the proposed impact site of 600 feet msl.

Lane County has grown significantly (9.0%) in the last ten years. According to Portland State University, the population estimate for the next ten years is similar. Although the growth in Lane County is slightly below the state average the amount of compensatory mitigation for loss of jurisdictional wetlands has been substantial. This is evidenced by a review of the Division of State Land's "Summary of Activities in the Removal-Fill Program for Waters of the State for the 1995-1997 Biennium" which lists 52 removal-fill permits requiring compensatory mitigation in Lane County totaling 627,090 cubic yards of fill and 331,844 cubic yards of removal.

Pat Thompson, a wetland consultant for Lane County Public Works is aware of the numerous wetland fill projects Lane County will be needing to mitigate for in the next five years, in particular, lineal road related projects. The County is already experiencing difficulty in developing suitable on-site mitigation sites, and/or finding it very difficult to locate off-site mitigation opportunities. John Tamulonis, the Community and Economic Development Manager for the City of Springfield has also expressed his concerns for finding suitable mitigation sites and his desire for practical, high value off-site mitigation possibilities such as a mitigation bank would provide. Future projections of development and road related wetland impacts, for both Lane County and the City of Springfield, indicate that on-site mitigation opportunities will become more and more difficult in the future as the area becomes more developed and the on-site mitigation opportunities become exhausted. The Springfield local wetland inventory indicates there are 57 identified wetland areas covering 404 acres within the urban growth boundary and 187 acres of designated "other water" areas.

3.0 ADJACENT PROPERTY OWNERS

The following are the surrounding property owners names and addresses:

Thomas Hunton 92194 Purkerson Road Junction City, OR 97448

Betty Hill 27699 Meadowview Road Junction City, OR 97448

Betty Z. Hill Living Trust 27699 Meadowview Road Junction City, OR 97448

4.0 PROOF OF OWNERSHIP

Attachment I contains the current deed and ownership record for the Bank. The Bank is located in T I6S, R5W, Sec. 24, Tax Lot 503. The site is owned by Amazon Creek Mitigation Bank LLC, David Jampolsky, Managing Member.

5.0 SITE ASSESSMENT

5.1 Cowardin and Hydrogeomorphic Wetland Classes

There are several areas of existing wetlands which are listed on the Junction City Quadrangle, National Wetlands Inventory Map either adjoining or in the Bank (See NWI Map Figure 5). The listed Cowardin classifications wetlands include:

PFOC-Palustrine/ Forested/Seasonally Flooded (adjacent)

This wetland area runs along the northeast corner of the Bank site adjacent to Amazon Creek.

PEMAd-Palustrine/Emergent/Temporarily Flooded/diked/partially drained/ditched

R2UBHx-Riverine/Lower Perennial/unconsolidated bottom/excavated This refers to Amazon Creek.

The Bank wetland Hydrogeomorphic (HGM) Classification is slope/flat (See Attachment 2 - Letter from Paul Adamus).

5.2 Ecological Baseline

5.2.1 Vegetation

Prior to construction of the Bank the entire site was in grass seed production.

5.2.2 Soils

According to the Lane County Soil Survey the site is composed primarily of Bashaw clay (8) and Awbrig silty clay loam (5), with a smaller amount of Coburg silty clay loam (31) and a some Salem gravelly silt loam (118) (See Figure 6 -Soils Map). Both the Awbrig and Bashaw soils arc listed as hydric by the NRCS, *Hydric Soils of Oregon*.

The Bashaw clay consists of poorly drained and very poorly drained soils that have formed in alluvium. They occur in backwater areas of floodplains and in drainage channels of silty alluvial terraces. The permeability is very slow and runoff is very slow to ponded.

Awbrig silty clay loam is a deep, poorly drained soil found on stream terraces and drainageways and formed in alluvium. Both the permeability and runoff are very slow.

Coburg silty clay loam is a deep, moderately well drained soil on low stream terraces. The permeability is moderately slow and runoff is slow. Salem gravelly silt loam is a deep well drained soil on stream terraces. The permeability is moderate and runoff is slow.

5.2.3 Hydrology

The Bank is located in the broad lowland alluvial terrace of Amazon Creek, a tributary to the Long Tom River. The topography of the surrounding areas consists of flat valley bottom land. Movement of unconfined ground water moves from the south to the north following the general topographic trend of the area, where the water is discharged as seeps, springs or to surface water bodies. According to the U.S. Geological Survey publication, Selected Ground-Water Data in the

Eugene-Springfield Area, Southern Willamette Valley Oregon, there are sand and gravel alluvial deposits in the vicinity of the Bank which provide large quantities of water to area wells. Wells surrounding the site indicate water levels ranging as high as seven feet below ground elevation in drilled wells.

The site is drained by Amazon Creek which flows north northwest toward the Long Tom River. The Amazon Creek drainage was originally very marshy. The borrowed name "Amazon" was fitting as historically it would flood wide areas almost every winter when it overflowed its shallow banks. Flood control manipulation of Amazon Creek began as early as 1913, to where today, the entire channel has either been deepened, widened or paved with concrete. The primary source of the original wetland hydrology of the site was overflow from the Amazon Creek. Since the Amazon has been channelized and deepened the seasonal overbank flows do not occur.

Most of the stream flow in this area occurs during the winter and spring coinciding with the majority of the area's precipitation. The ground water in the alluvial deposits of this area is recharged seasonally, directly or indirectly by precipitation, where the soil adsorbs the water and it percolates downward to the underlying saturated zones.

5.2.4 Wildlife

Attachment 3 includes the Field Survey Forms from site visits by USFWS beginning in November 1999 through January 2001. Also attached summary results of the 2000 and 2001 Winter Waterfowl Surveys by the USFWS.

5.3 Wetland Determination/Delineation

In June, 2000 Allen Makinson with the Natural Resources Conservation Service (NRCS) conducted a wetland determination of the Bank area. This assessment determined that approximately 27 acres of the Bank was prior converted wetland. In addition to the NRCS determination an on-site meeting with Pat Thompson and Janet Morlan, Wetland Program Leader for DSL, was conducted on March 20, 2001. As a result of the site visit and a follow up meeting on July 17, 2001 with Janet Morlan, Larry Devroy (DSL) and Pat Thompson, DSL made the finding that 27.4 acres of the site qualifies as Wet PC, 11.7 acres as upland, and 0.9 acres PC (Wet Det #01-0144). Acreage amounts are verified by Autocad provided by Branch Engineering. A copy of the NRCS determination is included as Attachment 4.

6.0 MITIGATION BANK SITE PLAN

A 1936 aerial photograph of the Bank is included as Figure 3. The site plan for the Bank is included as Figure 4. Development of the Bank is primarily through the restoration/enhancement of the existing Wet PC farm wetlands along with some creation and less than an acre of restoration. In the past, efforts were made to drain the property with internal drainage ditches as well as drainage through the channelization of Amazon Creek. These drainage attempts however, were not sufficiently successful to create upland.

The Bank's construction will restore a wetland complex comprised of several habitat types that will include temporarily-flooded, seasonally-flooded, and semi-permanently flooded Palustrine emergent, scrub/shrub and forested habitats. The primary source of the original wetland hydrology of the site was overflow from Amazon Creek. Since the Amazon has been channelized and deepened the seasonal overbank flows do not occur. As a result, the Bank will restore wetlands to the site, although with a different hydrology source, this time utilizing precipitation, ground water and surface water rather than overflow from Amazon Creek.

6.1 Design Assumptions

Successful implementation of this Bank plan is based on the following assumptions which are necessary for the surface and seasonally high ground water to serve as the primary hydrologic connection.

Normal rainfall will occur over the establishment and monitoring periods (normal rainfall being consistent with historic precipitation amount, form, and seasonality)

Evaporation is less than precipitation or input

Normal flooding pulses, and normal ground water table levels persist

Planting zones are correct, soils are of the proper types to support the vegetation planted, and sufficient plant material will be available to execute the plan. Suppliers have been identified in *Hortus West*, 1999 Volume 10, Issue 1, for each species proposed. However, they have not been specifically contacted, for

verification of particular plant stock on hand. In the event that the prescribed species are unavailable, other native wetland plants capable of providing similar functions will be substituted. All deviations from the approved plans will be reported to the MBRT with the as-built plans.

6.2 Design Details

The Bank site plan (Figure 4) shows the site and grading plan for the Bank. The following sections detail the measures either already completed or to be taken regarding water sources, grading and erosion control, vegetation establishment, and the operational schedule.

6.2.1 Water Sources

The hydrologic source for the restored/created/enhanced wetlands is already in place, however, prior to construction of the Bank it was degraded and impacted by agricultural practices. Captured seasonal high ground water, precipitation and surface water are now being used to increase the hydrology of the site.

Constructed drainage systems and Amazon Creek drain the site at rates higher than historically indicated. The seasonal water, which until the construction of the Bank, was drained from the site

as quickly as possible to Amazon Creek, now remains on-site, as was historically the case.

The wetland is being restored and created by retaining high surface water flows using low earthen levees to retain the water rather than quickly diverting high flows through the existing drainage ditches. A minor amount of excavation was conducted during the construction of the island. The majority of the levee material came from off site. The approximate 3000 feet of diking has a natural appearance, with irregular boundaries and shape mimicking and blending in with the natural features. The levees have an average height of two to three feet, 10 feet width and side slopes ranging between 5:1 to 10:1. The approximate maximum winter high water will be 2.5 feet in depth in the deepest areas.

Wetter seasonal swales exist within the ponded areas spreading out and passing through a wet marshy area with shallow seasonal open water and interspersed, slightly higher wetland prairie. The slight variations in topography within the system facilitate direction of water movement, provide additional areas for the scrub/shrub vegetation, and allow for more diversity for wildlife habitat.

There is one adjustable water control outfall structure located on the north levee of the Bank. The structure consists of a 24 inch outfall with a three foot wide riser. On the east side of the Bank is a natural low area which will act as an emergency flood spillway with overflow to Amazon Creek. The water control structure will provide management options for both encouragement of native wetland plants and discouragement of invasive plants and allow water movement and control toward the north into the adjacent wetlands.

6.2.2 Vegetation

In the fall of 2001 and spring 2002, the Bank will be seeded with a mulch-seed mixture planted in a zone planting for individual species. At least four species of grasses ranging from I lb/ac to 4 lbs/ac for each species, four species of sedges, rushes and other herbaceous vegetation and seven species of forest and scrub/shrub species will be planted. Some scrub/shrub and forest species were planted on the levees during the spring 2001, additional bare root scrub/shrub and forest species will be planted during the fall 2001.

The wetland will be planted with native wetland vegetation as shown on the planting plan and cross section. The species, sizes, and density of the plants are indicated in the planting plan (See Attachment 5).

6.2.3 Grading and Erosion Control

The levee work completed was conducted by a 21 cubic yard capacity scraper. The owner also has access to farm machinery with farming implements available for discing, seeding, and cultivation as needed.

A small amount of scalloping and contouring on the southeast side of the Bank, per MBRT recommendations following the site visit, was completed during summer 2001. The Bank has been seeded with a native grass mixture to assure a full cover prior to the rainy season.

6.2.4 Operations Schedule

The 40 acre Bank construction is nearly complete. The first phase of the excavation work was completed in the summer of 2000 and consisted of the construction of a levee to impound site flows rather than allowing the water to runoff directly to Amazon Creek. The second phase of the construction, completed in the summer of 2001, included some minor scalloping on the southeast side of the Bank to create

more diverse topography/hydrology to increase plant species diversity. Initial planting occurred during the spring 2001 along the levee edges, but complete planting of the Bank will occur in the fall of 2001 and spring of 2002.

The planting operation will be overseen by a wetland specialist, horticulturalist, or biologist selected by the Bank Sponsor. After planting, the Bank will be periodically checked by the selected individual for early detection of any problems.

6.2.5 Wildlife Enhancements and Concerns

The Bank will be a natural home for many wildlife species including birds, mammals, fish, reptiles and amphibians. The creation of the various wetland regimes will offer a wide range of habitat for both nesting and foraging possibilities. The Bank will conduct specific habitat enhancements including island habitat, large woody debris including logs or logs with root wads, wood duck boxes and possible meadowlark nest boxes.

Steve Smith of the ODF&W has indicated that fish entrapment issues are not a concern with this site as the Amazon Creek even during highest winters flows does not overflow. The Amazon is the only potential source of fish to the Bank area.

Limited hunting will be allowed on the Bank site. Hunting will comply with all State and Federal regulations. In addition, a maximum of four hunters will be allowed on site at any one time. Hunting will be allowed a maximum of four days per week and will not exceed 32 hours in any week. The hunting season varies year to year based upon the health of the waterfowl populations and is Federally determined. The season generally lasts between 50 to 100 days between mid-October through early January.

6.2.6 Environmental Quality Discussion

The Mitigation Bank is located within the Amazon Creek Watershed. Amazon Creek is a water quality limited stream under the Clean Water Act, Section "303D Listing". It is included due to bacteria (fecal coliform) and dissolved oxygen (DO). The Bank will help to address these

parameters of concern in several ways.

Low dissolved oxygen levels are a concern for Amazon Creek. The Bank as a functioning wetland will help increase DO levels by decreasing the biological oxygen demand (BOD). This is due to the wetland trapping the organics, thus decreasing the amount of organic matter that ultimately enters Amazon Creek. The organic matter increases the BOD which decreases the DO. The DO levels during the critical time of May I through October 31 are also aided by increased flows to Amazon Creek during the critical period. The wetlands accomplish this by retaining seasonal precipitation, decreasing flow velocities and allowing runoff to leave the wetland over a prolonged period of time. During high flow events, the Bank will hold the water, then release it at a slower rate to the receiving stream which keeps the flows higher during periods of traditionally lower flows which helps to increase the DO levels.

The bacteria levels of Amazon Creek is also a parameter of concern. This parameter could also be helped with filtration of water through the wetland. Studies conducted at the Arcata Marsh and Wildlife Sanctuary in Arcata, California have demonstrated that fecal coliform removal is about 86% complete in their constructed wetland waste water treatment facility.

In addition to addressing dissolved oxygen and bacteria, the Bank will reduce herbicide input to Amazon Creek. Forty acres of agricultural land that in the past received herbicide applications two times a year will be replaced with a high value wetland. The only herbicide applications that will occur within the Bank are highly controlled spot applications of individual noxious invasive species.

6.2.7 Buffers

"The zoning and comprehensive plan for this area provides for the necessary buffer and long term hydrologic protection that is vital to a wetland Mitigation bank, particularly to one of this size" (Section 9.0) Further, the site is bounded by drainage ditches along the south and west sides, by Amazon Creek and forested wetland on the east side, and restored wetland on the north side. Consequently, the bank site is adequately buffered against degradation from off-site. No credit will be generated for buffers.

7.0 PAST AND PRESENT USES OF THE SITE

Amazon Creek is a vastly different waterway than it was near the turn of the century. Prior to dredging, which dominates its features today, it was a shallow creek and slough, no more than five or six feet deep. The banks were moderately sloped, and peak storm discharges during heavy winter storms resulted in almost annual flooding. Early local residents gave it the name "Amazon" because it would flood such a wide area almost every winter when it overflowed its shallow banks. Thus the Banks hydrology is significantly different than it was historically. Due to the type of alterations that have occurred it is not feasible to restore the historic hydrology to the site. We must instead recreate the site wetlands with a different hydrologic regime.

It is not known exactly when the area was first cultivated for agricultural use, but historical aerial photos indicate the site was in agricultural use in 1936. Reconnaissance of the site and landowner records indicated no evidence of any type of hazardous materials on-site. The site was examined for evidence of areas of stressed or voided vegetation, drums, fill pipes, dump sites, stained soils, unusual odors, etc. No buildings have ever been known to occur on-site.

8.0 MITIGATION BANK WETLAND FUNCTIONS

This bank holds tremendous potential for performing a variety of wetland functions, foremost being wildlife habitat for migratory waterfowl, bald eagles, peregrine falcons, shore birds, neotropical song birds and western pond turtles. The site is designated as a critical area for wintering waterfowl due to its location between William Finley National Wildlife Refuge and Fern Ridge Reservoir in the Willamette Valley Waterfowl Dispersal Plan (ODFW, 1981).

The Bank will also function to provide on-site storage of precipitation. The wetlands will capture and retain precipitation, off-setting the effects of the existing manmade drainage surrounding the area that promotes fast drainage and decreases ground water recharge. Precipitation, site surface water flows, and ground water will be allowed to remain on-site within the enhanced wetland areas where they will accumulate and create a seasonally ponded and inundated wetland. These areas will hold water, increasing the retention time thereby allowing the vegetation and soils to interact with any possible nutrients they might contain in order to act as a filtration system.

9.0 EFFECTS OF ADJACENT LAND USES

The Bank is located within an agricultural area that is zoned EFU (exclusive farm use) as are all of the adjacent properties. The zoning and comprehensive plan for this area provides for the necessary buffer and long term hydrologic protection that is vital to a wetland Mitigation bank, particularly to one of this size.

The Bank is being developed so that the neighboring property owners will not be affected by increased flooding or have the drainage of their fields adversely affected. Contrary, the creation of additional storage in the Bank should reduce frequent peak flow levels downstream helping to moderate downstream flooding.

10.0 WETLAND CREDITS OFFERED

The original hydrology of the Bank was altered by attempts to drain the property with extensive drainage ditches and the historical massive dredging of Amazon Creek. Due to these efforts the wetland hydrology was significantly deteriorated. The majority of the site (27.4 acres) qualifies as wet prior converted cropland (Wet PC) and is, therefore, eligible for a Mitigation ratio of 2: 1. Other portions of the site qualify for creation credits (11.7 acres at a 1.5:1), a small amount of restoration (0.9 acres at I: I).

Acres	Mitigation Type	Credit Ratio	Credits Earned
27.4	Restoration/Enhancement of Wet PC	2:1	13.7
11.7	Creation	1.5:1	7.8
0.9	Restoration of PC	1:1	<u>0.9</u>
40.0			22.4

The Site Plan will restore palustrine emergent, forested, and scrub/shrub wetland habitats in the slope/flat hydrogeomorphic (HGM)setting.

11.0 FUNCTION ASSESSMENT

Mr. Paul Adamus of Adamus Resource Assessment, Inc. performed a function assessment of the Bank using the DSL's *Guidebook for Hydrogeomorphic (HGM)-Based Assessment of Region Wetland and Riparian Sites*. A summary of Mr. Adamus' assessment is that the construction of the Bank has resulted in an increased capacity for all or nearly all functions. A copy of the report is included as Attachment 2.

12.0 MONITORING PLAN

12.1 As-Built Survey

An as-built survey will be submitted to DSL within ninety days of acceptance of this instrument to verify topography and hydrology. The as-built survey will include site topography, wetland boundary, water control structures and any other data deemed pertinent. Photos will be taken throughout the spring at designated photo stations to help verify that the hydrology will be adequate to assure success of this plan.

12.2 Reference Site

The 30 acre Stewart Pond complex in West Eugene (Figure 7) is proposed as a reference site. It is located approximately 7.5 miles southeast of the Bank site. Paul Adamus suggested that of 109 sites that he evaluated for the DSL in the Willamette Valley, the Stewart Pond complex is most like the restoration at the bank site. That site also contains restored wetland on a formerly wooded flood plain in a slope/flat hydrogeomorphic (HGM) setting. It also has palustrine emergent, scrub/shrub, and forested habitats. The

Stewart Pond complex is owned by the BLM and has been monitored annually since it was restored in 1995. The site has been and will continue to be actively managed to reduce cover of invasive species. In the most recent published monitoring report (City of Eugene, 2000), data collected from 215 points within the complex show that 52 herbaceous plant species were found. In addition, a one hour survey conducted independently in the Stewart Pond complex by Paul Adamus and others in 1999 as part of the Willamette Valley HGM project found 32 species. By comparison, an initial survey of the Bank site done by Paul Adamus in June of 2001, after herbicide had been applied to the non-inundated areas of the Bank, found 24 plant species, all herbaceous. Of the 24 species found at the Bank site, all but 5 were also present at the Stewart Pond complex. The species list from the Stewart Pond complex

was used to guide selection of the seeds and plants to be planted at the Bank site and will also be used to evaluate the species richness in the plant communities developed at the Bank site. There is no data on stem density for the Stewart Pond site at this time. Stem density data will be collected and compared to stem density at the Bank site in the annual report.

12.3 Annual Report

Annual reports describing data collected and activities conducted at the Bank from January 1 through December 31 will be provided to DSL, ACOE, and the members of the MBRT by January 31 of the following year. Data collected will include results of vegetation monitoring, water level data, wildlife observations, and photos taken from the four permanent photo stations shown on Figure 4. A comparison of plant community composition in habitat types at the Bank site to those in similar habitat types at the reference site will be provided. The report will also describe any pertinent management or remedial activities and will provide an accounting of credit sales and availability.

12.4 Monitoring Plan Supervision

The planting of the Bank will be supervised by a wetland specialist or biologist who will be retained by the Bank's sponsor. The monitoring program will be conducted either by the owner under the direction of a Certified Wetland Delineator or a Certified Wetland Delineator hired and paid for by the Bank sponsors.

12.5 Annual Review

The agencies and MBRT will be invited to conduct an annual review of the Bank between April 1 and June 30 of each year, beginning in 2002. This is a prime time to observe the hydrology, vegetation, and wildlife usage at the site. It is also a reasonable time after receipt of the Annual Report in January. Monitoring will continue until five years after the last credit is sold, However, if the site achieves equilibrium, meets success criteria, and demonstrates self-sustainabilty sooner, the sponsors may petition DSL and the Corps to release them from further responsibility to actively monitor the site.

12.6 Wildlife Monitoring

Because wildlife habitat use is significantly influenced by factors beyond the site, they will not be part of the formal performance standards. However, wildlife use of the bank site will be suggested by a wildlife survey conducted twice each year (spring: between May 15 and June 15; winter: between January 1 and February 1) by the sponsor during the life of this Instrument. Four census stations will be selected within or adjacent to the different habitat types, herbaceous, forested, scrub/shrub, and open water. All individual birds, mammals, amphibians, and reptiles observed within 50 meters of the station during a 15 minute period will be recorded. The 15 minute survey will occur sometime between sunrise to four hours after sunrise. Birds flying over or near the census station and any wildlife observed (direct observations or evidence such as scat, tracks, etc.) while walking between census stations

are recorded as observations, but separately from observations at the census stations.

13.0 GOALS, OBJECTIVES AND PERFORMANCE STANDARDS

The primary goal of the Bank is to convert farmland back to natural wetland resources to enhance diversity, provide wildlife habitat, and support natural wetland functions. The Bank will create and restore 40.0 acres of seasonally and semi-permanently flooded, saturated, inundated or ponded palustrine emergent, scrub-shrub and forested habitats. The project will be successful and certified when:

13.1 Vegetation Performance Standards

13. 1.1 Herbaceous Vegetation

COVER and COMPOSITION. At the end of the first growing season, desirable herbaceous vegetation will dominate in 60% of the plots located in the non-inundated emergent habitats located at the bank site. At the end of year two growing season, desirable herbaceous vegetation will dominate in a number of plots equal to or greater than 65% of the proportional number of plots in which it dominates at the reference site in non-inundated emergent habitats, and 70% or greater in subsequent years. SPECIES RICHNESS. At the end of the first and second growing seasons the number of species on the cumulative list of desirable herbaceous plant species (i.e.. The list accumulated from among all plots in herbaceous emergent habitats at the Bank site) will be at least 60% percent of the number of species of desirable herbaceous plants on a comparable list from the reference site. At the end of year 5 growing season, this standard will be 70% or greater. Both planted and recruited species will be included in evaluating these standards. No more than 15% of individuals will be non-native, invasive, undesirable herbaceous species.*

"Dominate" means to comprise at least 50% relative cover in a 1m x1m plot.

13.1.2 Scrub-shrub and Forest Vegetation

The cumulative list of species from plots in the scrub/shrub habitats will contain no fewer than three species of desirable planted or volunteer woody species. Based on counts of woody stems summed from plots in scrub-shrub habitats there will be at least 100 stems per acre or at least 60% of the stem density at which they occur in comparable plots at the reference site (whichever is greater). These standards take into account both mortality and colonization. No more than 15% of individuals shall be undesirable, non-native species*. Both planted and recruited species will be included in evaluating these standards. The same standards will apply to any forest wetland habitats.

There is currently no data available for stem density at the reference site. A stem density survey will be conducted at the reference site and used as reference for the Bank site.

13.1.3 Open Water

In open water areas there will be no more than a total of 15% cover of undesirable non-native, invasive species*. Open water areas and water levels will be identified by staff gauges and observation wells monitored monthly. (See Section 13.2 Hydrology Objective)

*Non-native, undesirable species include: reed canary grass (*Phalaris arundinacea*), purple loosestrife (*Lythrum salicaria*), Canadian thistle (*Cirsium arvense*), Scots broom (*Cytisus scoparius*), Himalayan blackberry (*Rubus discolor*), tansy ragwort (*Seneciojacobaea*), Eurasian waterfoil (*Myriophyllum spicatum*), hydrilla (*Hydrilla verticillata*), smooth cordgrass (*Spartian alterniflora*), South American waterweed (*Elodea densa*) and spartina species. Other species may be deemed undesireable by consensus of the MBRT in consultation with the Sponsor.

13.1.4 Methodology

A systematic plot method for sampling points within the Bank will be used. 25 plots will be situated equidistantly along 5 transect lines. The transects will be placed equidistantly across the Bank site. They will be aligned perpendicular to the topography or direction of water movement. The location of the first sample plot on each transect will be staggered in order to minimize potential overlap among plots. For surveying herbaceous and open water habitats, each plot will have a diameter of ten feet, centered on the transect. Plants will be identified to species and relative percent of each species will be estimated in each plot. For surveying woody habitats, each plot will have a diameter of 30 feet, centered on the transect. Each plot on each transect will be surveyed for the characteristics described in sections 13.1.1, 13.1.2, 13.1.3 as applicable. All surveys will be conducted during the summer. Following an analysis of the first year's data using species-area curves in each habitat, a determination will be made as to whether additional plots/ and or transects are required to accurately determine species richness. In addition, established site photo stations will be used in each year to provide a visual record of the overall health and diversity of the wetland vegetation. Photo station locations are identified on the Site Plan (Figure 4).

13.2 Hydrology Objective

The hydrology objective will be considered successful and certified when the restored, enhanced, and created areas meet the hydrology criteria as specified in the Corps of Engineers 1987 delineation protocols. In most years (i.e., 3 out of 5) forested habitats shall have a water table no more than twelve inches below the surface in mid-March, scrub/shrub habitats shall be flooded or saturated until mid-March, and emergent habitats shall be saturated or shallowly ponded for more than 60 days (i.e. end of April). Depth of water in selected ponded areas (staff gauges) and in observation wells will be monitored monthly to verify that the restored areas meet the required hydrology criteria.

14.0 CONTINGENCY PLANS

During monitoring inspections, surveys and site visits any problems will be noted. A plan to correct any deficiencies will be developed and either implemented immediately or presented to the MBRT for approval, whichever is appropriate.

Success of planting will be noted each year and additional seed, plugs, or cuttings placed to replace unwarranted loss. However, if other desirable species are out-competing the planted species and the volunteer species are consistent with plant community targets developed for the Bank, the voluntary communities will be left undisturbed and the appropriate success criterion will have been considered to have been met (adaptive management). Water rights have been acquired so newly planted vegetation could be irrigated to promote planting success during extraordinary climate conditions.

Prior to the sale of credits in the Bank a letter of credit or a performance bond, in the amount of \$45,000.00 will be secured to provide for the implementation of any remedy that may become necessary, or until such time that success is ensured and DSL and the ACOE agree that the financial security release is warranted.

14.1 Funding

The owners of the proposed Bank will guarantee that the necessary finances will be made available to successfully execute this mitigation plan and any contingencies which might arise through the development of a performance bond or letter of credit, as described in Section 18.0

14.2 Responsible Parties

The responsible party who will implement and provide for monitoring the success of the Bank is: Amazon Creek Mitigation Bank, LLC.

35749 Spring Hill Road Creswell, Oregon 97426 Office: 541-895-5910

Cell: 541-913-8805

15.0 CONSISTENCY WITH LOCAL COMPREHENSIVE PLAN

The site is zoned exclusive farm use (EFU). The use of EFU land for wetland mitigation is an outright use. The site is however within the 100 year flood hazard area for Amazon Creek. Lane County Planning Department has approved the floodplain Development Permit (PA 99-6120) for construction within the flood hazard area. A copy of the permit is included as Attachment 6.

16.0 WATER RIGHTS APPLICATION

Mr. Jampolsky has already applied for and received his permit to construct a reservoir and store public water (Permit #R-12825) from the Oregon Water Resources Department (OWRD). A copy of the permit is included

as Attachment 7.

17.0 CREDIT BANKING SYSTEM

The credit banking system for the Amazon Creek Mitigation Bank site is based on DSL's mitigation ratios as specified in OAR 141-85-135. A mitigation credit is the unit of measurement describing wetland impact compensation requirements. For each acre of wetland impact, one mitigation credit is required and once permitted can be purchased from the Bank to satisfy the impact requirement.

Since the grading and earthwork have been completed, the sponsor will request that 30 percent of the available credits be certified and released for sale upon the execution of this instrument. Certification for sale of the remaining credits (that portion retained until demonstration of success) will be requested by the sponsor as soon as success can be demonstrated (e.g., after the first or subsequent growing season).

18.0 PROJECT COSTS & FINANCIAL RESOURCES

There is no land acquisition involved as the sponsor owns the Bank site. Additionally, all of the excavation work, and much of the vegetative planting have already occurred. Prior to the sale of credits in the Bank, financial security, in the form of an irrevocable letter of credit, or a performance bond, in the amount of \$45,000.00 will be in place to provide for the implementation of any remedial action that may become necessary, or until such time that success criteria have been met and DSL and the ACOE agree that the bond release is warranted. The financial security document will be presented to DSL and the ACOE for approval after the acceptance of the final instrument. The amount of the bond or letter of credit is based on the three main types of remedial work that may become necessary 1) excavation and hydrological connection 2) planting plan 3) and monitoring.

The monitoring cost for the Bank, for the five monitoring years, is estimated to be an average of \$4,000.00 for each monitoring report, for a total cost of \$20,000.00. It should be noted that depending on the condition of the Bank and the timing of the release of credits, the monitoring may not occur in contiguous years with the approval of the DSL and ACOE.

The amount of the financial security instrument for the Bank is a total of \$45,000. This covers \$10,000.00 if additional levee work becomes necessary, \$15,000.00 for any vegetation work, and \$20,000.00 for five years of monitoring. A phased reduction of the financial security is planned based upon completion of various phases in the development of the Bank, compliance with the Memorandum of Agreement (MOA) and approval of DSL and ACOE in consultation with the MBRT. A draft phase reduction follows:

After the first two monitoring reports have been submitted showing compliance with the MOA, a total of \$23,000 of the financial security will be released (\$8,000 for 2 monitoring reports, \$15,000 for vegetation planting), retaining \$22,000. After the fourth monitoring report is submitted, showing compliance with the MOA an additional \$12,000 of the financial security will be released (\$8,000 for 2 monitoring reports and \$4,000 for grading), retaining \$10,000. After the fifth monitoring report showing compliance with the MOA is submitted, the final \$10,000 will be released.

19.0 LONG TERM PROTECTION

The bank will be protected through a restrictive covenant. The covenant is based upon the restrictive covenant language provided by DSL. A copy of the restrictive covenant language is included as Attachment 8. The owner intends to retain ownership of the property for the long term. However, after the completion of the terms of this Banking Instrument, the land may be sold or otherwise transferred to another entity (e.g. Lane County, private party, USFWS, other) with the desire to maintain the wetland resource. For the life of this Banking Instrument the Sponsor shall notify the DSL, Corps, and MBRT upon such sale or transfer and provide contact name(s) addresses or phone numbers.

20.0 TIME PERIODS ASSOCIATED WITH THE BANKING INSTRUMENT

The terms of this Instrument will continue until five years after the last credit is sold, However, if the site achieves equilibrium, meets success criteria, and demonstrates self-sustainabilty sooner, the sponsors may petition DSL and the Corps to release them from further responsibility to actively manage the site.

The Financial Security Instrument may be released in phases as outlined above. However, the sponsor may petition DSL and the Corps to release them from this requirement earlier if the success of the site and achievement of success criteria are confirmed.

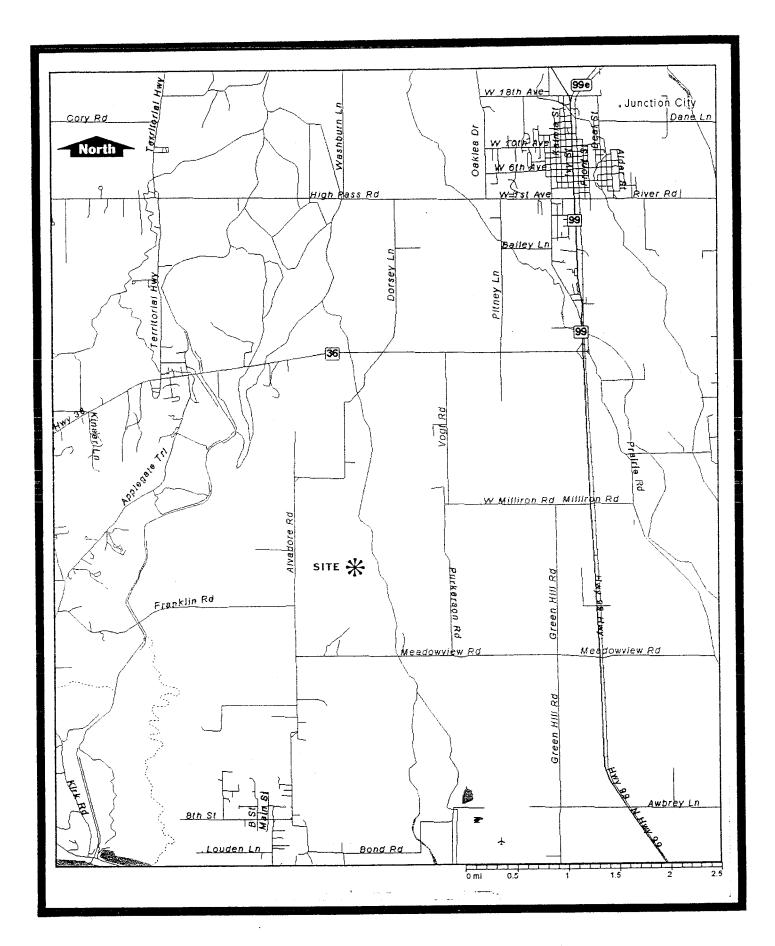
The terms of this Instrument may be changed during the life of the Instrument. Either the sponsor, DSL or the Corps may initiate a proposed change at any time. However, the change will only take effect if all three signatory parties agree to that change. It is understood that the MBRT serves as an advisory body to the DSL and Corps and may participate in any discussions that may result in changes to the Instrument. It is also understood that DSL and the Corps may request periodic meetings, to discuss relevant issues.

21.0 REFERENCES CITED

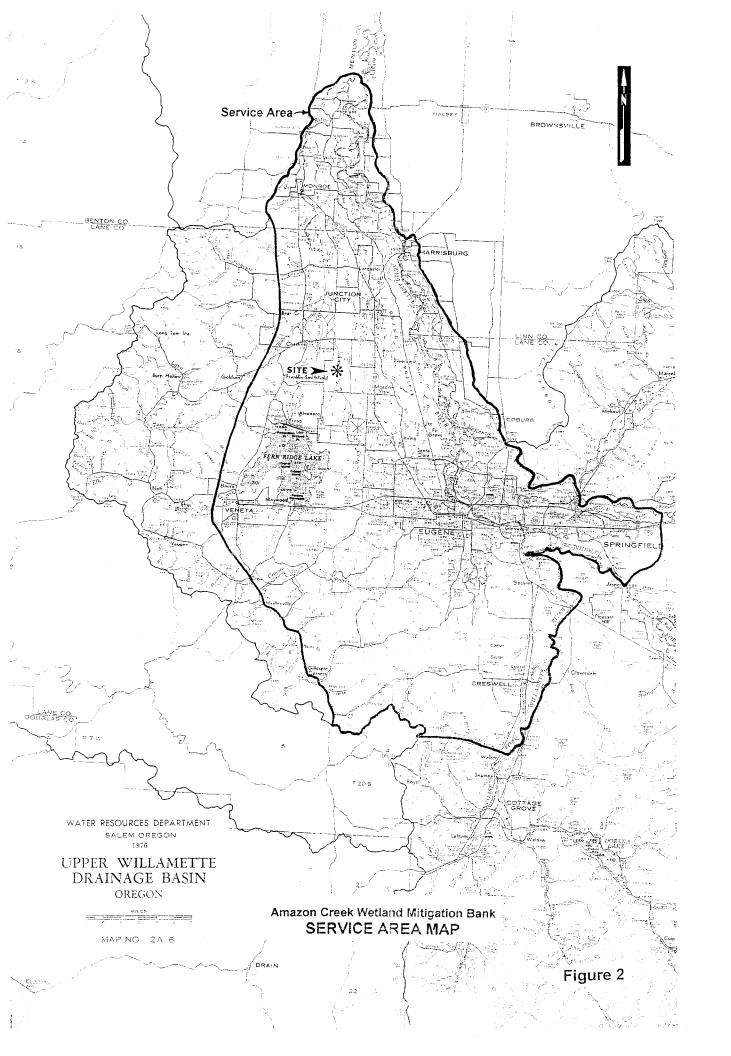
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- U.S. Fish and Wildlife Service. National Wetlands Inventory Quadrangle, Junction City, Oregon, 1994.

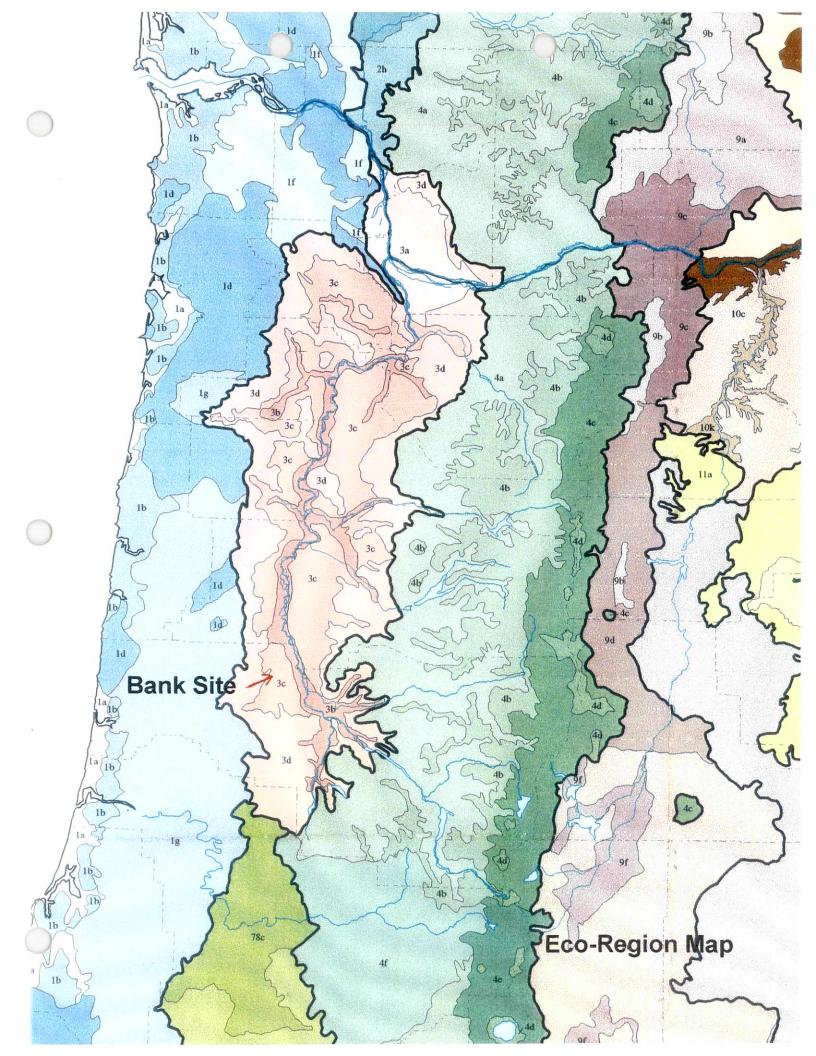
FIGURES

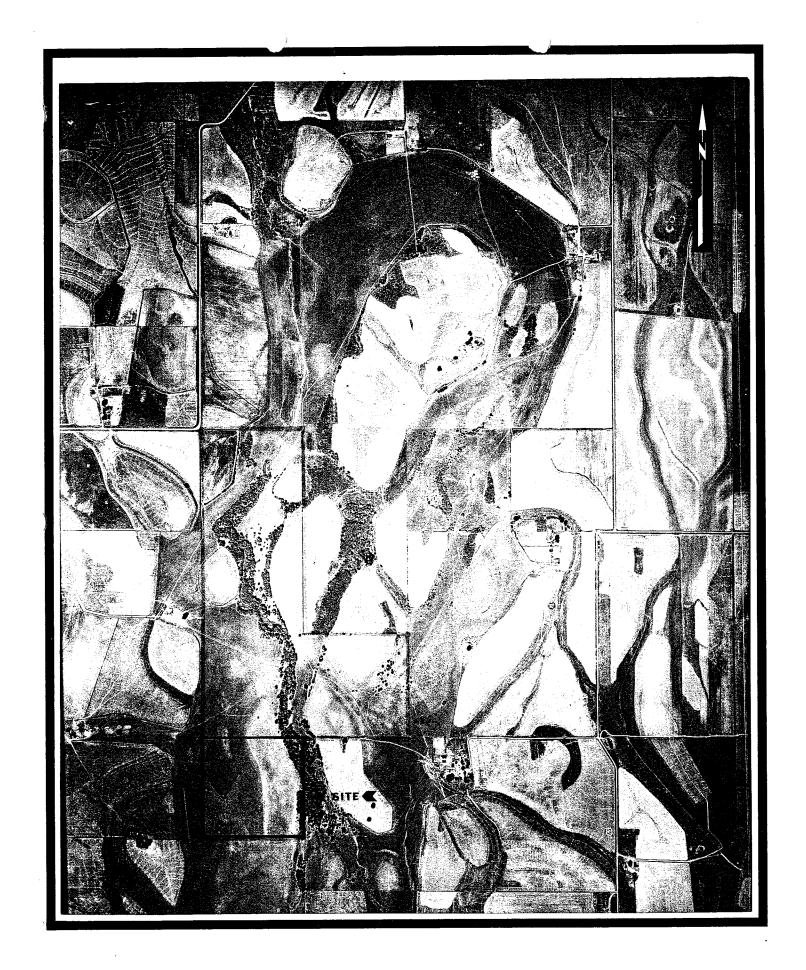
FIGURE 1



Amazon Creek Wetland Mitigation Bank
SITE LOCATION MAP





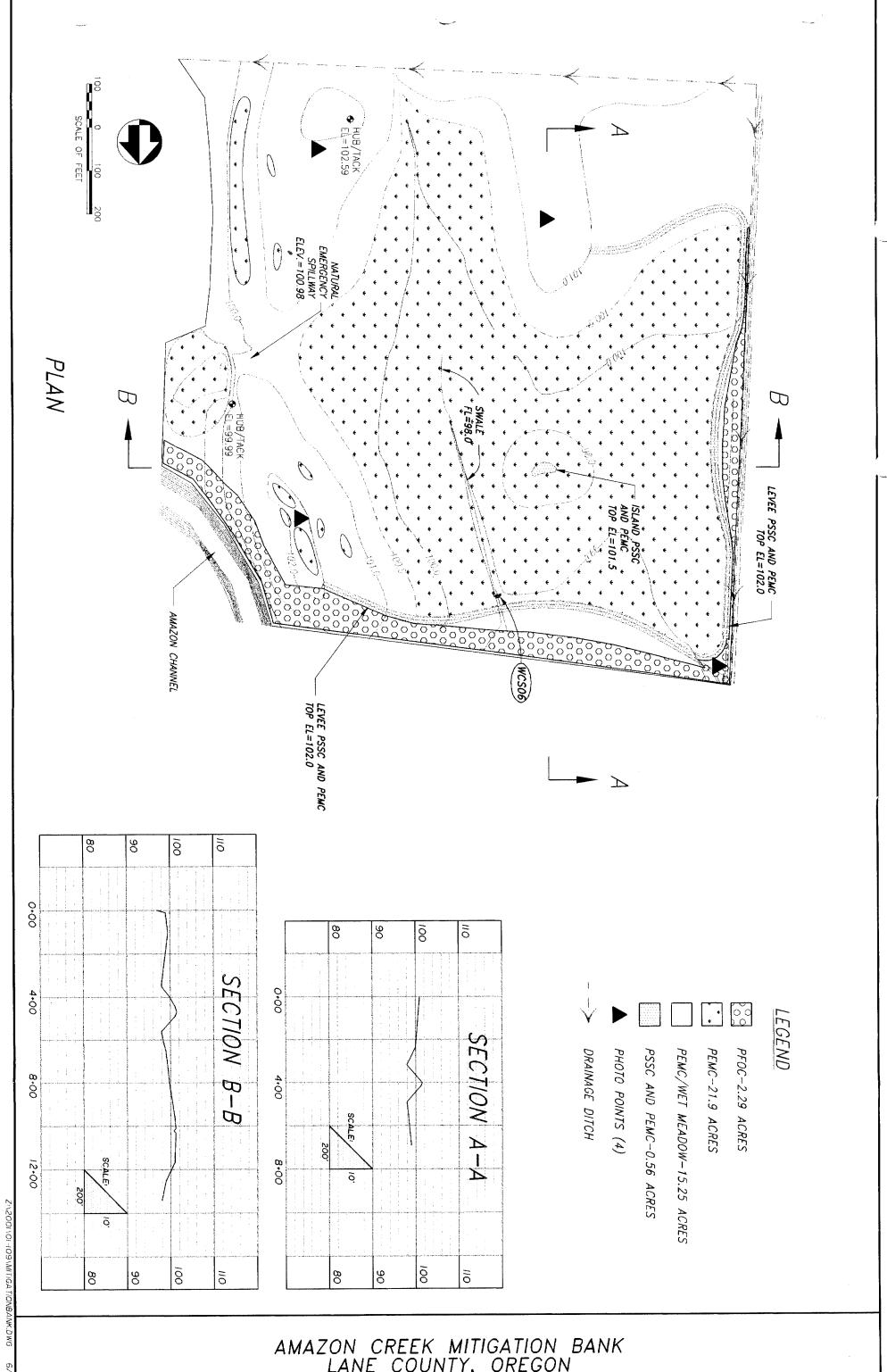


Amazon Creek Wetland Mitigation Bank
1936 AERIAL PHOTOGRAPH

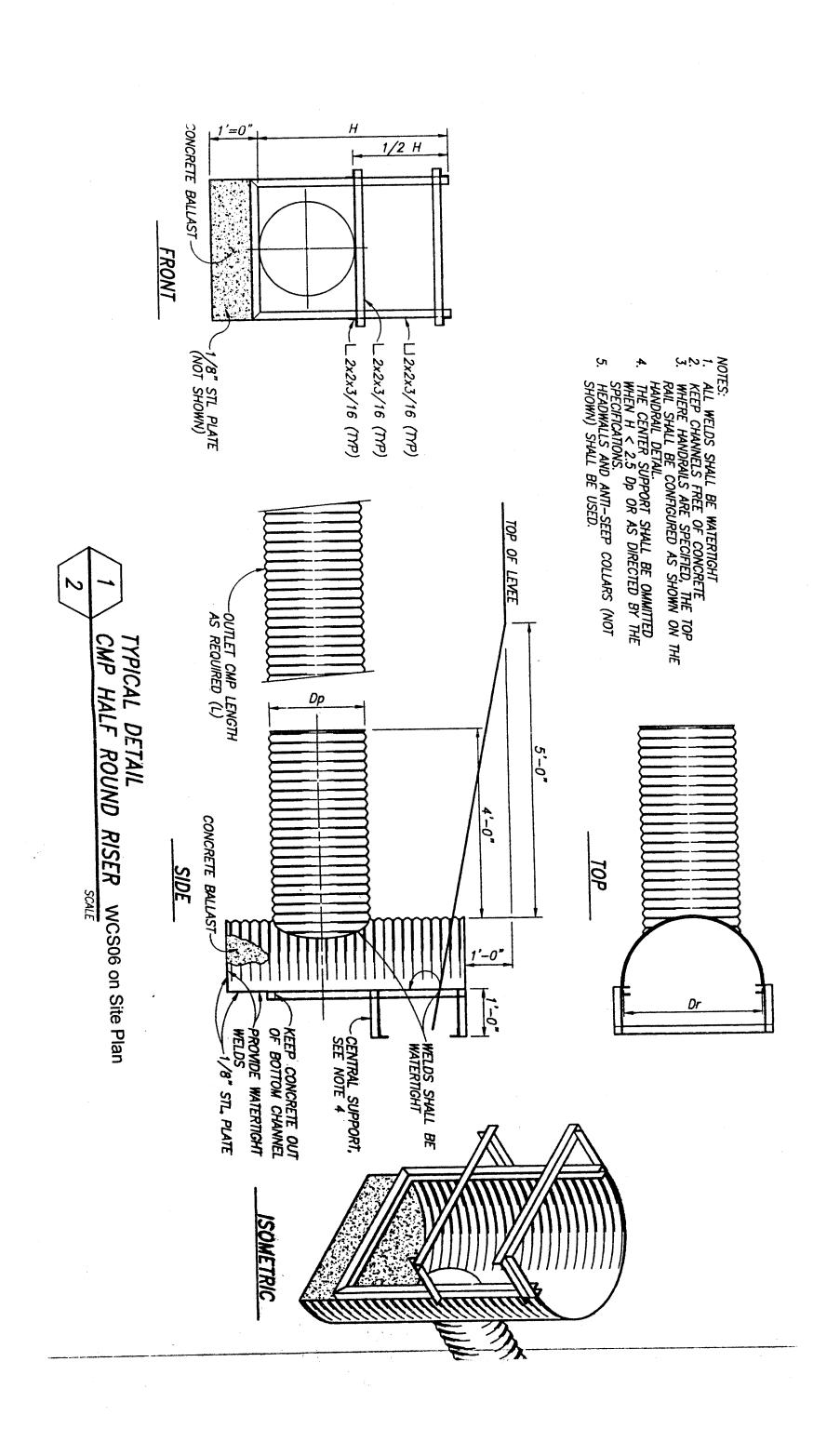


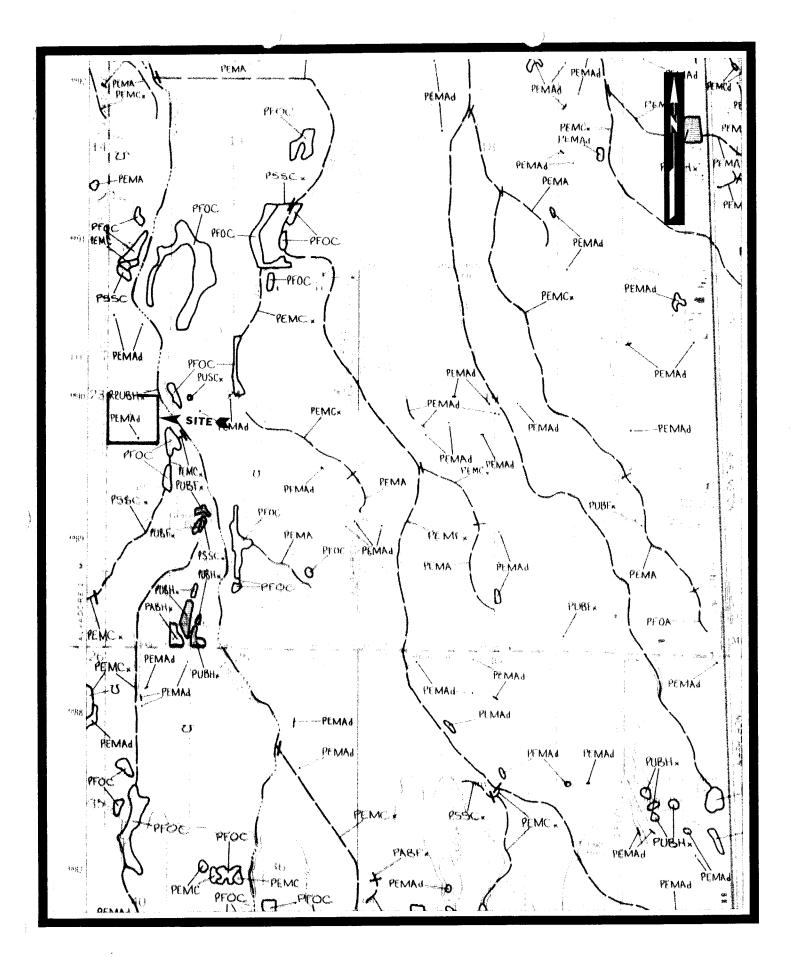
Jampolsky Property 1985 After Amazon Creek Channeled

> Bank Site In Red



AMAZON CREEK MITIGATION BANK LANE COUNTY, OREGON WETLAND MITIGATION SITE PLAN





Amazon Creek Wetland Mitigation Bank
NATIONAL WETLANDS INVENTORY MAP

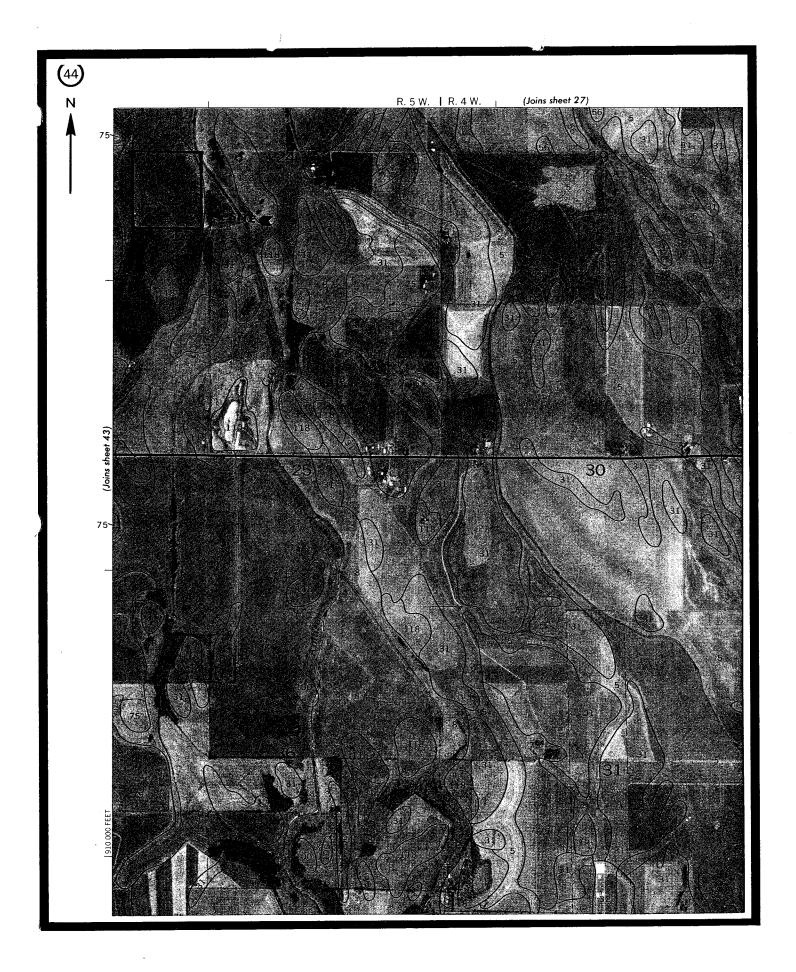
Soil Survey of Lane County Area, Oregon

United States Department of Agriculture Soil Conservation Service

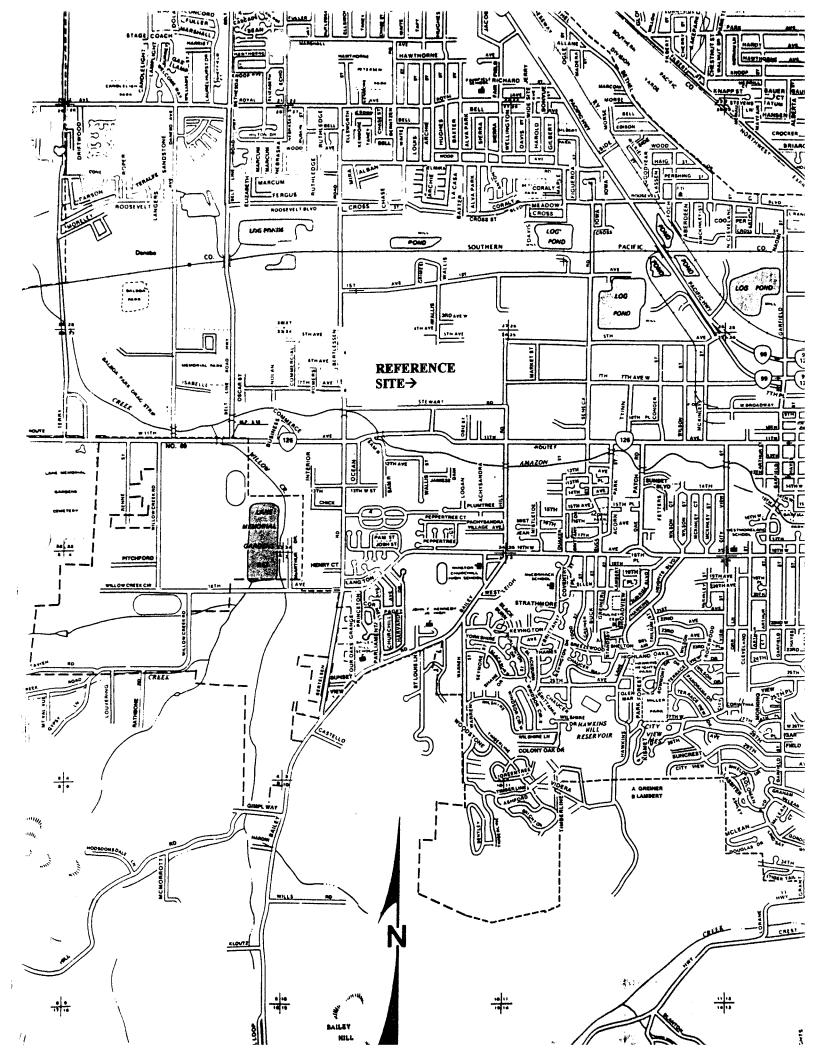
The four soils types identified by number within the Bank site on the following page are as follows:

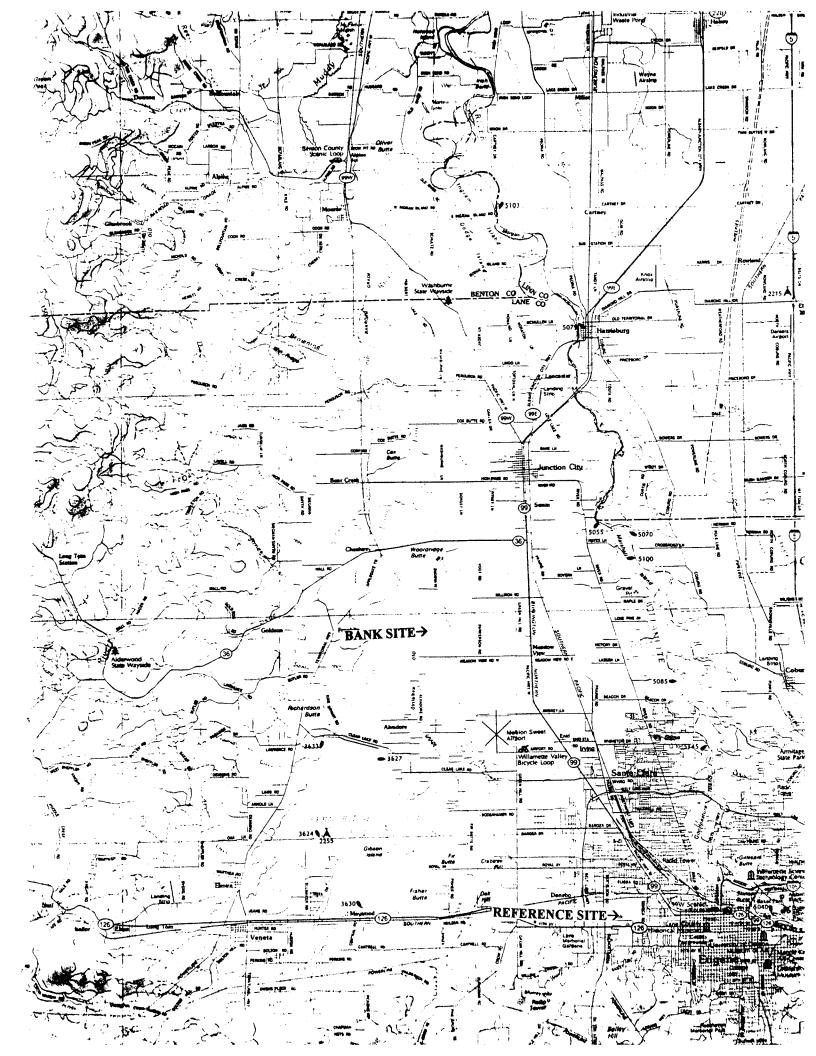
Bashaw Clay (8) Awbrig Silty Clay Loam (5) Coburg Silty Clay Loam (31) Salem Gravely Silt Loam (118)

For descriptions of the above soil types see Page 3, section 5.2.2 Soils



Amazon Creek Wetland Mitigation Bank SOILS MAP





ATTACHMENTS

ATTACHMENT 1

After Recording Return to:

Tami S.P. Carroll Watkinson Laird Rubenstein Lashway & Baldwin, P.C. P.O. Box 10567 Eugene, OR 97440 Until a change is requested all tax statements shall be sent to the following address:

NO CHANGE

WARRANTY DEED - STATUTORY FORM

David Jampolsky, Grantor, conveys and warrants to Amazon Creek Mitigation Bank, LLC, an Oregon limited liability company, Grantee, the following described real property, free of encumbrances except as specifically set forth herein:

The Northwest Quarter of the Southwest Quarter of Section 24, Township 16 South, Range 5 West, Willamette Meridian, all in Lane County, Oregon.

THIS INSTRUMENT WILL NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY APPROVED USES AND TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES AS DEFINED IN ORS 30.930.

The true consideration for this conveyance is property other than money.

The liability and obligations of Grantor to Grantee and Grantee's heirs and assigns under the warranties and covenants contained herein or provided by law shall be limited to the amount, nature and terms of any right of indemnification available to Grantor under any title insurance policy, and Grantor shall have no liability or obligation except to the extent that reimbursement for such liability or obligation is available to Grantor under any such title insurance policy. The limitations contained herein expressly do not relieve Grantor of any liability or obligations under this instrument, but merely define the scope, nature, and amount of such liability or obligations.

Dated this 18th day of July, 2001.

David Jampolsky

Division of Chief Deputy Clerk Lane County Deeds and Records

2001-044733

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\$31.00

07/18/2001 03:33:18 PM CASHIER 04

RPR-DEED Cnt=1 Stn=1 \$10.00 \$11.00 \$10.00 STATE OF OREGON)
) ss
County of Lane)

This instrument was acknowledged before me on July 18, 2001 by David lympotsky

OFFICIAL SEAL
TAMIS P CARROLL
NOTARY PUBLIC - OREGON
COMMISSION NO. 340407
MY COMMISSION EXPINES DECEMBER 18, 2004

Notary Public for Oregon My commission expires: 400 16-5-13 500 501 502 503 16-5-24

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ATTACHMENT 2

Assessment of Probable Functions of Wetlands at the Amazon Creek Ranch, Junction City, Oregon

by

Paul R. Adamus

Adamus Resource Assessment, Inc. 6028 NW Burgundy Dr., Corvallis, OR

Submitted **June 13, 2001**

Methods

I first visited the property, accompanied by Dave Jampolsky, for about 1 hour on June 4 for the purpose of determining the hydrogeomorphic subclass to which its wetlands belong. I subsequently visited the property on June 8 and June 10 for the purpose of assessing probable functions of these wetlands. For that goal, I used the Oregon Division of State Lands' *Guidebook for Hydrogeomorphic (HGM)-based Assessment of Oregon Wetland and Riparian Sites. I. Willamette Valley Ecoregion, Riverine Impounding and Slope/Flats Subclasses* (Adamus 2001). I used the "reference-based method" contained in that document for the function assessments.

I spent a total of 13 field hours examining several wetlands on the property. The following 4 wetland sites were assessed:

Jampolsky south unit, existing wetland (21 acres)
Jampolsky north unit, existing wetland (29.5 acres)
Jampolsky east unit, constructed wetland (exact acreage undetermined)
Jampolsky "chub pond" wetland (exact acreage undetermined)

A fifth wetland unit, just east of the chub pond unit, was not assessed at this time.

Boundaries of these assessment sites are highlighted in maps contained in this report. The boundaries were defined by last winter's high water line, or higher elevations if native wetland plant species predominated and hydric soils were present at higher elevations. In the case of the East unit, the design high water level was used. In general, the assessment site boundaries corresponded with locations of the confining levees. The wetlands were assessed as four separate sites (rather than combined into one) because of their different ages and management activities.

An important part of the function assessment involves collecting information on the presence or absence of common native and non-native plant species at each site. This was the most time-consuming portion of the assessment, inasmuch as all plant species that occupy more than 100 square feet of a site must be located. To accomplish this, I walked belt transects across each site, spaced about 30 feet apart, as I slowly scanned the adjoining areas for all species meeting this spatial criterion. I also examined soils at the far ends of each transect to verify redoximorphic conditions. I obtained information on land cover surrounding each site from recent aerial photographs covering several time periods and provided by the landowner.

Caveats

• This assessment does not, and was not intended to, provide a determination of the exact wetland *jurisdictional boundaries* of any of the sites.

- Information on attributes other than and addition to wetland *functions* is sometimes considered by agencies involved with mitigation banking. This report only addresses probable wetland functions.
- All limitations of the method used, as described in that method's guidebook (Guidebook for Hydrogeomorphic (HGM)-based Assessment of Oregon Wetland and Riparian Sites. I. Willamette Valley Ecoregion, Riverine Impounding and Slope/Flats Subclasses), are applicable to this assessment. These limitations include, for example, the recognition that not all plant species may be detectable during visits covering a single day, week, or year. They also include the understanding that the method does not predict site potential, i.e., the relative capacity of functions at any given future time.
- I did not measure acreage or elevations of the assessment sites, but relied on information provided by the landowner. Also, I relied on the landowner for information about the condition of the property (including the lack of wintertime inundation) at the time of purchase.
- Function scores for the south unit may not be typical for that unit because it has been dosed recently with herbicides for elimination of much of its ryegrass cover.
- Estimating the functions of non-wetland sites is not an established application of the assessment method I used, but at the landowner's request I applied the method to estimate function of the sites at the time of property purchase, when the sites most likely were technically non-wetland due to predominance of non-wetland plant species (ryegrass). Nonetheless I consider this an appropriate application because the sites are all on hydric soil and likely were wetlands prior to ryegrass cultivation.
- The information presented in this report does not comprise a complete inventory of plants in these wetlands, nor a survey of rare, threatened, or endangered species.
- Although the information provided in this report is suitable for addressing several
 immediate aspects of mitigation bank decisions, additional sampling of plant and/or
 animal communities, using more quantitative protocols, may be necessary in concert
 with periodic function assessments to monitor performance of these sites with
 sufficient precision over time.

Results

Classification

Although decades ago these sites would probably have been classified as Riverine (due to near-annual flooding from the Amazon channel), since the channel was channelized these sites have not received overbank flooding from the channel on a biennial basis. Although some depressions have been excavated within parts of some of the sites, the sites do not

receive any appreciable amount of overland runoff, so therefore are classified as Slope/Flats according to the HGM classification.

Probable Functions

The completed Assessment Summary Forms are attached, one per site, as are the working sheets of standard indicators used for assessing each function of each site. See the original DSL publication for the scoring models used to compute and standardize the scores shown on the data forms.

Change in Function

As the summary sheets indicate, all 4 of the wetland units result in an increased capacity for all or nearly all functions, as compared to conditions at the time the property was purchased.

Reference Wetland Recommendation

Data from over 109 wetlands collected during DSL's HGM project collectively establishes reference conditions for Willamette Valley wetlands, obviating the necessity of making a paired comparison of a restored/created wetland with an existing wetland. Nonetheless, if such an additional comparison is desired for more precise monitoring over time, one site that might be considered as an approximate analog is the Stewart Pond wetland in West Eugene. Like the Jampolsky wetlands, the Stewart Pond wetland was formerly part of a wooded floodplain in an agricultural setting, but now is a restored Slope/Flats wetland.

Assessment Summary Forms

Black font indicates the original form. **Red font** indicates data and assumptions pertinent to the noted wetland site.

Assessment Summary Form $(page \ 1 \ of \ 2)$

Site Name: Jampolsky south wetland County: Lane Assessed by: Paul Adamus Date: June 8, 2001

Mapped Soil Series: Bashaw

Trowr subclass(cs) . Stope 1	Function Capacity Score (standardized)						
	Present		When property purchased (score based on presumed				
Functions				l on presumed teristics)			
	score	acres	score	acres			
Water Storage & Delay	0.75	21	0	21			
Sediment Stabilization &	0.78	21	0.29	21			
Phosphorus Retention							
Nitrogen Removal	0.48	21	0.31	21			
Titlogen removar							
Thermoregulation	not		not				
Thermoregulation	applicable		applicable				
	to this		to this				
Duine and Due de etien	subclass 0.05	21	subclass 0.26	21			
Primary Production Resident Fish Habitat	not	21	not	41			
Support	applicable		applicable				
Support	to this		to this				
	subclass		subclass				
Anadromous Fish Habitat	not		not				
Support	applicable		applicable				
	to this subclass		to this subclass				
Invertebrate Habitat Support	0.33	21	0.15	21			
Amphibian & Turtle Habitat	0.35	21	0.26	21			
Amphibian & Turtic Habitat							
D. 1'. W.4 1'.1C.	0	21	0	21			
Breeding Waterbird Support	0	21	0	21			
		,					
Wintering & Migratory	0.83	21	0.38	21			
Waterbird Support							
Songbird Habitat Support	0.48	21	0.60	21			
Support of Characteristic	0.42	21	0.37	21			
Vegetation	(4)						
- 3		1					

Assessment Summary Form (page 2 of 2)

the Reference-based Method, stands the Judgmental Method (Appendix	ardized to "highest functioning" ardized to "least altered"?	ity from (check one): '?
Do you consider the site to historically ha		_X yesno
Is the site part of a larger contiguous wetland or r If yes, describe how it is connected (permanent/s	riparian area?Yes easonal channel, etc.):	X_No
Describe the basis for boundaries you used to defi	ine the "site": Defined by the	attached map, to include one unit
restoration project. This unit is bounded hydr		
transition to predominantly ryegrass monocult	ure.	
1. Make your best estimate of relative dominance	of the direct sources of water	inputs to this site during each of th
seasonal periods during an average year:		0.000
	April 1 – October 31 (dry)	November 1- March 30 (wet)
seasonal periods during an average year:	April 1 – October 31 (dry)	November 1- March 30 (wet)
seasonal periods during an average year: Channel flow	April 1 – October 31 (dry)	November 1- March 30 (wet)
Channel flow (including overbank flooding)	April 1 – October 31 (dry)	November 1- March 30 (wet)
Channel flow (including overbank flooding) Overland runoff (not in channels)	April 1 – October 31 (dry) 0%	November 1- March 30 (wet) 0%
Channel flow (including overbank flooding) Overland runoff (not in channels) Subsurface flow & groundwater	April 1 – October 31 (dry) 0% 0% 99%	November 1- March 30 (wet) 1% 59%
Channel flow (including overbank flooding) Overland runoff (not in channels) Subsurface flow & groundwater Direct precipitation	April 1 – October 31 (dry) 0% 0% 99% 1%	November 1- March 30 (wet) 1% 59% 40%
Channel flow (including overbank flooding) Overland runoff (not in channels) Subsurface flow & groundwater Direct precipitation Artificial water imports	April 1 – October 31 (dry) 0% 0% 99% 1%	November 1- March 30 (wet) 1% 59% 40%



Table 1. Plant species found at Jampolsky wetlands, June 2001

A= occupying >100 sq. ft.; B= present

Plant Species	Native?	South	North	East	Chub
L		unit	unit	unit	pond
Agrostis sp.	No	A	Α	Α	A
Alopecurus geniculatus	Yes	A	В	Α	A
Alopecurus pratensis	Yes	В		В	В
Anthemis cotula	No	A	Α	A	A
Avena fatua	No			Α	A
Beckmaniella syzigachne	Yes	В	В	В	В
Bidens frondosa	Yes	A	A	A	A
Briza minor	No	A	Α	A	A
Bromus inermis	No				В
c.f. Lythrum hyssopifolia	Yes		A	A	A
Calamagrostis sp.	Yes				В
Carex densa	Yes			В	
Castilleja tenuis	Yes				В
Cirsium arvense	No	A	Α	Α	A
Cirsium vulgare	No	В	В	В	В
Daucus carota	No	A	A	Α	A
Downingia elegans	Yes			Α	В
Echinochloa crus-galli	No		A	A	A
Eleocharis ovata	Yes			В	
Elytrigia repens	No				A
Epilobium ciliata	Yes	A	A	A	A
Festuca arundinacea	No			A	В
Glyceria occidentalis	Yes	A	A	Α	Α
Gnaphalium palustre	Yes	A	A	A	A
Grindelia integrifolia	Yes	В	A	Α	A
Hypochaeris radicata	No	В	В	В	В
Juncus bufonius	Yes	A	В	A	A
Lolium multiflorum	No	A	A	A	A
Lolium perenne	No			A	A
Ludwigia palustris	Yes	В	В	В	A
Medicago lupulina	No			A	A
Navarretia intertexta	No	1	В	В	A
Parentucellia viscosa	No		В		
Phalaris arundinacea	No		A		A
Plagiobothrys figuratus	Yes	В	В	В	В
Plantago lanceolata	No		В		
Plantago major	No		В	- 1	
Poa sp.	Yes	В	В	В	В
Poaceae sp.	No	+		A	A
Polygonum aviculare	No	1	В		
Polygonum persicaria/	No	1	A	A	A
hydropiperoides	-,0				
Ranunculus	Yes	В	1	1	
orthorhynchus		-			
Ranunculus sceleratus	Yes				
Rorippa curvisiliqua	No	A	A	A	A

Plant Species	Native?	South unit	North unit	East unit	Chub pond
Rumex crispus	No	A	A	Α	A
Scirpus microcarpus	Yes				В
Scirpus tabernaemontani	Yes	A	A		Α
Sonchus asper	No	A	A.	Α	Α
unknown forb 1	No		Α	Α	Α
Viccia cracca	No			Α	Α

Supporting Data Sheets

Black font indicates the original form. **Red font** indicates data and assumptions pertinent to the noted wetland site.

Jampolsky South wetland unit

Function Capacity: Water Storage and Delay

#	Reference-based Indicator	Raw	Scale	Scale	Scaled
		Datum	for RI	for SF	Datum
A	Percent of site that is inundated only seasonally	100	<10 = .1	none = 0	1.0
			10-30 = .3	1-10 = .1	
			30-60 = .5	10-25 = .6	
			60-90 = .7	25-50 = .8	
			> 90 = 1.0	> 50 = 1.0	
В	Vertical increase in surface water level (ft) in most	1.1	<2 =.2	0 = 0	0.75
	of the seasonal zone		2-3 =.4	.14 = .25	
	V.		4-6 = .6	.5- 1.0 = .5	
			7-10=.8	1 - 2 = .75	
			>10=1.0	>2 = 1.0	

Score = 0.75 Standardized = 0.75

Function Capacity: Sediment Stabilization and Phosphorus Retention

#	Reference-based Indicator	Raw Datum	Scale for RI	Scale for SF	Scaled Datum
A	Score from Water Storage & Delay assessment	0.75			0.75
В	Maximum annual extent (%) of hummocks Microtopography is generally flat except for island. There are no hummocks.	0	N/A	none = 0 1-10 = .6 10-90 = .8 >90 = 1.0	0
С	Percent & distribution of pools at biennial high water Note: If site is >1 acre, select the condition that predominates in 1-acre subunits of the site	K	A = 0 B = .1 C = .2 D = .3 E = .4 F = .5 K = .6 H = .7 I = .8 J = .9 G = 1.0	A = 0 B = .6 C = .65 D = .7 E,F = .75 K = .8 H = .85 I = .9 J = .95 G = 1.0	0.8
D	Predominant soil texture: GC= gravel or cobble SA=sand, sandy loam, or loamy sand L= loam, silty loam, gravelly loam C= clay, sandy clay, silty clay, clay loam, silty clay loam O= organic particles<1mm	С	GC =.1 SA =.2 L =.8 C/O = 1.0	GC =.1 SA =.2 L =.8 C/O = 1.0	1.0

#	Reference-based Indicator	Raw	Scale	Scale	Scaled
		Datum	for RI	for SF	Datum
Е	Percent of site currently affected by soil compaction (score): 6 = recent, at >90% of site 5 = recent, at 10-90% of site	# 4	5/6 = .1 4 = .2 3 = .4 2 = .6	5/6 = .1	0,2
	4 = recent, at 1-10% of site 3 = >5 years ago, >90% of site 2 = >5 years ago, 10-90% of site 1 = >5 years ago, 1-10% of site 0 = none		1 =.8 0 = 1.0	4 = .2 3 = .4 2 = .6 1 = .8 0 = 1.0	
F	Percent of site affected by soil leveling	100	100 = .1 10-99 = .3 1-10 = .6 0 = 1.0	100 = .1 10-99 = .3 1-10 = .6 0 = 1.0	0.1
G	Percent of site affected by soil mixing, including plowing (score): 6 = recent, at >90% of site 5 = recent, at 10-90% of site 4 = recent, at 1-10% of site 3 = >5 years ago, >90% of site 2 = >5 years ago, 10-90% of site 1 = >5 years ago, 1-10% of site 0 = none	# 6	5/6 = .1 4 = .2 3 = .4 2 = .6 1 = .8 0 = 1.0	5/6 = .1 4 = .2 3 = .4 2 = .6 1 = .8 0 = 1.0	0.1
Н	Percent of seasonal zone that is <i>bare</i> during most of the dry season. due to application of herbicide for ryegrass elimination this year	~ 85	>80 = 0 60-80 = .2 40-60 = .4 20-40 = .6 1-20 = .8 0 = 1.0	>80 = 0 60-80 = .2 40-60 = .4 20-40 = .6 1-20 = .8 0 = 1.0	0

Score = 2.9 Standardized = 0.78

Function Capacity: Nitrogen Removal

#	Reference-based Indicator	Raw Datum	Scale for RI	Scale for SF	Scaled Datum
A	Percent of site that is inundated only seasonally	90 +	none = 0 1-10 = .1 10-30 = .3 30-60 = .5 60-90 = .7 > 90 = 1.0	none = 0 1-10 = .1 10-25 = .6 25-50 = .8 > 50 = 1.0	1.0
В	Difference between biennial high and low predominating water levels: 0) = no change 1) = difference of one class 2) = difference of 2 classes 3) = difference of 3 classes 4) = difference of 4 classes goes from ~ 20 inches to 0 inches	# 2	0) = 0 1) = .3 2) = .5 3) = .8 4) = 1.0	0) = 0 1) = .3 2) = .5 3) = .8 4) = 1.0	0.5

#	Reference-based Indicator	Raw Datum	Scale for RI	Scale for SF	Scaled Datum
С	Percent of site currently affected by soil compaction (score): 6 = recent, at >90% of site 5 = recent, at 10-90% of site 4 = recent, at 1-10% of site 3 = >5 years ago, >90% of site 2 = >5 years ago, 10-90% of site 1 = >5 years ago, 1-10% of site 0 = none mild	#4	5/6 = .1 4 = .2 3 = .4 2 = .6 1 = .8 0 = 1.0	5/6 = .1 4 = .2 3 = .4 2 = .6 1 = .8 0 = 1.0	0.2
D	Percent of site that was constructed from upland: 6 = recent, >90% of site 5 = recent, 10-90% of site 4 = recent, 1-10% of site 3 = >5 years ago, >90% of site 2 = >5 years ago, 10-90% of site 1 = >5 years ago, 1-10% of site 0 = none "upland" = non-hydric soils, but this was constructed on hydric soils	0	6 = 0 5 = .1 4 = .2 3 = .3 2 = .4 1 = .5 none = 1.0	6 = 0 5 = .1 4 = .2 3 = .3 2 = .4 1 = .5 none = 1.0	1.0
Е	Number of kinds of dead wood	0	none = 0 1 =.1 2/3 =.2 4/5 =.3 6/7 =.5 8/9 =.7 10/11 =.9 12 = 1.0	none = 0 1 =.1 2/3 =.2 4/5 =.3 6/7 =.6 8/9 =.8 10/11 =.9 12 = 1.0	0
F	Diameter of largest trees (inches)	none	none = 0 1-12 = .1 13-19 = .25 20-27 = .5 28-44 = .75 45-52 = .9 >52 = 1.0	none = 0 1-5 = .1 6-9 = .25 10-17 = .5 18-25 = .75 26-35 = .9 >35 = 1.0	0
G	Maximum annual extent (%) of hummocks Microtopography is generally flat except for islands. There are no hummocks.	0	N/A	none = 0 1-10 = .6 10-90 = .8 >90 = 1.0	0
Н	Percent of site affected by soil leveling	100	100 =.1 10-99 =.3 1-10 =.6 0 = 1.0	100 = .1 10-99 = .3 1-10 = .6 0 = 1.0	0.1

#	Reference-based Indicator	Raw Datum	Scale for RI	Scale for SF	Scaled Datum
Ι	Percent & distribution of pools at biennial low water Note: If site is >1 acre, select the condition that predominates in 1-acre subunits of the site No permanent water	A	A = 0 B,C = .3 D = .4 E,F = .5 G = .6 H = .7 I = .8 J = .9	A = 0 B,C = .3 D = .4 E,F = .5 G = .6 H = .7 I = .8 J = .9	0
J	Burned or harvested	no	K = 1.0	K = 1.0 no = 0 yes = 1.0	0
K	Land cover in the vicinity of the site in 1800's: 1= wooded; 2= nonwooded	wooded			1

Standardized = 0.48 Score = 2.00

Function Capacity: Thermoregulation
NOT APPLICABLE TO THIS HGM SUBCLASS

Function Capacity: Primary Production

#	Reference-based Indicator	Raw	Scale	Scale	Scaled
		Datum	for RI	for SF	Datum
A	Percent of site currently affected by soil				
	compaction (score):	#4			0.2
	6 = recent, at >90% of site				
	5 = recent, at 10-90% of site		5/6 = .1	5/6 = .1	
	4 = recent, at 1-10% of site		4 =.2	4 =.2	
	3 = >5 years ago, $>90%$ of site		3 =.4	3 =.4	
	2 = >5 years ago, 10-90% of site		2 =.6	2 = .6	
	1 = >5 years ago, 1-10% of site		1 =.8	1 =.8	
	0 = none mild		0 = 1.0	0 = 1.0	
В	Number & distribution of vegetation forms	A	A = 0	A = 0	0
	10000		B2 = .60	B2 = .60	
	Only one vegetation form occupies more		C2 = .65	C2 = .65	
	than 0.5 acre herbaceous		B1 =.70	B1 = .70	
			C1,D = .75	C1,D = .75	
			E2 = .80	E2 = .80	
			F2 =.85	F2 = .85	
			E1 =.90	E1 = .90	
			F1 =.95	F1 = .95	
			G = 1.0	G = 1.0	
С	Maximum annual extent (%) of hummocks	0	N/A	none = 0	0
	9 - 1000			1-10 =.6	
	Microtopography is generally flat except			10-90 = .8	
	for islands. There are no hummocks.			>90 = 1.0	
D	Percent of site affected by soil leveling	100	100 = .1	100 = .1	0.1
			10-99 = .3	10-99 = .3	
			1-10 =.6	1-10 =.6	
			0 = 1.0	0 = 1.0	

#	Reference-based Indicator	Raw	Scale	Scale	Scaled
		Datum	for RI	for SF	Datum
Е	Percent & distribution of pools at biennial low	A	A = 0	A = 0	0
	water		B = .1	B =.6	
			C =.2	C = .65	
			D =.3	D=.7	
			E = .4	E,F = .75	
			F =.5	K = .8	
			K =.6	H = .85	
			H = .7	I =.9	
			I =.8	J = .95	
			J = .9	G = 1.0	
	¥		G = 1.0		
F	Percent of land cover in contributing	0	<10 = 0	<10 = 0	0
	watershed & within 200 ft that is not cropland,		10-20 = .1	10-20 = .1	
	lawns, pavement, or buildings		20-40 = .3	20-40 = .3	
	20. 24		40-90 = .5	40-90 = .5	
	all ryegrass within 200 ft		90-100 = 1.0	90-100 = 1.0	
G	Percent of seasonal zone that is bare during	~ 85	>80 = 0	>80 = 0	0
	most of the dry season		60-80 = .2	60-80 = .2	
			40-60 = .4	40-60 = .4	
	due to application of herbicide for ryegrass		20-40 = .6	20-40 = .6	
	elimination this year		1-20 = .8	1-20 = .8	
			0 = 1.0	0 = 1.0	
Н	Land cover in the vicinity of the site in 1800's:	wooded			1
	1= wooded; 2= nonwooded				

Score = 0.25 Standardized = 0.05

Function Capacity: Resident Fish Habitat Support NOT APPLICABLE TO THIS HGM SUBCLASS

Function Capacity: Anadromous Fish Habitat Support NOT APPLICABLE TO THIS HGM SUBCLASS

Function Capacity: Invertebrate Habitat Support

#	Reference-based Indicator	Raw	Scale	Scale	Scaled
		Datum	for RI	for SF	Datum
A	Percent of site that is inundated	0	0 = 0	0 = 0	0
	permanently and contains herbs		1-10 = .9	1-10 = .9	
	•		>10 = 1.0	>10 = 1.0	\$400.00°C 00-12-4
В	Percent of site that is inundated only	90 +	none = 0	none = 0	1.0
	seasonally		1-10 =.1	1-10 = .1	
	-		10-30 = .3	10-25 = .6	
			30-60 = .5	25-50 = .8	
			60-90 = .7	> 50 = 1.0	
			> 90 = 1.0		

#	Reference-based Indicator	Raw	Scale	Scale	Scaled
		Datum	for RI	for SF	Datum
С	Type of connection to associated channel: SSC/SSD = seasonal connection to/from onsite seasonal pools PPC/PPD = permanent connection to/from onsite permanent pools	none	none = 0 SSC/SSD = .4 PPC/PPD = .8 SPC/SPD = 1.0	N/A	N/A
	SPC/SPD = seasonal connection				
	to/from onsite permanent pools	0		0 1	0.4
D	Predominant depth category during biennial low water	0	0 = .1 1-2" = .4 2-24" = 1.0 >24" = .8	0 =.1 1-2" = 1.0 2-24" =.8 >24" =.2	0.1
Е	Percent & distribution of pools at biennial high water Note: If site is >1 acre, select the condition that predominates in 1-acre subunits of the site	K	A = 0 B = .6 C = .65 D = .7 E,F = .75 K = .8 H = .85 I = .9 J = .95 G = 1.0	A = 0 B = .6 C = .65 D = .7 E,F = .75 K = .8 H = .85 I = .9 J = .95 G = 1.0	0.8
F	Maximum annual extent (%) of hummocks Microtopography is generally flat except for islands. There are no hummocks.	0	N/A	none = 0 1-10 = .6 10-90 = .8 >90 = 1.0	0
G	Percent of site affected by soil leveling	100	100 =.1 10-99 =.3 1-10 =.6 0 = 1.0	100 =.1 10-99 =.3 1-10 =.6 0 = 1.0	0.2
Н	Percent of site currently affected by soil compaction (score): 6 = recent, at >90% of site 5 = recent, at 10-90% of site 4 = recent, at 1-10% of site 3 = >5 years ago, >90% of site 2 = >5 years ago, 10-90% of site 1 = >5 years ago, 1-10% of site 0 = none mild	#4	5/6 = .1 4 = .2 3 = .4 2 = .6 1 = .8 0 = 1.0	5/6 = .1 4 = .2 3 = .4 2 = .6 1 = .8 0 = 1.0	0.2
I	Mapped soil series is hydric	yes	1= yes	1= yes	1
	(not simply a hydric inclusion)		0= no	0= no	

#	Reference-based Indicator	Raw	Scale	Scale	Scaled
		Datum	for RI	for SF	Datum
J	Percent of site that was constructed from upland:	0			1.0
	6 = recent, >90% of site		6 = 0	6 = 0	
	5 = recent, 10-90% of site		5 = .1	5 = .1	
	4 = recent, 1-10% of site		4 = .2	4 = .2	
	3 = >5 years ago, $>90%$ of site		3 = .3	3 = .3	
	2 = >5 years ago, 10-90% of site		2 = .4	2 = .4	
	1 = >5 years ago, 1-10% of site		1 = .5	1 = .5	
	0 = none		none = 1.0	none = 1.0	
	"upland" = non-hydric soils, but				
	this was constructed on hydric soils				
K	Number & distribution of vegetation	A	A = 0	A = 0	0
	forms		B2 = .60	B2 =.60	
			C2 = .65	C2 = .65	
			B1 = .70	B1 =.70	
	Only one vegetation form occupies		C1,D = .75	C1,D = .75	
	more than 0.5 acre - herbaceous		E2 = .80	E2 = .80	
			F2 = .85	F2 =.85	
			E1 = .90	E1 = .90	
			F1 = .95	F1 =.95	
			G = 1.0	G = 1.0	
L	Percent of surrounding land cover	25	<10 = 0	<10 = 0	0.3
	within 200 ft that is not cropland,		10-20 = .1	10-20 = .1	
	lawn, buildings, or pavement		20-40 = .3	20-40 = .3	
			40-90 = .5	40-80 = .5	
	25% is comprised of the adjoining		90-100 = 1.0	80-90 = .7	
	wetland unit			90-100 = 1.0	
M	Percent of land cover in contributing	25	<10 = 0	<10 = 0	0.3
	watershed & within 200 ft that is not		10-20 = .1	10-20 = .1	
	cropland, lawns, pavement, or		20-40 = .3	20-40 = .3	
	buildings		40-90 = .5	40-90 = .5	
	0.00		90-99 =.9	90-99 =.9	
			100 = 1.0	100 = 1.0	

Score = 1.37 Standardized = 0.33

Function Capacity: Amphibian & Turtle Habitat

#	Reference-based Indicator	Raw Datum	Scale for RI	Scale for SF	Scaled Datum
A	Percent & distribution of pools during biennial high water Note: If site is >1 acre, select the condition that predominates in 1-acre subunits of the site	K	A = 0 B = .1 C = .2 D = .3 E = .4 F = .5 G = .6 H = .7 I = .8 J = .9 K = 1.0	A = 0 B = .6 C = .65 D = .7 E,F = .75 G = .8 H = .85 I = .9 J = .95 K = 1.0	1.0

#	Reference-based Indicator	Raw Datum	Scale for RI	Scale for SF	Scaled Datum
В	Maximum annual extent (%) of hummocks Microtopography is generally flat except for islands. There are no hummocks.	0	N/A	none = 0 1-10 = .6 10-90 = .8 >90 = 1.0	0
С	Percent of site affected by soil leveling	100	100 = .1 10-99 = .3 1-10 = .6 0 = 1.0	100 = .1 10-99 = .3 1-10 = .6 0 = 1.0	0.1
D	Mapped soil series is hydric (not simply a hydric inclusion)	yes	$ \begin{array}{r} \text{no} = 0 \\ \text{yes} = 1.0 \end{array} $	no = 0 yes = 1.0	0
Е	Difference between biennial high and low <i>predominating</i> water levels 0) = no change 1) = difference of one class 2) = difference of 2 classes 3) = difference of 3 classes 4) = difference of 4 classes	#2	4) = 0 3) = .3 2) = .5 1) = .8 0) = 1.0	4) = 0 3) = .1 2) = .3 1) = .9 0) = 1.0	0.3
F	Percent of site currently affected by soil compaction (score): 6 = recent, at >90% of site 5 = recent, at 10-90% of site 4 = recent, at 1-10% of site 3 = >5 years ago, >90% of site 2 = >5 years ago, 10-90% of site 1 = >5 years ago, 1-10% of site 0 = none mild	#4	5/6 = .1 4 = .2 3 = .4 2 = .6 1 = .8 0 = 1.0	5/6 = .1 4 = .2 3 = .4 2 = .6 1 = .8 0 = 1.0	0.2
G	Presence of logs &/or boulders extending above the surface of permanent water no permanent water	0	absent = 0 present = 1.0	absent = 0 present = 1.0	0
Н	Number of types of deadwood	0	0 = 0 1-2 = .1 3-5 = .25 6-8 = .5 9-11 = .75 11-12 = 1.0	0 = 0 1 = .1 2 = .25 3-4 = .5 5-7 = .75 >7 = 1.0	0
I	Diameter (inches) of the largest trees	none	none = 0 1-12 = .1 13-19 = .25 20-27 = .5 28-44 = .75 45-52 = .9 >52 = 1.0	none = 0 1-5 = .1 6-9 = .25 10-17 = .5 18-25 = .75 26-35 = .9 >35 = 1.0	0

#	Reference-based Indicator	Raw	Scale	Scale	Scaled
J	Number & distribution of vacatation	Datum	$\begin{array}{ c c c } \hline \textbf{for RI} \\ A = 0 \end{array}$	for SF A = 0	Datum 0
J	Number & distribution of vegetation forms Only one vegetation form occupies more than 0.5 acre herbaceous	A	A = 0 B2 = .60 C2 = .65 B1 = .70 C1,D = .75 E2 = .80 F2 = .85 E1 = .90 F1 = .95 G = 1.0	A = 0 B2 = .60 C2 = .65 B1 = .70 C1,D = .75 E2 = .80 F2 = .85 E1 = .90 F1 = .95 G = 1.0	0
K	Percent of site that was constructed from upland: 6 = recent, >90% of site 5 = recent, 10-90% of site 4 = recent, 1-10% of site 3 = >5 years ago, >90% of site 2 = >5 years ago, 10-90% of site 1 = >5 years ago, 1-10% of site 0 = none "upland" = non-hydric soils, but this was constructed on hydric soils	0	6 = 0 5 = .1 4 = .2 3 = .3 2 = .4 1 = .5 none = 1.0	6 = 0 5 = .1 4 = .2 3 = .3 2 = .4 1 = .5 none = 1.0	1.0
L	Herbs as a percent of the parts of the site that are inundated only seasonally low % cover due to application of herbicide for ryegrass elimination this year	15	0 = 0 1-20 = .1 20-40 = .6 40-60 = .75 60-80 = .85 80-100 = 1.0	0 = 0 1-30 =.1 30-50 =.6 50-70 =.75 70-100 = 1.0	0.1
M	Percent of permanent zone that is open water (i.e., lacking herbs) permanent water zone is lacking	0	100 = .1 80-99 = .8 60-80 = 1.0 40-60 = .8 20-40 = .4 0-20 = .2	100 = .1 80-99 = .3 60-80 = .6 40-60 = .8 20-40 = 1.0 0-20 = .8	0
N	Distance (ft) to nearest busy road	2460	<100 = 0 100-300 = .3 300-600 = .5 600-1200 = .7 1200-2400 = .8 2400-4800 = .9 >4800 = 1.0	<100 = 0 100-300 = .3 300-600 = .5 600-1200 = .7 1200-2400 = .8 2400-4800 = .9 >4800 = 1.0	0.9
0	Percent of surrounding land cover within 200 ft that is not cropland, lawn, buildings, or pavement 25% is comprised of the adjoining wetland unit	25	<10 = 0 $10-20 = .1$ $20-40 = .3$ $40-90 = .5$ $90-100 = 1.0$	<10 = 0 $10-20 = .1$ $20-40 = .3$ $40-80 = .5$ $80-90 = .7$ $90-100 = 1.0$	0.3

#	Reference-based Indicator	Raw	Scale	Scale	Scaled
		Datum	for RI	for SF	Datum
P	Evenness (ratio) of wooded and	0	<.1 =.1	<.1 =.1	0
	natural grass cover classes within		0.1 - 0.8 = .6	0.1 - 0.8 = .6	
	200 ft of the site		0.8 - 1.2 = 1.0	0.8 - 1.2 = 1.0	
			1.2 - 2.0 = .6	1.2 - 2.0 = .6	
	neither are present		>2.0 =.1	>2.0 =.1	
Q	Percent of land cover in	0	<10 = 0	N/A	0
	contributing watershed and within		10-20 = .1		
	200 ft that is not cropland, lawn,		20-40 = .3		
	buildings, or pavement		40-90 = .5		
			90-99 = .9		
			100 = 1.0		
R	Land cover in the vicinity of the site	wooded			1
	in 1800's:				
	1 = wooded; 2= nonwooded				

Score = 1.97 Standardized = 0.35

Function Capacity: Breeding Waterbird Support

#	Reference-based Indicator	Raw	Scale	Scale	Scaled
		Datum	for RI	for SF	Datum
A	Percent & distribution of pools during	A	A = 0	A = 0	0
	biennial low water		B = .1	B =.6	
			C =.2	C = .65	
	Note: If site is >1 acre, select the		D = .3	D =.7	
	condition that predominates in 1-acre		E = .4	E,F = .75	
	subunits of the site		F = .5	K = .8	
			K = .6	H = .85	
			H = .7	I =.9	
			I =.8	J =.95	
			J =.9	G = 1.0	
			G = 1.0		
В	Percent of site occupied by the most	100	100 = 0	100 = 0	0
	extensive depth category during		80-100 = .1	80-100 = .1	
	biennial low water.		50-80 = .4	50-80 = .4	
			30-50 = .8	30-50 = .8	
			<30 = 1.0	<30 = 1.0	
C	Number of depth categories during	3	1 = 0	1 = 0	0.6
	biennial high water. Categories are:		2 = .3	2 = .3	
	_x 1 - 2 inches		3 = .6	3 = .6	
	_x 2 - 24 inches		4 = 1.0	4 = 1.0	
	$\frac{x}{> 6 \text{ ft}}$				
D	Predominant depth category during	0	0 = 0	0 = 0	0
	biennial low water		1-2" =.6	1-2" =.6	
			2-24" = 1.0	2-24" =.8	
			2-6 ft = .8	2-6 ft =1.0	
			>6 ft =.6	>6 ft =.8	

#	Reference-based Indicator	Raw	Scale	Scale	Scaled
		Datum	for RI	for SF	Datum
Е	Difference between biennial high and	2	4) = 0	4) = 0	0.3
	low predominating water levels		3) =.3	3) =.1	
	0) = no change		2) =.5	2) =.3	
	1) = difference of one class		1) =.8	1) =.9	
	2) = difference of 2 classes		0) = 1.0	0) = 1.0	
	3) = difference of 3 classes				
	4) = difference of 4 classes				
F	Herbs as a % of the parts of the site	0	0 = 0	0 = 0	0
	that are inundated permanently		1-10 =.4	1-10 =.4	
			10-30 = .8	10-30 =.8	
			30-60 = 1.0	30-60 = 1.0	
			60-90 = .9	60-90 = .9	
			>90 =.4	>90 =.6	
G	Distance (ft) to nearest busy road	2460	<100 = 0	<100 = 0	0.9
			100-300 =.3	100-300 =.3	
			300-600 = .5	300-600 = .5	
			600-1200 =.7	600-1200 =.7	
			1200-2400 = .8	1200-2400 = .8	
			2400-4800 = .9	2400-4800 = .9	
77		200	>4800 = 1.0	>4800 = 1.0	
Н	Frequency (score) of humans visiting	300	100-200 = 0	100-200 = 0	0.3
	on foot		200-300 = .3	200-300 = .3	
	assuming 100% is visited for 23-83		300-400 = .7	300-400 = .7	
T	$days/yr = 3 \times 100 - 300$	250/	400-500 = 1.0	400-500 =1.0	4.0
I	Percent of surrounding land cover within 200 ft that is water or wetland	~ 25%	none = 0	none = 0	1.0
	The state of the s		1 - 10 = .4 10-20 = .8	1 - 10 = .4 10-20 = .8	
	(not including this site)		>20 = 1.0	10-208 >20 = 1.0	
J	Paraant of aurrounding land acres that	~ 10.3	none = 0	none = 0	0.8
J	Percent of surrounding land cover that is water or wetland, averaged among 3	~ 10.3	1 - 10 = .4	1 - 10 = .4	0.0
	zones (200, 1000, and 5280 ft)		1 - 10 = .4 10-20 = .8	1 - 10 = .4 10-20 = .8	
	25 + 5 + $1/3$ = $31/3$ = 10.3		>20 = 1.0	10-208 >20 = 1.0	
K	Percent of surrounding land cover that	4	<10 = 0	<10 = 0	0
IV.	is not cropland, lawn, buildings, or	*	10-20 = .1	10-20 = .1	U
	pavement (average of 200 and 1000 ft		10-20 = .1 20-40 = .3	10-20 = .1 20-40 = .3	
	zones)		40-80 = .5	40-80 = .5	
	some wetland:		80-90 = .7	80-90 = .7	
	5 + 3/2 = 8/2 = 4		90-100 = 1.0	90-100 = 1.0	
	3+3/2-6/2-4		70 100 1.0	70-100 1.0	

Score = 0 Standardized = 0

This site currently does not meet minimum requirement of containing >0.5 acre of surface water on July 1 of most years, so scored as "0."

Function Capacity: Wintering & Migrating Waterbird Support

#	Reference-based Indicator	Raw Datum	Scale for RI	Scale for SF	Scaled Datum
A	Seasonal zone as percent of site in sites that also contain permanent surface water	0	none = 0 1-20 = .5 20-40 = .7 40-60 = .8 60-80 = .9 >80 = 1.0	none = 0 1-20 = .5 20-40 = .7 40-60 = .8 60-80 = .9 >80 = 1.0	0

#	Reference-based Indicator	Raw	Scale	Scale	Scaled
		Datum	for RI	for SF	Datum
G	Diameter (inches) of largest trees	0	none = 0	none = 0	0
			1-12 = .1	1-5 = .1	
			13-19 = .25	6-9 = .25	
			20-27 = .5	10-17 = .5	
			28-44 = .75	18-25 = .75	
			45-52 = .9	26-35 = .9	
**	N. 1 0 11 - 11 - 12 - 12 - 12		>52 = 1.0	>35 = 1.0	0
Н	Number & distribution of vegetation	A	A = 0	A = 0	0
	forms		B2 = .60	B2 = .60 C2 = .65	
			C2 = .65	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	0-1		B1 = .70	B1 = .70	
	Only one vegetation form occupies		C1,D = .75 E2 = .80	C1,D = .75 E2 = .80	
	more than 0.5 acre - herbaceous		F2 = .85	F2 = .85	
			E1 = .90	E1 = .90	
			F1 = .95	F1 = .95	
			G = 1.0	G = 1.0	
I	Percent of surrounding land cover	0	0 = 0	0 = 0	0
1	within 200 ft that is woodland	U	1-10 = 1	1-10 = .1	U
	within 200 it that is woodland		10-20 = .2	10-20 = .2	
			20-40 = .4	20-40 = .4	
			40-60 = .6	40-60 = .6	
			60-80 = .8	60-80 = .8	
			>80 = 1.0	>80 = 1.0	
J	Percent of surrounding land cover that	0.6	<10 =.1	<10 =.1	0.1
]	is wooded (average of 200, 1000, &	0.0	10-20 = .2	10-20 = .2	0.1
	5280 ft zones)		20-40 = .4	20-40 = .4	
	0 + 1 + 1 = 2/3 = 0.6		40-60 = .6	40-60 = .6	
	0 1 1 1 2/3 - 0.0		60-80 = .8	60-80 = .8	
	"		>80 = 1.0	>80 = 1.0	
K	Percent of site affected by soil mixing	# 6	1.0	1.0	0.1
1,	(score):	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
	6 = recent, at > 90% of site				
	5 = recent, at 10-90% of site		5/6 = .1	5/6 = .1	
	4 = recent, at 1-10% of site		4 = .2	4 = .2	
	3 = >5 years ago, $>90%$ of site		3 = 4	3 = .4	
	2 = >5 years ago, 10-90% of site		2 = .6	2 = .6	
	1 = >5 years ago, 1-10% of site		1 =.8	1 =.8	
	0 = none		0 = 1.0	0 = 1.0	
L	Percent of site currently affected by	0	>90 = 0	>90 = 0	0
	mowing or extreme grazing		10-90 =.2	10-90 = .2	
			1-10 =.4	1-10 =.4	
			none = 1.0	none = 1.0	
M	Maximum annual extent (%) of	0	N/A	none = 0	0
10000000	hummocks		ansarin didelitri	1-10 =.6	
	Microtopography is generally flat			10-90 = .8	
İ	except for islands. There are no			>90 = 1.0	
	hummocks.				
L	ARMARIAN UCANO	L	L		L

#			Scale	Scale	Scaled
		Datum	for RI	for SF	Datum
N	Percent of surrounding land cover	100	<10 =.1	<10 =.1	1.0
	within 200 ft that is grassland or		10-20 =.2	10-20 = .2	
	water/wetland		20-40 = .4	20-40 = .4	
			40-60 = .6	40-60 = .6	
			60-80 = .8	60-80 = .8	
			>80 = 1.0	>80 = 1.0	
0	Percent of surrounding land cover that	99	<10 =.1	<10 =.1	1.0
	is grassland or water/wetland (average		10-20 = .2	10-20 = .2	
	of 200 & 1000 ft zones)		20-40 = .4	20-40 = .4	
			40-60 = .6	40-60 = .6	
	only a small portion which is		60-80 = .8	60-80 = .8	
	woodland is not		>80 = 1.0	>80 = 1.0	
P	Presence of permanent surface water	0	absent = 0	absent = 0	0
			present = 1.0	present = 1.0	
Q	Frequency (score) of humans visiting	300	100-200 = 0	100-200 = 0	0.3
	on foot		200-300 = .3	200-300 = .3	
	assuming 100% is visited for 23-83		300-400 = .7	300-400 = .7	
	$days/yr = 3 \times 100 = 300$		400-500 = 1.0	400-500 =1.0	
R	Distance to nearest busy road	2460'	<100 = 0	<100 = 0	0.9
			100-300 = .3	100-300 = .3	
			300-600 = .5	300-600 = .5	
			600-1200 = .7	600-1200 = .7	
			1200-2400 = .8	1200-2400 = .8	
			2400-4800 = .9	2400-4800 = .9	
			>4800 = 1.0	>4800 = 1.0	
S	Land cover in the vicinity of the site in	wooded			1
	1800's:				
	1= wooded; 2= nonwooded				

Score = 1.80 Standardized = 0.48

Function Capacity: Support of Characteristic Vegetation

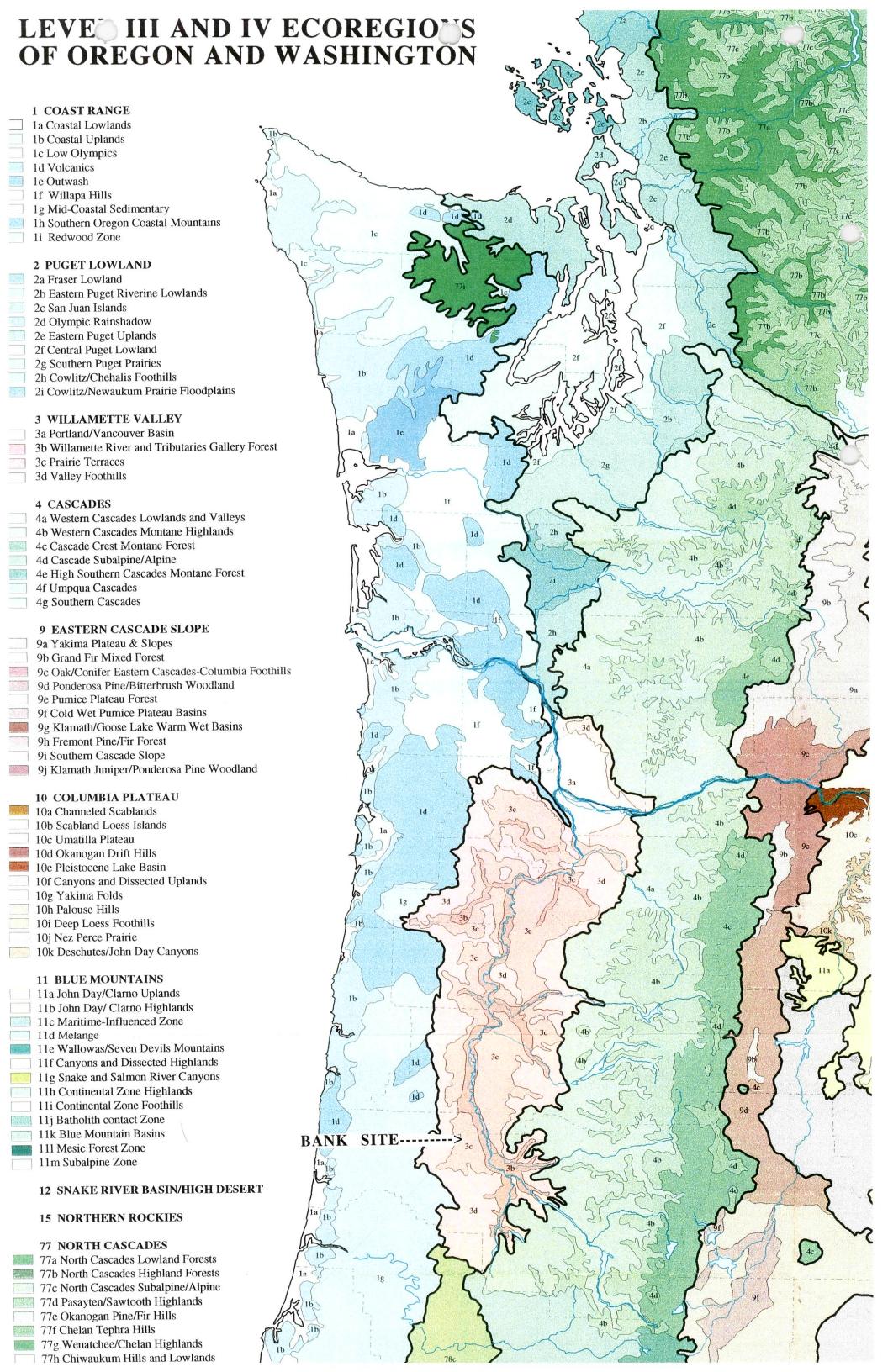
	Reference-based Indicator	Raw Datum	Scale for RI	Scale for SF	Scaled Datum
A	Percent vegetated	15	<10 = .1 10-20 = .2 20-40 = .4 40-60 = .6 60-80 = .8 >80 = 1.0	<10 = .1 10-20 = .2 20-40 = .4 40-60 = .6 60-80 = .8 >80 = 1.0	0.2
В	Number & distribution of vegetation forms	A	A = 0 B2 = .60 C2 = .65 B1 = .70	A = 0 B2 = .60 C2 = .65 B1 = .70	0
	Only one vegetation form occupies more than 0.5 acre herbaceous		C1,D = .75 E2 = .80 F2 = .85 E1 = .90 F1 = .95 G = 1.0	C1,D = .75 E2 = .80 F2 = .85 E1 = .90 F1 = .95 G = 1.0	
С	Mapped soil series is hydric (not simply a hydric inclusion)	yes	no = 0 yes = 1.0	no = 0 yes = 1.0	1.0

	Reference-based Indicator	Raw Datum	Scale for RI	Scale for SF	Scaled Datum
D	Spatial predominance of non-native herbs A = Non-natives predominate B = Cannot determine (about equal) C = Natives predominate	В	A = 0 B = .5 C = 1.0	A = 0 B = .5 C = 1.0	0.5
Е	Percent of common herb species that are non-native	56	100 = 0 85-99 = .1 75-84 = .25 63-74 = .5 50-62 = .75 34-49 = .9 0 -33 = 1.0	100 = 0 80-99 = .1 67-79 = .25 60-66 = .5 25-59 = .75 1-24 = .9 0 -33 = 1.0	0.75
F	Number of native woody species	0	0 = 0 1-3 = .1 4-5 = .25 6-8 = .5 9-12 = .75 13-15 = .9 >15 = 1.0	0 = 0 1 =.1 2-3 =.25 4-5 =.5 6-9 =.75 10-13 =.9 >14 = 1.0	0
G	Percent of woody species that are native	0	0 = 0 1-56 = .1 57-72 = .25 73-78 = .5 79-85 = .75 86-99 = .9 100 = 1.0	0 = 0 1-57 = .1 58-66 = .25 67-74 = .5 75-79 = .75 80-99 = .9 100 = 1.0	0
Н	Percent of woody cover within stratum that is comprised of nonnative species (Use the greater of the tree, understory shrub, or open shrub stratum's percent)	0	100 = 0 40-99 = .1 20-39 = .25 10-19 = .5 5-9 = .75 1-4 = .9 0 = 1.0	100 = 0 80-99 = .1 30-79 = .25 10-29 = .5 5-9 = .75 1-4 = .9 0 = 1.0	0
I	Number of deadwood types	0	0 = 0 1-2 = .1 3-5 = .25 6-8 = .5 9-11 = .75 11-12 = 1.0	0 = 0 1 = .1 2 = .25 3-4 = .5 5-7 = .75 >7 = 1.0	0
J	Diameter (inches) of largest trees	0	none = 0 1-12 = .1 13-19 = .25 20-27 = .5 28-44 = .75 45-52 = .9 >52 = 1.0	none = 0 1-5 = .1 6-9 = .25 10-17 = .5 18-25 = .75 26-35 = .9 >35 = 1.0	0

	Reference-based Indicator	Raw Datum	Scale for RI	Scale for SF	Scaled Datum
K	Percent of site that was constructed from upland: 6 = recent, >90% of site 5 = recent, 10-90% of site 4 = recent, 1-10% of site 3 = >5 years ago, >90% of site 2 = >5 years ago, 10-90% of site 1 = >5 years ago, 1-10% of site 0 = none "upland" = non-hydric soils, but this was constructed on hydric soils	θ	6 = 0 5 = .1 4 = .2 3 = .3 2 = .4 1 = .5 none = 1.0	6 = 0 5 = .1 4 = .2 3 = .3 2 = .4 1 = .5 none = 1.0	1.0
L	Percent of site currently affected by soil compaction (score): 6 = recent, at >90% of site 5 = recent, at 10-90% of site 4 = recent, at 1-10% of site 3 = >5 years ago, >90% of site 2 = >5 years ago, 10-90% of site 1 = >5 years ago, 1-10% of site 0 = none mild	# 4	5/6 = .1 4 = .2 3 = .4 2 = .6 1 = .8 0 = 1.0	5/6 = .1 4 = .2 3 = .4 2 = .6 1 = .8 0 = 1.0	0.2
N	Percent of site affected by soil mixing (score): 6 = recent, at >90% of site 5 = recent, at 10-90% of site 4 = recent, at 1-10% of site 3 = >5 years ago, >90% of site 2 = >5 years ago, 10-90% of site 1 = >5 years ago, 1-10% of site 0 = none Percent of site currently affected by mowing or extreme grazing	# 6	5/6 = .1 4 = .2 3 = .4 2 = .6 1 = .8 0 = 1.0 >90 = 0 10-90 = .2 1-10 = .4	5/6 = .1 4 = .2 3 = .4 2 = .6 1 = .8 0 = 1.0 >90 = 0 10-90 = .2 1-10 = .4	0.1
0	Frequency (score) of humans visiting on foot assuming 100% is visited for 23-83 days/yr = 3 x 100 - 300	300	none = 1.0 100-200 = 0 200-300 = .3 300-400 = .7 400-500 = 1.0	none = 1.0 100-200 = 0 200-300 = .3 300-400 = .7 400-500 = 1.0	0.3
P	Distance to nearest busy road	2460'	<100 = 0 100-300 = .3 300-600 = .5 600-1200 = .7 1200-2400 = .8 2400-4800 = .9 >4800 = 1.0	<100 = 0 100-300 = 3 300-600 = .5 600-1200 = .7 1200-2400 = .8 2400-4800 = .9 >4800 = 1.0	0.9
Q	Percent of land cover in <u>contributing</u> <u>watershed</u> that is not cropland, lawn, buildings, or pavement	0	<10 = 0 10-20 = .1 20-40 = .3 40-90 = .5 90-99 = .9 100 = 1.0	<10 = 0 10-20 = .1 20-40 = .3 40-90 = .5 90-99 = .9 100 = 1.0	0

	Reference-based Indicator	Raw	Scale	Scale	Scaled
		Datum	for RI	for SF	Datum
R	Percent of surrounding land cover	25	<10 = 0	<10 = 0	0.3
	within 200 ft that is not cropland,		10-20 = .1	10-20 = .1	
	lawn, buildings, or pavement		20-40 = .3	20-40 = .3	
			40-90 = .5	40-80 = .5	
	25% is comprised of the adjoining		90-100 = 1.0	80-90 = .7	
	wetland unit			90-100 = 1.0	
S	Land cover in the vicinity of the site	wooded			1
	in 1800's:				
	1= wooded; 2= nonwooded				

Score = 2.80 Standardized = 0.42



ATTACHMENT 3

Project: Janpolshy Date: March 24 2000

Notes: arrived at Jane's about 1306. Sunny and warm weather has been the sormal pattern for the past 3 weeks, and wetland is beginning to duy up around edges, but still planty of water within 75% Of basin. When I popped up over the dike, I observed 800 ducks, all species common within the valley. Mall, No. Pintoil, 6W Feel, Showler and Wigeon, and a few durins; 2 lesser Scarp, 12 R.N. Dicks and a few Ruddy's. Birds were attirety foraging who la great to see. Oldo, I counted over 400 Davallows - all Tree Swallows - which were actually Hawking insects above the welland. Shorelind, numbers were strong, with over 500 dunlin foraging on the Shallours within the South end of the unit. I saw a Bald Eagle, but no Peregnine Folcons today. This is a great project.

Malk Juher

Project: Janyobhy Date: 5 Sept 2000 Notes: Went with Jim Houk out to look at Dane's project, and to lay out new wetland or south last corner of property. I was impressed in how Boare has manged the wetland the Habital to exceptional, and will hold many thousands of ducks the winter. As for all the other werk, it looks great and the tribit wettand is looking good. This will be an Interesting project to watch over time. Mark Fisher

Project: Jangwelly Date: Nov 28 /999

Notes: Arrived at Sampolshy at 16:30. Observed over 8 000 Dunlin book foraging and arriving from areas off the property. Water levels Atel only about 1/2-1/2 capacity. Duck Munders were low, only 150. Also, Observed 2 peregrine follows foraging within the basin, charing the Dunlin. Switz, sow 45 downtoher Sp. and 7 Black bellied plower in the weltand. Impressive!

Project: Jampolohy Date: Thurs. 10 Fek Notes: Oberned large numbers of ducks, roughly 1800. Mostly GWTeal ~ 540 Pintail ~ 450 Wigeon ~ 360 Mallard ~ ZZS Norther Showler - 225 Nice balance. Aloo, bew clivers including 25 Ruddy and Bufflehead, 2 Jesser Scary All Brids were foraging throughout the lasin, and I noticed a large number of Chironomid adults Imerging from the Wethands. The first tree Devallows of the year were observed foraging conside adult midges. Wetland #'s twee levels were at or about max Staff.

Project: Jampolshy Date: Jan 8 2001

Notes: Was out in fane county and dispped by Dove's project - Water has been hard to Come by, but blave has water on several sites on the property. Our mid-winter waterfun surveys reveled over 800 birds in here last week. But as I walked thrue, there was evidence of heavy use by the amount of feathers an good crap on the dikes. I walked up to the mitigation wetland and jumped over 1,500 bird From that unit. Ducks love that pand, mis have something to do with the shallow water. The wellands on the east side of the slough was way downs, and only a handful of ducks were present.
The chub Pond was felling up, but it too was well below maximim Volume. Mak Fisher

 \bigcirc

LANE Jan 4th Dave Jampolsky

Zone Summary - 2001 Wi		State:		
	Form Ridge SWA	WEW	Johnseins/ markli ld/onks	Jampolskys
Survey Unit/Area:	SWA	WEW	markhi Rd/rox	Jampoles
Observers:			7645	
Date:				
Mallard	1159	15	70	100
Black/Mottled/Mexican				
Gadwall	5		10	
Wigeon	110	100	20	50
Green-winged Teal	2172	700	607	<u>50</u>
Blue winged/Cinn. Teal			607	(2)
Shoveler	250	7		700
Pintail	904		2 0 70	200
Wood Duck	IUT		2870	250
Whistling Duck				
Subt. Dabblers	U (000)			······································
Redhead	4.600			·
Canvasback				
Scaup	——————————————————————————————————————			
Ring-necked Duck				
				5
Goldeneye	40			
Bufflehead	/2_			
Ruddy Duck				
Subt. Divers	19			
Eiders				
Scoters				
Oldsquaw				
Harlequin				
Subt. Seaducks	910			
	2(c)'8 (H)'	75 (c)	15 (c)	
Unidentified) VERS -	236			
Miscellaneous UNID	57	5	30	
TOT. DUCKS	4922	202	3622	1230
Lesser Snow (white)				1200
Blue-phase Snow				
Ross'				
Snow/Ross' undif.				
Subt. "White" G.				
White-fronted Goose				
Western		18		··
Lesser/Taverner				
Cackling	1800	200	400	
Dusky	265	200	400	
Aleutian	2.05			
Canada - undif.	2 70		170	
Subt. Canada	7136		175	
Brant	1135			
TOT. GEESE	712	3.0		
Tundra Swan	2135	218	575	
rundia Swall		1	i	

		Ì				
Area:	Fem Ridge	Peters/Sadri	Jampolsky	Eugene	Junction City	LANE
	W.M.A.	Estergard	Pvt. Lands	Airport	Sewage	COUNTY
Observers:	Jock Beatt	Jock Beatt	Jock Beatt	Jock Beall	Jock Beatt	Jock Beatt
		Mark Fisher	Mark Fisher	Mark Fisher	Mark Fisher	Mark Fisher
Pilot:	Ray Bentley	Ray Bentley	Ray Bentley	Ray Bentley	Ray Bentley	Ray Bentley
Mallard .	897	, , , , , , , , ,	135	213	ricy somey	1,578
Mexlike Duck			1			,,,,,
Gadwall			 			
Wigeon	75		405	97		714
G-w Teal	835		1,350	125	700	
B-w/Cinn Teal			1,550	125	700	3,700
Shoveler	75				800	871
Pintail	20		810	275		1,618
Wood Duck	20	 	810			1,010
Whistling Duck						
Dabblers	1,902		2,700	710	1,500	8,247
Dappoid	1,002	1	2,700	,,,,	1,500	0,24
Rèdhead						
Canvasback						
Scaups					255	25!
Ring-necked D.						
Goldeneyes:						
Bufflehead			75		1	7:
Ruddy Duck					350	356
Divers	0	(75	0	605	686
-/-						
Hooded Mergansers						1.
Common Mergansers						1:
Subtota						
Mergansers					<u> </u>	2:
Unidentified	18			5		31
TOTAL DUCKS	1,920	275	2,775	715	2,105	9,26
Brant	†	1	<u> </u>			
White Geese	 	1	 	1	 	
W-f Geese		1		† <u>'</u>	 	
Canada Geese (Unid)	67	750) c	1,872	250	7,00
TOTAL GEESE						1
		1		1,570		
Tundra Swan		ļ		1	ļ	
Trumpeter Swan	1		1			
Mute Swan						
Unknown Swan	_	1		56		19
TOTAL SWAN	4	1	1	56	5 (19
TOTAL WATERFOWN	1,987	1,02	5 2,775	2,644	2,35	16,46
			I			

MWW00.XLS 10

ATTACHMENT 4

J.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE

NRCS-CPA-026E · 8-95

HIGHLY ERODIBLE LAND AND WETLAND CONSERVATION DETERMINATION

Name: Jampolsky, Dave Tract: 495 Farm: 01

County: Lane Request Date:

FSA Farm No.: 1400

Section I - Highly Erodible Land

Fields in this section have undergone a determination of whether they were nighly erodible land (HEL) or not; fields for which an HEL Determination has not been completed are not listed. In order to be eligible for USDA benefits, a person must be using an approved conservation system on all HEL.

Field	HEL (Y/N)	Sodbusted(Y/N)	Acres	Determination Date
1	N	N	23.7	12/14/99
3	N	N	89.6	12/14/99
4	· N	N	77.1	12/14/99
un-1	N	N	8.2	12/14/99
un-2	N	N	0.5	12/14/99
un-3	N	N	1.2	12/14/99

Section II - Wetlands

Helds in this section have had wetland determinations completed. See the letlands Explanation section for additional information regarding allowable activities under the wetland conservation provisions of the Farm Bill and lection 404 of the Clean Water Act.

Field	Wetland Label	Acres	Determination Date	Certification Date
1 1 3 3 3 4 4 4	CW NW PC CW PC CW FW NW	5.2 8.0 10.5 2.5 10.5 72.5 5.5 0.8 28.3 40.4	01/11/00 01/11/00 01/11/00 01/11/00 01/11/00 01/11/00 01/11/00 01/11/00 01/11/00	01/11/00 01/11/00 01/11/00 01/11/00 01/11/00 01/11/00 01/11/00 01/11/00 01/11/00 01/11/00
un-1 un-2 un-3	M M	8:1 1:2 1:5	01/11/00 01/11/00 01/11/00	01/11/00 01/11/00 01/11/00 01/11/00

NRCS-CPA-026E 8-95

HIGHLY ERODIBLE LAND AND WETLAND CONSERVATION DETERMINATION

lame: Ja lounty:	mpolsky, Dave Lane			FSA		
·			*****		••••	
etland						
:W	Converted wetland Description: An a and 11/28/90; Aut commodities will r Maintenance allowe plan to clear, dra NRCS* and COE**.	rea where weth horized Cropp: esult in ineli- ed to original	lands were ing: Planti: igibility; scope and	28/90; converted ng of agri Authorize effect of	icultural ed Mainten system:	2/23/85 ance: If vou
W	Farmed Wetland; Description: An a 12/23/85, but stil be farmed as it wa maintained to the records exist or m built" records exi manipulate these a	1 meets wetlar s before 12/23 extent that example maintair st; If you pl	nd criteria 3/85; Authoristed befor ned to 12/2 lan to clear	; Authoriz orized Mai re 12/23/8 3/85 condi r, drain,	zed Croppin Intenance: 35 if "as] Ition if no	ng: May May be built" o "as
W	Non-wetland; Description: An a natural conditions not cropped prior has not been aband Authorized Mainten would convert adja	or wetlands to 12/23/85, coned; Authoriance: No rest	that were co loes not me lzed croppin crictions un	onverted p et wetland ng: No Re	rior to 12 criteria estrictions	2/23/85, , and s:
C	Prior Converted Cr. Description: An a to 12/23/85 and wa and does not meet restrictions; Aut.	rea that was d s cropped price farmed wetland	or to 12/23, l criteria;	/85 and wa Authoriz	is not abai	ndoned ng: No

manipulation would convert adjacent wetland labels.

).s. DEPARTMENT OF AGRICULTURE ATURAL RESOURCES CONSERVATION SERVICE

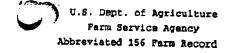
NRCS-CPA-026E 8-95

HIGHLY ERODIBLE LAND AND WETLAND CONSERVATION DETERMINATION

ounty: I		Request Date:		SA Farm No.:	1400
		tlands Explanation	on		
etland abel					
	Wetland; Description: An area wetland farmed under n resulting from abandon Cropping: May be farm woody vegetation; Aut maintain original syst pasture, and prior con wetlands or exceed "or clear, drain, fill, le COE**. Resources Conservatio of Engineers	that meets the wateral conditions ment of other welled under natural horized Maintenautem on related factorized cropland. The second second ignal scope and well or manipulate	etland crite s. Include tland label conditions nce: At le rmed wetlan Must not effect"; e these are	eria includi: s abandoned v s; Authorize without reme vel needed to d, farmed wer convert addi: If you plan v as contact N	ng wetland ed oval of tland tional to RCS* and
ccordanc	that the above determ ce with policies and pr Act Manual.	minations are corrected contained	rect and we ed in the N	re conducted ational Food	in
ignature	Designated Conservati	onist		Date	
alba d	t Makeran			Jun 07, 20	00
ll USDA ational	programs and services origin, religion, sex,	are available wit	thout regardatus, or has	d to race, condicap.	olor,

OREGON LANE

Report ID: FSA-156EZ-R001



FARM 1400

Prepared: 01/07/2000 Crop Year: 200t

Page: 1

OPERATOR: Nome & Address

FARMLAND CROPLAND

AG USE EFF AG USE LAND

FARM DESCRIPTION

STATUS

DAVID L JANPOLSKY

200.0 190.1

LAND 190.1

541-687-2464

190.1 Y5 165-5W-13,24

ACTIVE

31253 FOXRIDGE LM

EUGENE

OR 97405 9562

FARMS ASSOC. WITH OP: NONE

OTHER PRODUCERS ASSOCIATED WITH FARM: TON HUNTON

IRP Cropland:

.0

CRP MPL:

RP Contract No.: NONE

RECON. REF. NO.: 00000

FAV HISTORY: N

CROP	CONTRACT ACREAGE 27,3		DBL.CROP AVG. RI		CRP REDUCTION		CRP PENDING					PYMI YLD						
eat					,	.0			.0				71					
of Tracts: 1 TRACT NO. 495	FARMLAND 200.0	CROPLAND 190.1	AG USE LAND 190.1	CRP CROPLAND ACRES .0		WBP AC	RES		EFF A	G US			CRP MPL A			r: 201	00	-
CROP NAME		PFC ACRES	PFC TRACT YIELD	CRP-15 REDUCTION ACRES		CI TR/ YIE	ACT			PE	RP NDII CRES				AVG L-CRO	PPED		
WHEAT		27.3	71	0.0			0				0.0)			0.0	1		
to Grid Descr: Y5	16S-5W-13,	24		HEL O	27	A027	WL	CW	FW	PC	AW	MW	PCW	MG	R W	CWTE	CMI	W.A
OWNER 1	- CAMILLE	R JAMPOLSKY. 2	- DAVID L JAMP	UI CKA	N	N		4				,	N		150	- π : Ε	- CITI	10

OREGON.

LANE

Report ID: FSA-156E2-R001

U.S. Dept. of Agriculture Farm Service Agency Abbreviated 156 Farm Record

FARM 1400

Prepared: 08/30/1999 Crop Year: 1999

Page: 1

OPERATOR: Name, Address & I D No. FARMLAND CROPLAND

AG USE EFF AG USE LAND

FARM DESCRIPTION

STATUS

552-76-2362 g DAVID L JAMPOLSKY

541-687-2464

LAND

200.0 190.4 190.4 190.4 Y5 16S-5H-13,24

ACTIVE

31253 FOXRIDGE LN

EUGENE

OR 97405

FARMS ASSOC. WITH OP:

CRP:

.0 CRP Contract No.: NONE

RECON. REF. NO.: 00000

PAV HISTORY: N

CROP

CONTRACT ACREAGE

DBL.CROP

CRP

CRP

AVG,

REDUCTION

FW PC

PENDING

YLD

WHEAT

27.3

.0

No. of Tracts: 1

Year: 1999

TRACT NO. FARMLAND CROPLAND AG USE AG USE HEL 027 A027 WL

PCW

MG RN CHTE CWNA

IDENTIFIER

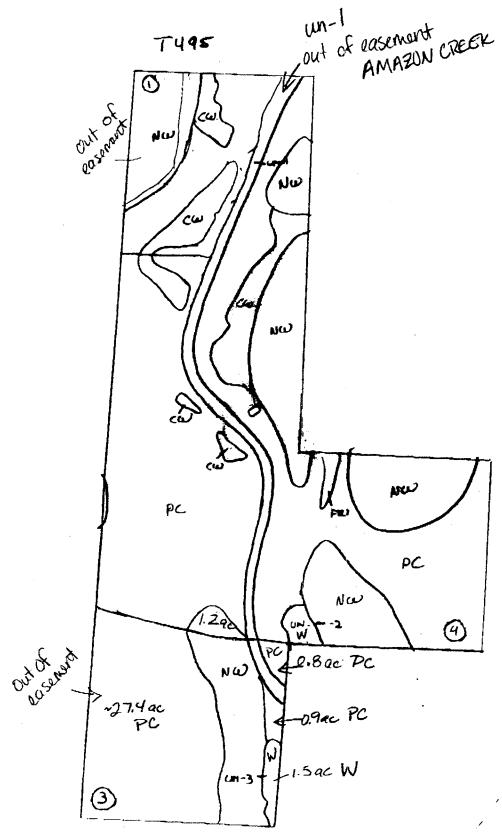
495

200.0 190.4 190.4 190.4 Y5 16S-5W-13.24

OWNER 1 - CAMILLE R JAMPOLSKY, 2 - DAVID L JAMPOLSKY



file:D:\My Documents\wrp\plans\Jampolsky Plan\Photos\Jampolsky 1968 photo.jpg



Easement, PC = 97.2. FW = 0.6 ac CW = 13.2 ac W = 9.3 ac NW = 34.5

ATTACHMENT 5

AMAZON CREEK WETLAND MITIGATION BANK PLANTING PLAN

The plant species list and planting plan for the Bank was determined by assessing the consultants past success's and experience acquired from other mitigation projects with very similar hydrogeomorphic settings as the Amazon Creek Wetland Mitigation Bank (slope/flat). We also compared the plant species and diversity with that of the Stewart Pond site in West Eugene, that will be used for a reference site for the bank. The other factor in the selection of plant species was the food, nesting and habitat requirements of the abundant shorebirds and water fowl species that are expected to eventually inhabit the bank site.

The Bank is also relying on some of the natural seed bank to be present on the Bank property, which will help determine what plant species may have originally occurred on the site historically.

Palustrine Forested Area (PFOC)

The Bank's PFOC areas will be located following the riparian area along the Amazon Channel attempting to mimic what existed historically and continuing in a meandering fashion following the natural contours of the site to the west along the north boundary. There is also a small area on the west side that will be PFOC as well. These areas will be planted with Oregon ash, Douglas hawthorn, black cottonwood and a limited reintroduction of Willamette Valley ponderosa pine, which is known to have existed throughout the Willamette Valley in the last century. Scrub/shrub and herbaceous species will also be planted within the forested wetland area.

Palustrine Scrub/Shrub Areas (PSSC)

The PSSC areas are located along the slopes of the levees, the small island and along the edges of the ponded area on the north and east sides. These areas will be planted with a mixture of redosier dogwood, hard hack, sitka willow, pacific willow and nootka rose.

Palustrine Emergent Wet Meadow Area (PEMC Wet Meadow)

The wet meadow areas are in the higher elevations within the south and east portions of the Bank. This area will be seeded with tufted hairgrass, western witch grass, meadow barley, and meadow foxtail in the upper areas, and slough grass and barnyard grass in the lower, wetter areas.

Palustrine Emergent Area (PEMC)

These PEMC wetlands are within those areas that were either graded to supply material for the dikes, the top of the levees, or are within the lower elevations of the Bank. These areas will be planted with the herbaceous species shown on the plant species list, in mixed random patterns, utilizing natural clumping, and with consideration given toward their position in the landscape, and indicator status.

AMAZON CREEK WETLAND MITIGATION BANK PLANT SPECIES LIST

Overstory Species

Common Name	Botanical Name	Size	Quantity	Status
Oregon Ash	Fraxinus latifolia	br	100	FACW
Ponderosa Pine	Pinus ponderosa	br	20	FAC
Black Cottonwood	Populus trichocarpa	br	25	FAC
Douglas' Hawthorn Crataegus douglasii		br	25	FAC
Scrub/Shrub Species				
Common Name	Botanical Name	Size	Quantity	Status
Red Osier Dogwood	Cornus stolenifera	br	20	FACW
Pacific Ninebark	Physocarpus capitatus	br	35	FACW
Hard Hack	Spiraea douglasii	br	50	FACW
Nootka Rose	Rosa nutkana	br	30	FAC
Pacific Willow	Salix iasiandra	br	15	FACW
Herbaceous Species				
Common Name	Botanical Name	Size	Quantity	Status
Lady's Thumb	Polygonum persicaria	sd	*	FACW
Devil Beggerstick	Bidens frondosa	sd	*	FACW
Lobbed Beggerstick	Bidens tripartita	sd	*	FACW
Marsh Cudweed	Gnaphalium palustre	sd	*	FAC+
Slough Sedge	Carex obnupta	rz	250	OBL
Creeping Spike Rush	Eleocharis palustris	rz	250	OBL
Small-Fruited Bulrush	Scirpus microcarpus	rz	250	FACW
Water Smartweed	Polygonum amphibium	rz	250	OBL
American Brookline	Veronica americana	sd	*	FACW
American Water Plantain	Alisma plantago aquatica	sd	*	OBL
Grass Species				
Common Name	Botanical Name	Size	Quantity	Status
Slough Grass	Beckmania snzigachne	sd	2 lb/ac	OBL
Tufted Hair Grass	Deschampsia cespitosa	sd	1 lb/ac	FACW
Meadow Barley	Hordeum brachyantherum	sd	2 lb/ac	FACW
Barnyard Grass	Enchinochloa crus-galli	sd	*	FACW
Meadow Foxtail	Alopecurus pratensis	sd	4 lb/ac	OBL
Western Witch Grass	Panicum acuminatum	sd	*	FACW

br = bare root

sd = seed

rz = rhysome

* = natural propagation

ATTACHMENT 6

LANE COUNTY PLANNING DIRECTOR **FLOODPLAIN PERMIT**



Date: September 10, 1999 File No.: PA 99-6120

I. **APPLICANT/OWNER:**

David Jampolsky 31253 Foxridge Lane Eugene, OR. 97405

II. **PROPOSAL:** Obtain a Floodplain Development Permit to place and remove approximately 28,000 cubic yards of material within the 100 year flood hazard area as per Lane Code 16.244.

III. **GENERAL INFORMATION**

A. Location and Site Description: Map: 16-05-13 Taxlot: 400

> Map: 16-05-24 Taxlot: 500,501,502 & 503

Plot No.: Zoning: E-40/FP/RCP

The site is located northwest of Eugene off Alvadore Road. The property is located within the 100 year flood hazard area, in Zone "A", as per Flood Insurance Rate Map (FIRM) Panel #415591-0615F, effective June 2, 1999.

The project consists of restoring/enhancing approximately 120 acres of seasonal shallowwater wetlands and riparian buffer habitat. The project is located on private property in Lane County approximately five miles northwest of Eugene.

DECISION IV.

The Special Use Permit is approved with conditions as contained in Exhibit "A".

John S. Petsch, Sr. Eng. Assoc.

EXHIBIT "A" PA 99-6120

CONDITIONS OF APPROVAL

FILL/EXCAVATION

WORK AUTHORIZED

1. This permit authorizes the placement and removal of approximately 28,000 cubic yards of material in the location on the approved plot plan for the purpose of restoring/enhancing approximately 120 acres of seasonal shallow-water wetlands and riparian buffer habitat.

ADDITIONAL DESIGN REQUIREMENTS

- 2. No fill shall be placed within 100 feet of the ordinary high water of a Class I Stream.
- 3. All vegetation removal shall comply with the Riparian Vegetation removal standards of Lane Code 16.253.

GENERAL CONDITIONS

- 4. This permit does not authorize any work that is not in compliance with the underlying base zone or other local, state or federal regulations pertaining to the operations authorized by this permit. The permit holder is responsible for obtaining the necessary approvals and permits before proceeding under this permit.
- 5. Violations of the terms and conditions of this permit are subject to administrative and/or legal actions which may result in revocation of the permit or damages. The permit holder is responsible for the activities of all contractors or other operators involved in work done at the site or under this permit.
- 6. A copy of the permit shall be available at the work site whenever operations authorized by the permit are being conducted.
- 7. Employees of Lane County and all duly authorized representatives of the Director shall be permitted access to the project area at all reasonable times for the purpose of inspecting work performed under this permit.
- 8. Lane County retains authority to temporarily halt or modify the operations if it should cause excessive turbidity or damage to natural drainages.
- 9. This approval shall expire two years from the date of final approval.

Project Description:

The project consists of restoring/enhancing approximately 120 acres of seasonal shallow-water wetlands and riparian buffer habitat. The project area is located on private property in Lane County approximately five miles northwest of Eugene, Oregon.

Project Objectives include:

- Restoring, enhancing and protecting habitat for fish and wildlife.
- Maximizing the acreage of wetlands in the project area through retention of surface water runoff.
- Improving flood attenuation and water quality in the Amazon Channel through the creation of shallow water wetlands and riparian buffers.

Background:

The project area consists of prior converted wetland and upland that is currently in agricultural production and has historically been surface graded to facilitate drainage for haying and grass seed production. There are existing water rights for 40 acres of the property. The Amazon Channel is the source of the water right for this property. The current owner has applied for enrollment in the USDA Wetland Reserve Program (WRP). The project area will initially be enrolled in a 10-year Restoration Cost-Share Agreement with the Natural Resource Conservation Service (NRCS). However, the landowner has expressed his intent to enroll the property in a 30-year or perpetual WRP Conservation Easement in the next several years. The NRCS resource soil scientist for Lane County has visually and physically inspected the property and has concluded that the property will maximize wildlife benefits and wetland functions and values when restored. As part of the WRP process, an NRCS Cultural Resource Specialist will complete a Cultural Resources Survey of the property.

Project Proposal:

Project activities will include surface grading/excavation at five sites on the property (see project conceptual plan). At all sites, surface grading/excavation will be done within natural swales or depressions. Spoils will be deposited along upland ridges to construct levees. Excavation will redistribute approximately 28,000 cubic yards of material on the property. Excavation will be done to an average depth of 6 to 12 inches within designated sites. Side slopes on all levees will be 10:1 to 20:1. Swales will be roughly 10 feet wide across the bottom with side slopes of 10:1. Ten water control structures (half round risers with flashboards) will be installed to regulate water levels within project wetlands. Average depth of restored wetlands will be 12 inches. Spoil areas will be graded, seeded, and planted with mixed hardwood and conifer trees. Wetland perimeters and a large area along the Amazon Channel (approx. 20 ac.) will be planted with a mix of hardwood and conifer trees and shrubs. Natural re-vegetation of wetland bottoms will occur from wetland-adapted plant seeds in the soil seed bank.

Project design and construction will be completed by a partnership between the landowner, NRCS, Oregon Department of Fish and Wildlife and Ducks Unlimited. The project is scheduled to begin construction in August 1999 and will be completed in August 2000.



Steve Liske 14711 NE 160th Ave. Brush Prairie, WA 98606

September 9, 1999

John Petsch Lane County Land Management

394-7 Via Fax - (541) 682-3497

RE: Jampolsky Wetland Restoration DU Project# OR-0043-001

Dear Mr. Petsch,

Per your request, this letter is to discuss the above referenced project and its impacts, or lack thereof, to flood flows in the area. The project involves the construction of levees approximately 3 feet high, to create water impoundments. The levees will be constructed with materials excavated onsite, and as such, there will be no net loss of flood storage as a result of the levee construction. In addition, the impoundments will serve as detention basins during peak runoff, thereby reducing flood flows downstream of the project. Finally, the project will incorporate water control structures and spillways that will allow high water to pass through the project without impacting neighboring parcels of land. The end result will be a project that will have no significant impacts on flood flows during a 100 year storm event.

If you have any questions, please feel free to call me at (360) 604-0410.

Sincerely,

DUCKS UNLIMITED, INC.

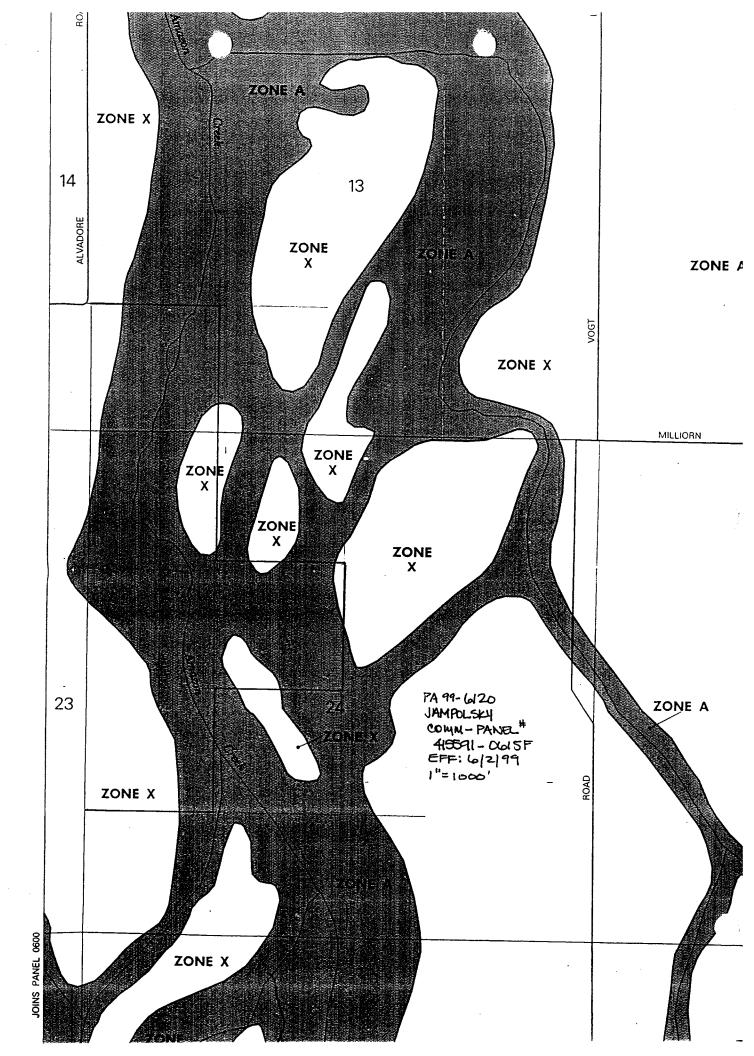
Steve Liske, P.E. Regional Engineer

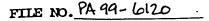
Cc: Dave Jampolsky

THEO PROFESSION OF THE PROPERTY OF THE PROPERT



Explines: 12-31-00





02/18/92



FLOOD PLAIN DEVELOPMENT APPLICATION Land Management Division

APPLICATION FOR REMOVAL OR FILL

This sheet should accompany a General Land Use Application. Please Print or Type 1. Applicant's Name DAVID JAMPOLSKY 2. Project Supervisor's Name______Phone_9/5-5829 3. Purpose of Project To restore and enhance cuetland hasitat 4. Description of Proposed Operation Plase see attacked description 5. Date of Project Start August 1999 Completion Time August 2000. 6. Project will be: Removal______Fill_____Combination______ 7. Material will consist of: Gravel Sand Rock Other Primarily Clay 8. Total amount of project fill (cu. yards) Approx 28,000. eu yards. Total amount of project removal (cu. yard) 28,000. (v. yards. 10. What steps will be taken to restore the area to its natural condition? see attached description 11. Any request for a Removal or Fill Permit requires that the Applicant submit detailed drawings showing: (1) Vicinity Map, (2) Detailed Plan View of Proposed Work, (3) Cross Section of Work Showing Quantities. All drawings must be to an appropriate scale. 8-1-99. icant's Signature

STATE OF OREGON

COUNTY OF LANE

PERMIT TO CONSTRUCT A RESERVOIR AND STORE THE PUBLIC WATERS

THIS PERMIT IS HEREBY ISSUED TO

DAVID JAMPOLSKY 31253 FOXRIDGE LANE EUGENE, OREGON 97405

(541)687-2464

The specific limits and conditions of the use are listed below.

APPLICATION FILE NUMBER: R-84257

SOURCE OF WATER: RUNOFF, A TRIBUTARY OF AMAZON CREEK

STORAGE FACILITY: RESERVOIR 3

PURPOSE OR USE OF THE STORED WATER: WETLAND ENHANCEMENT AND WILDLIFE

MAXIMUM STORAGE VOLUME: 21.0 ACRE-FEET EACH YEAR

WATER MAY BE APPROPRIATED FOR STORAGE DURING THE PERIOD: NOVEMBER 1 THROUGH JUNE 30 OF EACH YEAR

DATE OF PRIORITY: SEPTEMBER 2, 1999

THE MAXIMUM HEIGHT OF THE DAM SHALL NOT EXCEED 3.00 FEET.

DAM LOCATION: NWSW, SECTION 24, T16S, R5W, W.M.; ALSO SWNW

THE AREA TO BE SUBMERGED BY THE RESERVOIR IS LOCATED AS FOLLOWS: SWNW, NWSW SECTION 24 TOWNSHIP 16 SOUTH, RANGE 5 WEST, W.M.

Measurement, recording and reporting conditions:

- A. Before water use may begin under this permit, the permittee shall install a meter or other suitable measuring device as approved by the Director. The permittee shall maintain the meter or measuring device in good working order.
- B. The permittee shall allow the watermaster access to the meter or measuring device; provided however, where the meter or measuring device is located within a private structure, the watermaster shall request access upon reasonable notice.

PAGE 3

submit a claim of beneficial use, which includes a map and report.

Issued April 28, 2000

Martha (Water Resources Department

NOTE: Pursuant to ORS 537.330, in any transaction for the conveyance of real estate that includes any portion of the lands described in this permit, the seller of the real estate shall, upon accepting an offer to purchase that real estate, also inform the purchaser in writing whether any permit, transfer approval order, or certificate evidencing the water right is available and that the seller will deliver any permit, transfer approval order or certificate to the purchaser at closing, if the permit, transfer approval order or certificate is available.

Oregon Water Resources Department Water Rights Division

Water Rights Application Number R-84257

Final Order

Application History

On SEPTEMBER 2, 1999, DAVID JAMPOLSKY submitted an application to the Department for a water use permit. Pursuant to 537.409, the Department provided public notice of the application in the Department's weekly public notice. A 60 day comment period followed.

The Department has not received adverse comments related to the possible issuance of the attached permit.

The Department has received comments from Oregon Department of Fish and Wildlife related to the possible issuance of the attached permit. No substantial issues were raised in those comments.

Water is available for the proposed use as described in the attached permit.

The use, as described on the attached permit, will not injure any existing water rights and does not pose potential detrimental impacts to existing fishery resources.

Therefore, the proposed use would not impair or be detrimental to the public interest.

Order

Application R-84257 therefore is approved pursuant to ORS 537.409, and Permit Number R-12825 is issued as limited by the conditions contained therein.

DATED April

2000

Marth Pagel

Director

PLACED IN U.S. MAIL

MAY - 9 2000

OREGON WATER RESOURCES DEPT

Appeal Rights

This is a final order in other than contested case. Pursuant to ORS 536.075 and OAR 137-004-080 and OAR 690-01-005, you may either petition the Director for reconsideration of this order or petition for judicial review of this order. As provided in ORS 536.075,

WPTCO 180335-C

After Recording Return To Western Pioneer Title Co, PO Box 10146 Eugens, OR 97440

RESTRICTIVE COVENANT

Amazon Creek Mitigation Bank, LLC owner of the 40 acres of restored and created wetlands, located in Lane County, Oregon, T16S, R5W, Sec. 24, Tax Lot 503 as described in "Exhibit A", makes the following declarations as to limitations, restrictions and uses to which the property described herein is now subject and specifies that such declarations shall constitute covenants to be appurtenant to and run with the land as provided by law for the purpose of keeping the land as wetland. The owner's obligations shall be included in any transfer, conveyance, or encumbrance of the Protected Property or any part thereof. The property subject to this Restrictive Covenant has been offered to the U.S. Army Corps of Engineers (Corps) and Oregon Division of State Lands (DSL) to offset wetland loss or degradation at other locations, primarily in Lane, Linn and Benton Counties. This arrangement is defined in a Memorandum of Agreement and Wetland Mitigation Banking Instrument dated November, 2001, allowing Amazon Creek Mitigation Bank, LLC to restore and create wetlands on this property and to sell credits to entities holding specific permits issued by the Corps and DSL. The protected Property has been restored to wetland under agreement with the Corps and DSL. This Covenant assures that the Owner or Owners of the Protected Property, their grantees, heirs, successors and assigns, will permanently and continuously allow the existence of those wetland areas restored, created, or enhanced under that agreement.

The property described herein shall, except as provided in "Reserved Rights" below, be subject to the following:

- 1. There shall be no cutting, trimming, mowing, alteration or spraying with biocides of any vegetation in the Protected Property, except to eliminate undesirable or non-native invasive species from the site, or conduct other required management or maintenance.
- 2. There shall be no agricultural, commercial or industrial activity undertaken or allowed in the Protected Property except for limited plant or seed harvesting and management activities consistent with preserving the wetland character.
- 3. No domestic animals shall be allowed to graze or dwell on the Protected Property.
- 4. There shall be no filling, excavating, dredging, mining or drilling; no removal of topsoil, sand, gravel, rock, minerals, nor any dumping of ashes, trash, garbage, or any other material, and no changing of the topography of the land of the Protected Property once the wetlands is constructed unless it is necessary to meet management objectives, maintenance or to further the wetland characteristics of the Protected Property.
- 5. There shall be no building of new roads.
- 6. There shall be no operation of motorized vehicles of any type on the Protected Property, except for those necessary for remedial action, management, and maintenance purposes. Any motorized vehicle use that does occur shall be restricted to the upland portions of the site whenever practical.

NEVERTHELESS, and notwithstanding any of the foregoing provisions, the Owners of the property reserve for themselves, their heirs, successors, assigns, and designees, the following rights; provided, however, that the exercise of such rights is consistent with the preservation of the protected property as wetland.

RESURVED RIGHTS

- 1) Any activities related to the initial or subsequent construction, regrading, management, wildlife enhancement, planting, replanting, maintenance, trash removal, invasive weed or undesirable species control may be conducted in compliance with the mitigation plan, Oregon's Removal-Fill Law, and the requirements of the Division of State Lands.
- 2) Any activities related to education. Activities may include soil water or plant sampling, wildlife monitoring or other "outdoor classroom" activities. The Protected Property may also be used for limited native seed harvesting.
- 3) Trails may be made through the upland habitat portions of the property using gravel, wood chips or other products normally used for trail development and upkeep. These areas may be provided with benches and/or raised walkways.
- 4) Access by agricultural or other equipment needed to conduct site management, maintenance, or necessary/required remedial activities, In particular, access by the Junction City Water District is allowed under the terms of their easement along the Amazon Canal.
- 5) The right to recreational uses including hunting, fishing, and hiking for fee or gratis. Hunting will comply with all State and Federal regulations. In addition, a maximum of four hunters will be allowed on site at any one time. Hunting will be allowed a maximum of four days per week and will not exceed 32 hours in any week,
- 6) The right to prevent trespass and control access.
- 7) The right to install and maintain blinds for wildlife viewing and hunting.

BURDENS

Dated this

Expenses relating to preservation of the Protected Property subject to this Covenant shall be allocated to and paid by the Owner or Owners of the Protected Property as outlined in the banking instrument. These Burdens may be transferred to another entity by transfer of ownership or granting a Conservation Easement to allow that entity access to the Property and the Right to conduct such activities necessary to maintain the character and function of wetland on the Property.

This restrictive covenant entirely or in part may be terminated, amended, modified or revoked only upon written approval of the District Engineer of the Portland District of the U.S. Army Corps of Engineers and the Director of the Oregon Division of State Lands in agreement with the Owner of the Protected Property. To be effective, such approval must be witnessed, authenticated, and recorded pursuant to the laws of the State of Oregon.

Amazon Creek Mitigation Bank, LLC An Oregon Limited Liability Company

Ву:

David Jampolsky, Managing Member

State of Oregon County of Lane This instrument was acknowledged before me on April 3, 2002, by David Jampolsky, Managing Member of Amazon Creek Mitigation Bank, LLC, an Oregon Limited Liability Company.

OFFICIAL SEAL

CASSANDRA JERVIS
NOTARY PUBLIC - OREGON
COMMISSION NO. 353629
MY COMMISSION EXPIRES JANUARY 15, 2006

Notary Public for Pagon Commission expires: 1-15-0

EXHIBIT A

The Northwest Quarter of the Southwest Quarter of Section 24, Township 16 South, Range 5 West, Willamette meridian, all in Lane County, Oregon.

attn. Pavid 895-5910

Lane County Deeds and Records

\$31.00

04/03/2002 12:28:26 PM CASHIER 04

RPR-REST Cnt=1 Stn=3 \$10.00 \$10.00 \$11.00

Judy Lindon

Jugar 503.808
143-15



Division of State Lands

775 Summer Street NE, Suite 100 Salem, OR 97301-1279 (503) 378-3805 FAX (503) 378-4844 http://statelands.dsl.state.or.us

State Land Board

John A. Kitzhaber Governor

Bill Bradbury Secretary of State

Randall Edwards State Treasurer

April 13, 2001

Dave Jampolsky 92709 Alvadore Road Junction City, OR 97448

Re:

Wetland Determination for Mitigation Bank Site; Linn County

WD # 01-0144

Dear Mr. Jampolsky:

This letter is to convey the results of our wetland determination for the southern end of the project site proposed for the mitigation bank (map copy enclosed). Allen Makinson, NRCS, conducted a wetland determination suitable for farm bill applications but did not conduct a wetland delineation using the 1987 *Corps of Engineers Wetland Delineation Manual* that we use for determination of wetlands subject to state permit requirements. As such, Allen was looking only for aerial photograph evidence of prolonged surface ponding, not saturation. I asked Allen for any field data he might have collected, but have not gotten a response to that request.

I have made wetland determinations based upon my site visit with you and Pat Thompson on March 20, 2001, and a comparison of the soil survey map with the 4-20-98 aerial photograph. There is a strong correlation between all three pieces of information. The area mapped as Bashaw clay and Awbrig silty clay loam corresponds with the dark signatures on the aerial photograph, and also with the soil saturation that was evident on the 20th in the Southwest portion of the site as we walked west from the forested wetland. Likewise, the lighter tones on the aerial photo correspond with mapped non-hydric soil units on this and adjacent properties. The only discrepancy I noted was in the small section of field immediately adjacent to Amazon creek that was mapped by Allen as PC (0.9 acre). That area appeared to be an extension of the Salem gravelly silt loam and was not saturated; therefore, we consider it non-wetland.

The farmed areas noted on the attached map as "W" are wetland that can be banked at a ratio of 2:1 (2 acres enhanced for 1 acre of impact). The NW area could be used for

wetland creation, if feasible and desirable, at a ratio of 1.5:1. The small PC area noted above would also qualify for 1.5:1 if it is a non-hydric soil, as I suspect. I did not dig a pit in that area to confirm the soil, but Pat Thompson could do that if you so desire. If it is an area of former wetland it would qualify for a 1:1 ratio if restored.

Please contact me at extension 236 with any questions you might have. Good luck with the bank.

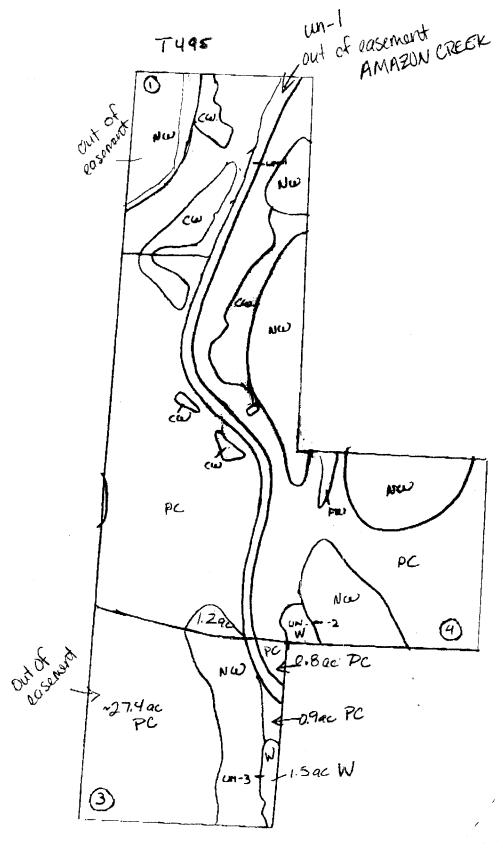
Sincerely,

Janet C. Morlan, PWS Wetlands Program Leader

cc: Larry Devroy
Pat Thompson

Approved b

John E. Lilly
Assistant Director



Easement, PC = 97.2. FW = 0.6 ac CW = 13.2 ac W = 9.3 ac AUU = 2UK



October 9, 2001

Mr. Dave Kurkoski Regulatory Project Manager-Special Studies U.S. Army Corps o Engineers CENWP-OP-G P.O. Box 2946 Portland, OR 97208-2946

RE: SECTION 7 CONSULTATION OF THE AMAZON CREEK WETLAND MITIGATION BANK PROPERTY

Dear Dave.

This is in follow-up to our telephone conversation regarding the need for a Section 7 consultation for endangered species for the above-mentioned wetland mitigation bank.

The wetland mitigation bank is a completely separate parcel and tax lot from the rest of the property and under different ownership. There is no federal nexus as far as funding or any other federal involvement other than the federal partners on the Mitigation Banking Review Team (MBRT), that might trigger the need for an endangered species study.

As an aside, The subject property has been in intensive agricultural production since prior to 1936; I have studied the property on many occasions and at different times of the year, and have not observed any endangered species on the property; Mark Fisher of the U. S. Fish and Wildlife Service, and Steve Smith of the Oregon Department of Fish and Wildlife, have also visited the site on many occasions over the last several years and neither of them have observed any endangered species on the bank site.

I hope this will give you the necessary information for your file. If you should require any additional information please feel free to give me a call at (541) 933-3318.

Sincerely,

PATRICK S. THOMPSON CONSULTING

Pat Thompson Wetland Specialist

cc.

Dave Jampolsky Larry Devroy

Carla Cudmore

Amazon Creek LLC

Division of State Lands

Ridgeline Resource Planning

Amazon Creek Mitigation Bank, LLC.

35749 Spring Hill Road Creswell, Oregon 97426 (541) 895-5910

Larry Devroy Wetland Mitigation Bank Specialist Oregon Division of State Lands

RE: Eugene Airport Issue

Dear Larry:

On February 2, 2001 Bob Noble, Airport Manager for the Eugene Airport, submitted a letter in response to the airport's receipt of notice of the proposed Amazon Creek Wetland Mitigation Bank.

The airport identified an area of concern as being within a 10,000 foot setback from airport runways.

The airport identified our project as being within this area of concern and therefore asked that consideration be given to this issue.

An airport map (see attached) was provided by Mr. Mike Coontz, Eugene Airport Operations Supervisor, that defines the 10,000 foot area of concern mentioned in Mr. Noble's letter, and that also identifies the bank site on the map as being within the 10,000 foot setback area.

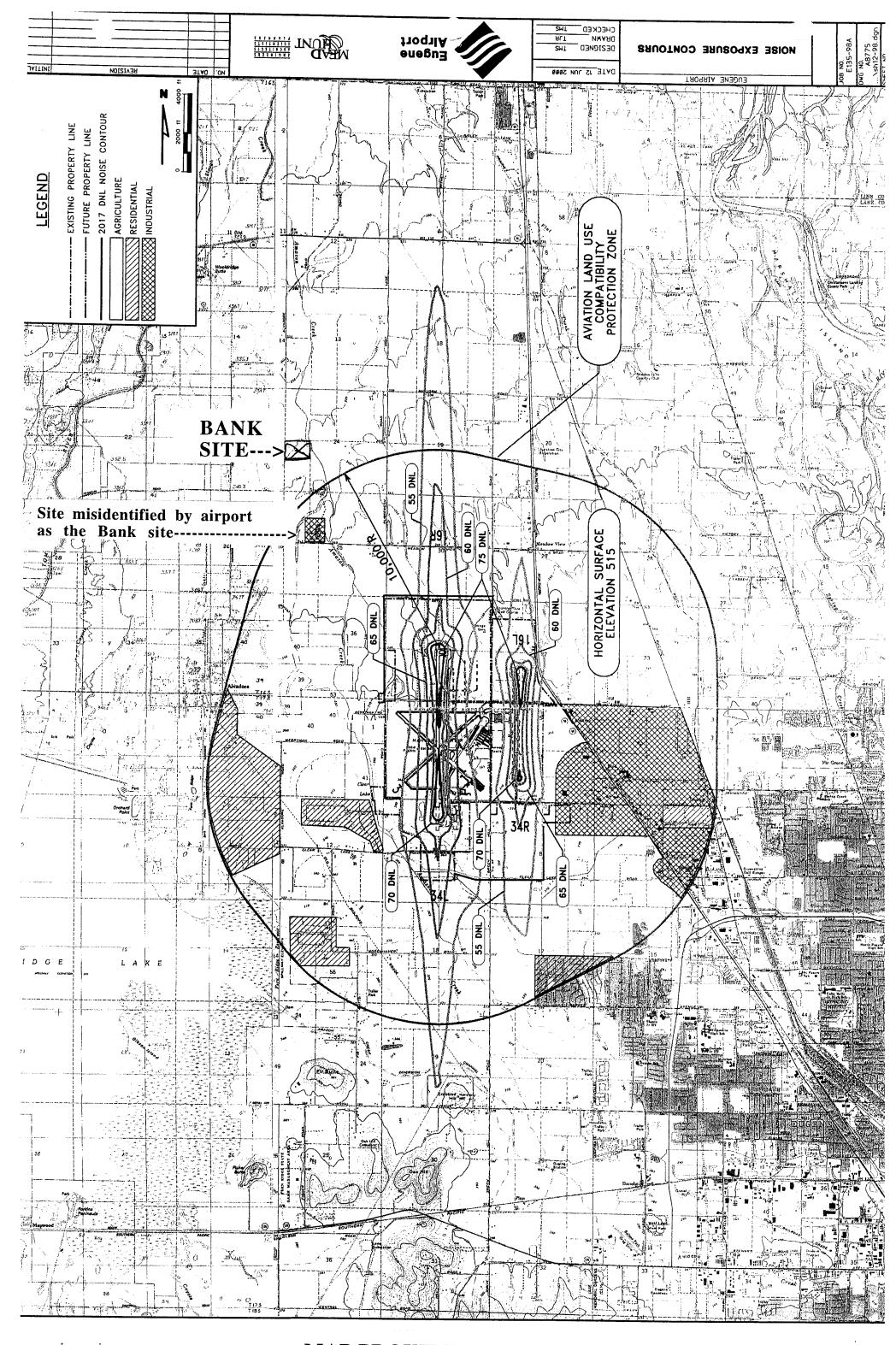
The airport had misidentified our project location. Mr. Coontz was so informed and provided with a copy of their map with the correct location of the bank site showing that is clearly outside the airports area of concern.

I have asked Mr. Coontz for the airport to send a follow up letter correcting their mistaken identification of the banks location and they have not done so.

Attached to this writing is the airport map provided by Mr. Coontz showing the 10,000 area of concern and the location of the properties in question.

Sincerely,

Dave Jampolsky



MAP PROVIDED BY EUGENE AIRPORT SHOWING 10,000 FOOT "AREA OF CONCERN"



January 18, 2002

Mr. Larry Devroy Wetland Mitigation Specialist Division of State Lands 775 Summer St. NE Salem, OR 97310-1279

RE: LANE COUNTY STATUTE ORS.215.213

Dear Larry,

This letter is in follow-up to our conversation regarding creation of wetland mitigation banks on Exclusive Farm Use (EFU) zoned land in Lane County. I spoke with Kent Howe, Lane County Planning Director, on January 16, 2002 at 8:10 AM, regarding this issue. Kent told me at that time that "Creation of, restoration of, or enhancement of wetlands was an outright given use in EFU zoned lands within Lane County under the above-mentioned statute. Kent also told me that he was very much in favor of the creation of wetland mitigation banks within EFU zoned properties. As you know, the City of Eugene has a wetland mitigation bank that is also located within this zoning designation. I also received an E-mail dated 1/16/02 at 08:27:02 AM, from Kent outlining the statute that allows creation of wetland mitigation banks on EFU zoned property within Lane County. Below I have included the exact wording of this statute.

215.213 Uses permitted in exclusive farm use zones in counties that adopted marginal lands system prior to 1993. (1) In counties that have adopted marginal lands provisions under ORS 197.247 (1991 Edition), the following uses may be established in any area zoned for exclusive farm use:

(s) Creation of, restoration of, or enhancement of wetlands.

If case you would like to contact Kent personally to verify this information, I have included his phone # and addresses below.

Kent Howe Lane County Planning Director 125 East 8th Ave. Eugene, OR 97401 Phone (541) 682-3734 Fax (541) 682-3947 E-mail Kent. Howe@co.lane.or.us

If you should require further information, please feel free to give me a call at (541) 933-3318.

Sincerely, PATRICK S. THOMPSON CONSULTING

Pat Thompson

Wetland Specialist

Dave Jampolsky cc.

file