

## RIVERGATE COOPERATIVE AGREEMENT: MITIGATION PROGRAM

(U.S. Fish and Wildlife Service comments re: 8/97 Port matrix)

Mitigation Program Elements	Performance Standards	Compliance	Task	Notes
2. New fill slopes, indicated on Attachment A, will be no steeper than 3:1.	Slopes must be 3:1 or less steep.	Unknown. Agencies are concerned that some areas may not be 3:1 (i.e. slope adjacent to railroad)	(Port) Conduct as built survey of slopes.	Slopes are currently very steep (est. 1:1) and need to be regraded in order to meet this criteria. However, there is now a gravel road along the west side of the project which is within the area needed to create a 3:1 slope, and the Port is planning railroad development within this area as well. Agencies must decide whether or not to approve a change to this criteria, and if approved, how to adequately compensate. The Service is concerned about compensating for the loss of this buffer elsewhere because of the vital role buffers play in maintaining water quality, providing wildlife habitat, etc. Without buffering the west side, the value of this project will be diminished.
2. After permanent fill slopes are formed in these areas (indicated on Attachment A), they will be planted using the specifications in Attachment B.	Permanent fill slopes to be revegetated per specifications in Attachment B.	No. Per 3/96 status report, slopes are being revegetated as adjacent property is developed. Slopes should have been revegetated when formed.	(Port) Conduct vegetative survey and/or provide agencies with aerial photos showing existing vegetation. Provide information on any revegetation efforts: location, dimensions, planting scheme, date(s) planted, map of established vegetation.	Port notes for this item state that this is to be done as part of final site development. The Service disagrees with this statement. The Agreement states that revegetation is to occur after permanent fill slopes are formed. The buffers should be well established by the time development occurs.
2. A vegetative screen to lessen the impact of the industrial development on the wetland area will be planted using the guidelines in the Smith and Bybee Lakes Management Plan, or the City's E Zone standards if the Management Plan has not been adopted.	Smith and Bybee Lakes Management Plan guidelines, Policy 22, B (page 54).	No. Per 3/96 status report, slopes are planted as adjacent property is developed. Vegetative screens should have been planted.	(Port) Establish vegetative screens.	Same comment as above.
3. The Ramsey Lake wetland and part of the adjacent upland area will be excavated to create year-round ponding, wetland fringe and islands, as indicated on Attachment A. Three separate ponds will be created with a total of at least 16 acres of water surface area.	Create at least 16 acres of water surface area (not including islands).	Unknown.	(Port) Provide as-built drawings of site which show topography (including all slopes along the shore and islands), the open water area during the dry season (to ensure at least 16 acres of water surface area, not including islands), and established vegetation on the islands and within the buffer.	Wetland acreage created needs to be determined by the Port and additional acreage should be created to meet the performance standard. Options for additional wetland restoration, including the conceptual design submitted by George Kral, should be discussed at the September, 1997 meeting.

<p>3. The wetland fringe and islands associated with the ponds will be planted as specified in Attachment B. Creation of the new ponds will leave the existing fringe vegetation in place (to the extent practical) on the east side of Ramsey Lake.</p>	<p>Attachment B</p>	<p>Unknown.</p>	<p>(Port) Provide as-built drawings which show existing vegetation and buffer dimensions. Provide info. on revegetation efforts, including planting scheme, date(s) planted, and map showing established vegetation.</p>	<p>This item may not be "done" as indicated on the Port matrix. Emily Roth's notes from the 8/19/97 site visit outline the next steps:</p> <ul style="list-style-type: none"> <li>- write goals and objectives for the islands.</li> <li>- remove exotic vegetation from the islands and replant with native species that meet the goals and objectives.</li> <li>- develop a maintenance and monitoring plan for the replanted islands.</li> </ul> <p><b>The Port should have the following available at the September 1997 meeting:</b></p> <ul style="list-style-type: none"> <li>- map showing the height of the islands and emergent fringe around the islands, as well as plant species present.</li> <li>- the area of emergent fringe, islands, and open water determined from aerial photos. Photos should be available at the meeting for review.</li> </ul>
<p>3. Material removed from Ramsey Lake may be used for construction of adjacent fill dikes and/or islands, or used to enhance upland soil before vegetation is planted.</p>	<p>Limitations on placement of fill removed.</p>	<p>Unknown.</p>	<p>(Port) Provide information on location(s) where fill material was placed.</p>	<p>---</p>
<p>4. The remaining upland area between Ramsey Lake and the Columbia Slough will be planted with appropriate upland species, using the specifications in Attachment B. At least 20 acres of riparian habitat will be created in this project.</p>	<p>20 acres of riparian habitat to be created. Planting specifications are in Attachment B.</p>	<p>No. Per 3/96 Status Report, the area was planted, but was only partially successful.</p>	<p>(Port) Provide information on revegetation efforts: location, dimensions, planting scheme, date(s) planted, and map showing established vegetation .</p>	<p>Areas outside of consideration for further wetland development should be revegetated beginning 1997. Areas where work can begin should be determined by agencies and Port at the September 1997 meeting.</p>
<p>5. The PORT will provide a minimum 100 foot buffer (measured from the ordinary high water mark) along the slough in South Rivergate.</p>	<p>100 foot buffer preserved in perpetuity.</p>	<p>Unknown.</p>	<p>(Port) Provide as-built drawings which show existing vegetation and buffer dimensions.</p>	<p>This buffer should be improved through revegetation efforts. (Potential partnership with BES.)</p>

5. Continue to maintain a 150 foot buffer adjacent to the slough in North Rivergate. Buffer will include a 100 foot vegetative buffer next to the slough and a 50 foot easement area for the 40 mile loop trail. The exact location of the trail may vary in order to accommodate topographical or vegetative features. These buffers may also be the location for stormwater outfall passive treatment facilities (i.e. constructed wetlands).	100 foot buffer and 50 foot easement preserved in perpetuity.	Unknown.	(Port) Provide as-built drawings which show existing vegetation and buffer dimensions.	Buffer areas outside of sites under consideration for development of treatment facilities should be enhanced through the removal of non-native species and unwanted debris, followed by revegetation with native species.
5. The PORT will replant riparian vegetation in these (both 100' and 150') buffer areas where it has been destroyed through the PORT's filling or construction activities (see Attachment B).	Revegetate impacted areas as specified in Attachment B.	Unknown.	Conduct vegetative survey and/or provide agencies with aerial photos showing before and after filling and construction activities. Provide information on any revegetation efforts: location, dimensions, planting scheme, date(s) planted, map of established vegetation.	All areas which are open, exhibit encroachment by non-native species, or are otherwise disturbed should be restored to a healthy riparian plant community.
5. At least 5 acres of riparian habitat will be enhanced in these (along slough in South Rivergate) buffer areas.	Attachment B.	Unknown.	Provide agencies with information showing where buffers have been revegetated: location, dimensions, planting scheme, date(s) planted, map of established vegetation. If 5 acres have not been enhanced, develop contingency plan.	Port notes for this item state that this is to be done as part of final site development. The Service disagrees with this statement. The Agreement states that revegetation is to occur after permanent fill slopes are formed. The buffers should be well established by the time development occurs.
6. The existing ponds adjacent to the new fill line in the North Bybee Lake area will be deepened and enlarged as indicated on Attachment A. At least 2 acres of wetland will be enhanced in this project.	Attachment A. 2 acres will be "enhanced". (Need specific standards).	No. Per 3/96 Status Report, area has been preserved only.	(Port) Provide agencies with map to scale showing topography, vegetation, protected buffers, pond water depths.	The Port matrix states that this has been done. However, the 2 acre site was protected from filling, but it was not enhanced as specified in the Agreement. The Service would like this mitigation element revised so that the 2 acre project will be incorporated as part of the restoration to be developed between the existing Ramsey Lakes and the Columbia slough.
7. The Port will have an analysis prepared of the surface water flow patterns in the Columbia Slough system.	Analysis sufficient to determine design characteristics for water level control projects.	Yes.	None.	---
8. Construct a water control structure in Smith Channel between Smith and Bybee Lakes.	Enable habitat modifications in Smith Lake through water level manipulation.	See "Revised 8 and 9" below.	N/A	---

<p>9. Construct a channel between the western end of Bybee Lake and the Columbia Slough.</p>	<p>Bybee Lk. function as an integral part of the Columbia Slough/Willamette system. Enhance 170 acres of lake &amp; wetland habitat. Habitat diversification in Bybee Lake.</p>	<p>See "Revised 8 and 9" below.</p>	<p>N/A</p>	<p>At the Rivergate meeting on April 15, 1997, the Port committed to sending out a revised matrix and agreement language in 2 weeks (by April 29th). Meeting notes faxed by the Port on April 25th stated that responses regarding the notes should be provided to the Port by May 7th, and then revised Agreement language would be sent out to agencies for review. The Service has not yet seen the revised Agreement.</p>
<p>"Revised" 8 &amp; 9. Replace existing water control structure in North Slough with one that 1) will allow unobstructed flow both in and out of the lakes on a daily and seasonal basis, and 2) can be manipulated to impound water. The design will be engineered to allow water control, have a standard opening across the North Slough and allow for vehicle access. The Port will be responsible for maintaining the integrity and functionality of the structure for the same length of time as the contractor. The Port will be responsible for removing the present structure if necessary to meet these objectives.</p>	<p>Provide for management of Smith and Bybee Lakes hydrology in a manner that allows water surface elevations in the lakes to mimic those of the Columbia River at its confluence with the Willamette River, both daily and seasonally.</p>	<p>No.</p>	<p>(Port) Develop/adopt Metro's water control structure plans.</p>	<p>Same comment as above.</p> <p>The revised Agreement should contain precise performance standards to ensure the structure operates effectively. Suggested standards: - The structure should allow water to be retained at up to 13.5 feet above MSL. - The structure should allow tidal influence at 1 foot above MSL, which is the natural base of the Columbia slough at the east terminus in north slough. - Control plates should allow water to be retained at each 1 foot interval.</p> <p>(Final standards will require review by Metro.)</p>
<p>"Revised" 8 &amp; 9. Develop a water source and distribution system to augment flow into the lakes from an outside source.</p>	<p>System must be adequate to control avian botulism, mimic river hydrology, and other management needs (agencies need to define &amp; develop augmentation requirement)</p>	<p>No.</p>	<p>(Agencies) Determine augmentation necessary to achieve objectives. (Port) develop water source and distribution system.</p>	<p>Suggested standards: - The pump will be a low head, high volume pump with the ability to augment water at a rate of 30 cfs (when water is available in the slough). - All necessary hoses will be provided. - A concrete pad to support the pump and a sump area at the intake point in north slough will be constructed. Note: Metro will provide the power source and will obtain any required permits. (Final standards will require review by Metro.)</p>
<p>"Revised" 8 &amp; 9. The PORT will work with the Smith &amp; Bybee Lakes Manager to develop a Habitat Restoration Plan that includes maintenance and monitoring to ensure that management objectives are met.</p>	<p>Outline strategy to return the Smith and Bybee Lakes area to tidal freshwater marsh habitat.</p>	<p>No.</p>	<p>(Port/Metro) Develop Habitat Restoration Plan (trial planting plots; monitoring plan to study reveg. plots vs. natural recruitment; process to determine need for active revegetation and exotic species removal; timeline; budget).</p>	<p>---</p>

"Revised" 8 & 9. Restore 350 acres of willow dominated habitat long the perimeter of the lakes.	Restore 350 acres of willow dominated habitat to 60% canopy closure.	No.	(Port/Metro) Implement Habitat Restoration Plan.	---
10. The PORT will design and construct a public storm drainage system which will be built to City of Portland standards.	City of Portland standards and Attachment C.	Unknown.	(Port) Provide information to agencies about the status, including any changes to original plan and design standards.	Port notes say "being done." The Service would like more information on this as mentioned to the left.
10. Upon completion, elements of the public storm drainage system will be transferred to City ownership for operation and maintenance.	Transfer to City ownership.	Yes.	N/A	The Service would like to know more about this process and the status.
10. Water from this public storm drainage system will not be routed into the Columbia Slough, Smith, Bybee, or Ramsey Lakes wetland systems without first entering a passive treatment facility to filter out commonly occurring substances, such as oil, grease, etc., which would have a significant negative impact on water quality.	Water must enter passive treatment facility. Attachment C.	Unknown.	(Port) Provide information to agencies about the status, including any changes to original plan and design standards.	Port notes say "being done." The Service would like more information on this as mentioned to the left.
10. Emergency spill containment will also be part of the passive treatment facility above the wetlands. Attachment C indicates the current PORT plan for storm drainage in Rivergate.	Facility must have emergency spill containment. Attachment C.	Unknown.	(Port) Provide information to agencies about the status, including any changes to original plan and design standards.	Port notes say "being done." The Service would like more information on this as mentioned to the left.