

EAST COLUMBIA NEIGHBORHOOD NATURAL RESOURCES MANAGEMENT PLAN



As Adopted by the
Portland City Council
on April 18, 1990
City of Portland, Oregon

Portland City Council

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Wetland Assessment (Technical Report) Completed By Scientific Resources, Inc.	Not Attached

EAST COLUMBIA NEIGHBORHOOD NATURAL RESOURCES MANAGEMENT PLAN

Introduction

The East Columbia Neighborhood is one of the most diverse areas in Northeast Portland. Its location close to the Columbia River, Portland Airport, industrial areas and major access routes make it a desirable place to both live and work. The neighborhood has clearly defined residential and industrial areas with several other large parcels used for agricultural and pastoral uses. One of the most important natural characteristics of the area are its wetlands and drainageways. The area has historically had flooding problems due to its low elevations and proximity to the Columbia River. Levees were originally constructed to assist in flood control and agricultural practices which dominated the landscape during the early part of the century. Today a network of drainage ditches exist in the area which divert water to one of two pump stations along the Columbia Slough.

Wildlife diversity is another factor which exists in the areas open spaces and farmed lands. Deer, fox, coyote, hawks and flocks of migrating and wintering waterfowl within and around industrial and residential areas are dramatic indicators of the area's contrasting urban and rural environmental identity.

The Comprehensive Plan has established increased residential densities on several of the area's vacant parcels while others received industrial zoning along the perimeter of the neighborhood. Since the adoption of the Comprehensive Plan, several fills of wetlands have been completed in the area. Although the adoption of the Environmental Zone has resulted in identifying and protecting some of the obvious habitat areas, other wetlands remain protected only by federal and state laws. The Neighborhood residents have worked hard over the last ten years to establish a consistent way to deal with wetland fills while participating in the often confusing fill permit regulations and procedures.

In 1989, the year the plan was undertaken, the federal and state agencies responsible for regulating and monitoring wetlands in this area (EPA, U.S. Corps of Engineers, US Fish & Wildlife, U. S. Soil Conservation Service and the Oregon Division of State Lands) agreed upon a new method to delineate wetlands, thereby eliminating some of the past confusion about what is and is not a wetland. In addition, the EPA and Corps of Engineers called for a "No Net Loss Policy" on the wetlands issue. Both the new delineation method and the "No Net Loss Policy" were taken into consideration by the neighborhood residents and staff that prepared this plan.

This plan is an attempt to draft a set of policies and objectives for guiding development within these natural areas. They are intended to be used as implementation tools to evaluate future fill permits, environmental reviews and other land uses cases which involve wetlands and other natural resource areas within the neighborhood.

The Plan Process

In May of 1989, The City of Portland Bureau of Planning began work on a study of wetlands within the Peninsular Drainage District #2 area. Due to the past history of fill permits, road construction projects and neighborhood involvement in local land use matters, the City recognized the need to put together a natural resource management plan based on input from the areas property owners, residents and the affected state and federal agencies.

In May 1989, the City hired Scientific Resources, Inc. (SRI), an environmental consulting firm to complete the wetlands delineation and wildlife analysis. Both SRI and the Planning Staff used the new Unified Federal Method to delineate the area's wetlands. The consultants and staff also met with most of the affected property owners to request permission to complete on-site inventory work and to brief them on the current wetlands issues. The result of the SRI work is a technical document contained in the second half of this plan.

The first neighborhood meeting was on June 14th and was attended by 28 persons. The explanation of the scope of the project and current wetlands policies were the main issues at this meeting. The second meeting was held on August 3rd, 1989. At this meeting the results of the SRI delineation were reviewed and discussed and a subcommittee was formed to begin work on writing a goal, policies and objectives for a neighborhood policy document. The subcommittee met for the second time on August 31st, 1989 to further discuss the policy document. The general membership was also invited to attend this meeting as were property owners within the study area, yet outside the East Columbia Neighborhood boundaries. The subcommittee met for a third time on Sept. 12th to review and further discuss the plan policies and objectives.

On October 19, 1989, another meeting of the general membership was held and a presentation was made by the Oregon Division of State Lands (DSL) and the U.S. Army Corps of Engineers on current wetlands policies. The subcommittee met for the fourth time on Nov. 4th and reviewed the preliminary draft plan. Revisions were made to the draft plan and a fifth meeting of the subcommittee was held on November 30th. Following that meeting a draft copy of the plan was mailed to the following environmental agencies for their review and comments [U.S. Army Corps of Engineers, Environmental Protection Agency, U.S. Department of Fish and Wildlife, Audubon Society, Oregon Division of State Lands, Columbia Corridor Association, 40-Mile Loop Land Trust, Oregon Department of Fish and Wildlife, Peninsular Drainage District No. 2, The Wetlands Conservancy, and Port of Portland]. The agencies were given a 30-day time period to comment on the draft. Several changes were then made to the plan based on the agencies comments.

A public notification was mailed to all property owners in the Peninsular #2 Drainage District (including the East Columbia Neighborhood) scheduling a neighborhood meeting to vote on the draft plan. The results of that meeting, held on March 13th, 1990, was a majority vote by the East Columbia General Membership to adopt the draft plan. The public notification also included a notice of a Planning Commission hearing on the plan on March 27th, 1990. The Planning Commission voted unanimously to adopt the plan and recommended adoption by the Portland City Council. On April 18, 1990, the City Council voted unanimously to adopt the East Columbia Natural Resources Management Plan.

Findings

Goal and Policy Considerations: A neighborhood based natural resource management plan must be in conformance with the Portland Comprehensive Plan and can be adopted as a Portland Neighborhood Plan under Portland Comprehensive Plan Policy 3.6 (Neighborhood Plans) and Policies 8.14 Natural Resources and 8.15 Wetlands/Riparian/Water Bodies Protection. The goal, policies and objectives of this neighborhood plan are proposed for adoption.

Implementing Actions: The plan also includes implementing actions which are not for Planning Commission or City Council adoption. They are proposed by the neighborhood as a plan for neighborhood initiated programs and provide a guide for private or city-assisted projects, neighborhood brochures, etc. Adoption of the East Columbia Neighborhood Natural Resources Management Plan does not commit the city to funding projects or implementing the actions at this time.

Purpose of the Plan: This neighborhood natural resource management plan is intended to promote a consistent approach to development within the environmentally sensitive areas of the neighborhood. Many of the neighborhood residents placed a strong priority on maximizing the educational and recreational values of these areas. Therefore, many of the policies reflect a commitment towards preserving these opportunities and enhancing them when possible. Although Goal 8 of the Comprehensive Plan contains policies and objectives for conserving natural resources and wetlands, this neighborhood plan is more refined and responsive to neighborhood needs than can be attained under the broad outlines of the City's Comprehensive Plan.

Conformance with the City's Comprehensive Plan:

A summary of the relevant Comprehensive Plan goals and policies as they relate to the East Columbia Neighborhood Natural Resources Management Plan.

Proposed Goal, Policies and Objectives: The Comprehensive Plan for the City of Portland provides a coordinated set of guidelines for decision making. The goal, policies and objectives of the East Columbia Neighborhood Natural Resources Management Plan are in conformance with the goals, policies and objectives of the Portland Comprehensive Plan. A summary of the relevant goals and policies as they relate to the East Columbia Neighborhood Natural Resources Management Plan follow:

- **Goal 2: Urban Development**

Policies 2.1 Population Growth, 2.2 Urban Diversity, 2.6 Open Space, 2.9 Residential Neighborhoods, 2.18 Utilization of Vacant Land.

Comment: By adopting the goal, policies and objectives of the neighborhood plan, the housing opportunities are enhanced by the neighborhoods support of residential development patterns which achieve the residential densities established by the Comprehensive Plan while preserving wetlands.

- **Goal 3, Neighborhood Goal and Policies**

Policies 3.1 Physical Conditions, 3.2 Social Conditions, 3.3 Neighborhood Diversity, 3.5 Neighborhood Involvement, 3.6 Neighborhood Plan and 3.7 Visual Communication.

Comment: Preservation of wetlands and wildlife habitats has been identified as a neighborhood priority and is a key element in this neighborhood plan. The neighborhood's large amount of vacant residentially zoned land is located in a region with an expanding number of jobs and industries which make it an ideal area for new housing production. The neighborhood residents look forward to the new housing production and want to promote the environmental identity of the area as an additional amenity to attract new residents. Neighborhood involvement is essential to drafting and implementing the plan.

- **Goal 4: Housing Goal and Policies**

Policies 4.3 New Housing Production, and 4.4 Housing Choice and Neighborhood Stability.

Comment: This plan encourages new housing production and varieties of housing developments on vacant land (such as P.U.D.'s) which preserve wetlands while achieving the housing densities established by the Comprehensive Plan.

- **Goal 5: Economic Development Goal and Policies**

Policies 5.12 Environment, Energy and Transportation, 5.18 Diversity and Identity in Industrial Areas, and 5.19 Protection of Non-Industrial Lands.

Comment: This plan provides industrial developers with the knowledge of neighborhood policies and objectives in advance of specific project planning. In addition, the plan is an attempt to bring state and federal policies on regulating wetlands down to a local level. The plan also contains objectives for buffering wetlands and non-industrial lands from new commercial and industrial developments which is supportive of Policy 5.19, Protection of Non-Industrial Lands.

- **Goal 6: Transportation Goal and Policies**

Policies 6.2 Regional and City Traffic Patterns, 6.3 Land Use/Street Relationship, and 6.4 Public Transportation

Comment: This goal is not directly related to the neighborhood Natural Resource Management Plan, however, the neighborhood has already addressed issues relating to the separation of industrial and non-industrial traffic. In addition, they are working on an on-going effort to re-establish Tri-Met bus service to the neighborhood. The neighborhood residents and property owners also look forward to participating in the future planning efforts and the environmental impact assessment for the tentative Slough bridge proposal at NE 13th Avenue.

- **Goal 7: Energy Goal and Policies**

Policy 7.3, Land Use.

Comment: This plan is supportive of new housing production and industrial developments which preserve wetlands while concentrating development on the remaining portions of the site. Residential developments such as P.U.D.s and cluster subdivisions result in a more energy efficient type of site development, which is supportive of Goal 7.

- **Goal 8: Environment Goal and Policies**

Policies 8.8 Groundwater Protection, 8.9 Open Space, 8.10 Drainageways, 8.14 Natural Resources, 8.15 Wetlands/riparian/water bodies Protection, 8.16 Uplands Protection, 8.17 Wildlife and 8.18 Natural Resources Management Plans.

Comment: The natural resource management plan goal, policies and objectives are supportive of the Environment Goal and policies since they promote education, conservation and the protection of wetlands and water bodies. Several of the plan's policies directly support the City's Goal 8 objectives to protect wetlands, water quality, flood control and wildlife corridors. In addition, this plan encourages the enhancement of significant open spaces, recreation trails and other upland areas in the neighborhood.

Policy 8.18 encourages the development of natural resource management plans for large areas. This plan addresses this specific Policy and is in compliance with Zoning Code Chapter 33, Section 635.100, Natural Resource Management Plans.

This plan covers areas mapped with the City's Environmental Zone and other properties recently inventoried as federal and state regulated wetlands. Therefore, the plan addresses resource values which are of a concern to local, state and federal agencies. The wetlands delineation completed by S.R.I. Consultants for this plan will result in more certainty for land owners and in more rapid processing of development requests. This information will also enable land owners to begin planning for future mitigation areas if fill requests will be necessary for land development.

Since the majority of the land owners who have vacant parcels mapped with wetlands do not have any immediate development plans, specific mitigation areas have not been identified. However, general areas where mitigation can occur are illustrated in Map 1B and are discussed under Policy 6 Wetland/Natural Resource Mitigation Areas.

Another one of the elements of this plan which is supportive of Goal 8 is Objective 6G, Application of Environmental Concern Overlay Zone. This objective requires that all new mitigation areas required by City, State, and Federal Reviews be mapped with the City's Environmental Concern overlay zone.

- **Goal 9: Citizen Involvement Goal and Policies**

Policies 9.1 Citizen Involvement Coordination, 9.2 Comprehensive Plan Review and 9.4 Intergovernmental Cooperation.

Comment: The East Columbia planning effort utilized extensive citizen involvement. It

is intended that adoption of this plan will aid in the Comprehensive Plan Review for this area. In addition, this plan involves the neighborhood citizens in environmental policies which were initiated by state and federal agencies.

- **Goal 11: Public Facilities Goal and Policies:**

Policies 11.11 Service Responsibility, 11.47 New Parkland and 11.52 Public/Private Opportunities.

Comment: The neighborhood objectives to provide increased recreational and educational opportunities are supportive of the city's objectives to provide them.

PROPOSED EAST COLUMBIA NEIGHBORHOOD NATURAL RESOURCES MANAGEMENT PLAN

Neighborhood Goal

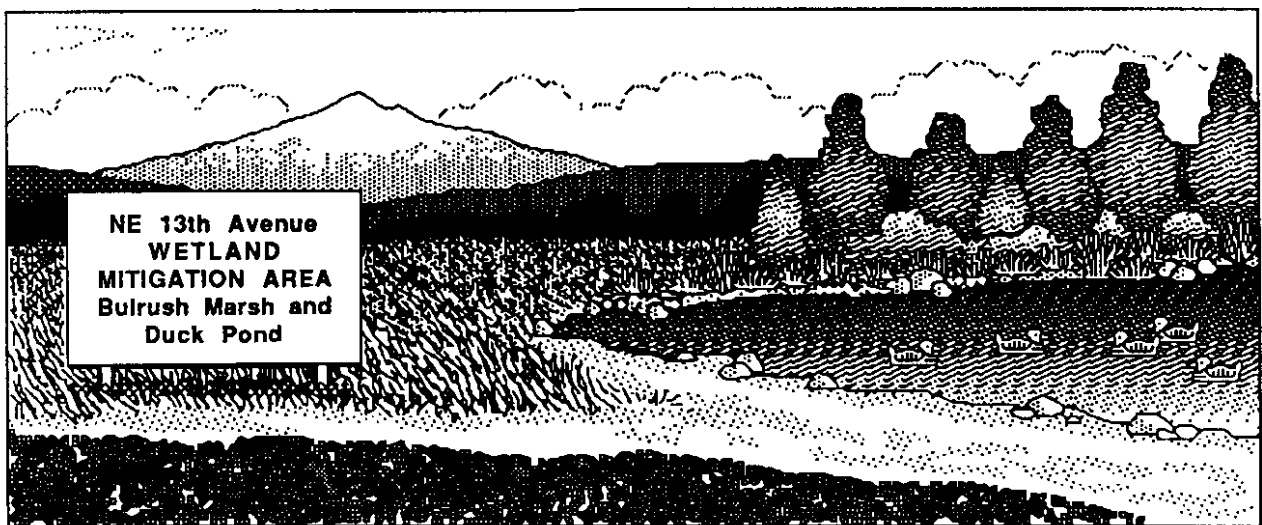
Strengthen the East Columbia Neighborhood as a desirable place to live and work by building and preserving wetlands and wildlife habitats and promoting the educational value of the environmental resources within it's boundaries.

POLICY 1: Education

Promote the knowledge of the environment within the East Columbia area and the historical events that have occurred in the area.

- Objective 1A : Access /Trails: Provide limited access to wetland and wildlife habitats area to ensure a balance between education and passive recreation values and the need to limit access to these environmentally sensitive areas.
- Objective 1B: Signage: Provide plaques and signs along trails, mitigation and preservation areas to describe the history, environmental resources and conservation efforts, as well as to limit access to specific viewing areas.

Discussion: The neighborhood residents feel it is important to share the knowledge of the area's history and environment with both children and adults. Since the 40-Mile Loop Trail route borders the neighborhood on the north, south and east, there are many opportunities to provide plaques and signs to describe the environment along the slough. In addition, the School District Arboretum provides the neighborhood with an area rich in wildlife and plant habitats which should be preserved and enhanced for educational opportunities.



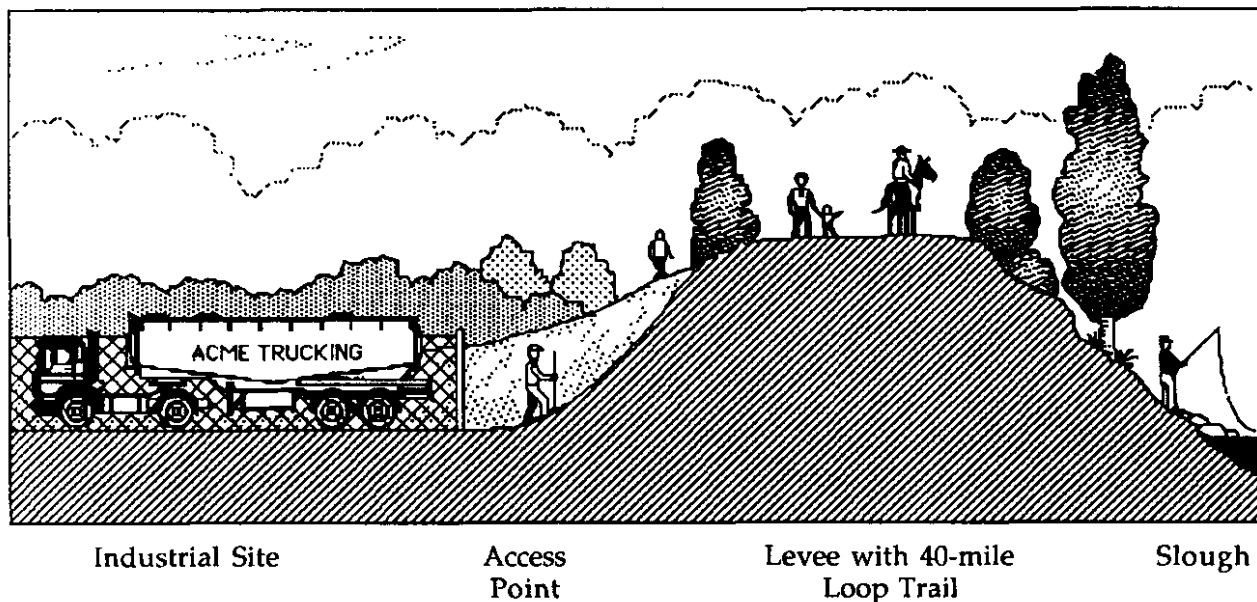
Example of Policy-Promoting Signage

POLICY 2: Recreation

Increase the opportunities for access to recreational areas within the neighborhood area.

- Objective 2A: Access to Open Space and Recreational Trails: Promote the use of existing parks and open space areas within the neighborhood by its residents and other city residents and require dedications of trail easements and connections when development occurs along the identified trail routes.
- Objective 2B: Increase public access to the slough for canoeing, hiking, horseback riding and other related recreational opportunities.
- Objective 2C: Relocate fences or barriers which prevent key access points to the trail system.

Discussion: Completion of the 40-Mile Loop Trail along the top of the levee on the south and east sides of the neighborhood is a high priority among the neighborhood residents. The views along this section of the trail offer an opportunity to see a variety of wetlands and wildlife habitats without the interference of automobile and truck traffic. However, getting to the trail and levee from different parts of the neighborhood will require access permission from a few property owners. Map #2, attached, identifies areas where the neighborhood residents feel trail access or connections will be necessary.

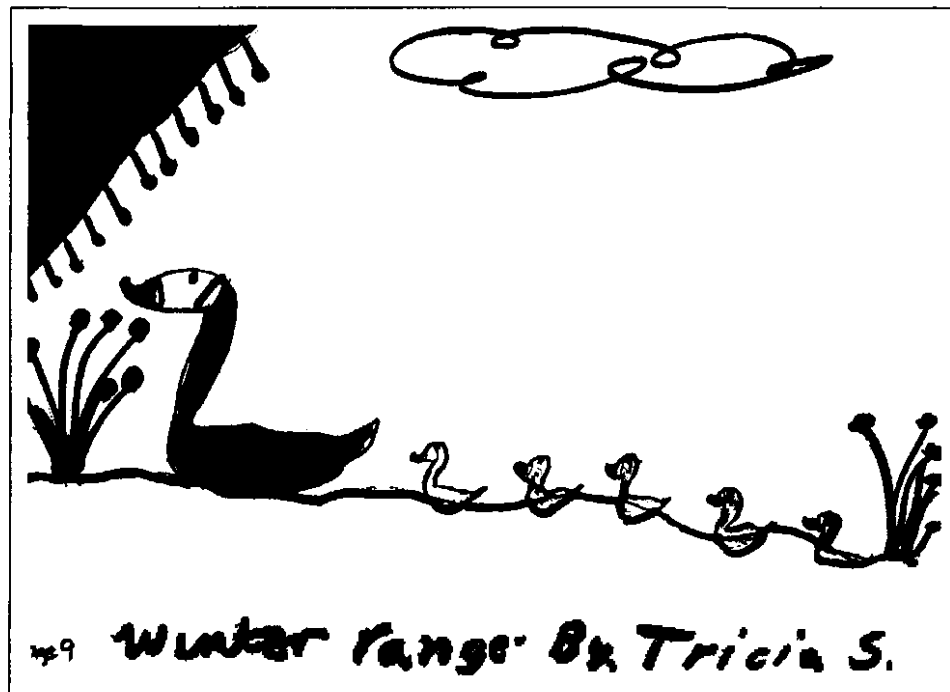


POLICY 3: Conservation

Promote conservation efforts which replace lost wetland and wildlife habitat values.

- Objective 3A: Promote conservation projects such as replacement of wetland vegetation and plant diversity, fish populations and bird habitats.
- Objective 3B: Promote conservation education programs and efforts which involve youth and minority employment.

Discussion: The neighborhood residents would like the property owners and developers to take advantage of the many conservation oriented groups such as the scout troops, the Oregon Youth Conservation Corps, Columbia Children's Arboretum Conservation Committee, etc. to replace and enhance wetlands and other natural resource areas. These objectives are also intended to advance the effort of educating our youth on the values of our environment.



POLICY 4: Water Quality

Enhance the water quality in the area's wetlands and drainageways by utilizing pollution control measures to maintain good water quality and implement vector control practices.

- Objective 4A: Require the construction of detention ponds and passive treatment wetlands for new industrial and commercial development to ensure that the water quality is acceptable for wildlife purposes and discharge into the Columbia Slough system.
- Objective 4B: Implement wetland management practices that are integrated with vector (mosquito) control needs of the community.

Discussion: Since the area's drainage system involves a network of drainage ditches which flow through wildlife habitats, residential, agricultural and industrial areas, it is important to neighborhood residents and environmental agencies to keep water quality as high as possible. A new concept which is being implemented elsewhere in the city is that of passive treatment wetlands. With the creation of a natural holding area for surface runoff, many sediments drop out and pollutants such as phosphorus are absorbed by plants before the runoff water flows into the Slough. The Oregon State Department of Environmental Quality is already requiring pre-treatment of stormwater runoff from industrial sites when a fill permit is required. Passive treatment wetlands also provide the additional benefit of stormwater detention in areas where periodic flooding can occur.

In addition, many of the area's existing wetlands provide ideal mosquito breeding habitats. However, there are methods for manipulating water levels or wetland characteristics during the breeding season which can drastically reduce the mosquito populations. The neighborhood residents would like property owners to consult with vector control experts on how to manage their wetlands (particularly when they are altering and creating new wetlands) in order to avoid unnecessary mosquito problems. Therefore, Multnomah County Vector Control should be included on the mailing list for the U.S. Army Corps of Engineers and State of Oregon Division of State Lands fill/excavation permits.

POLICY 5: Water Level Control

Work towards a unification of goals with the Drainage District that maintains water levels in the neighborhood system to sustain existing wetlands.

- Objective 5A: Prevent the long-term dewatering of existing wetlands within the neighborhood through good flood control/drainage management practices.

Discussion: Since the neighborhood residents have limited input into how the Drainage District manages the water levels in the area, they would like to encourage the District to develop a drainage management plan for the area which clarifies their jurisdiction and drainage practices. The Drainage District should incorporate other public interests and values into their operations and avoid the single-objective management technique of flood control.



POLICY 6: Protection of Wetland / Natural Resource Areas

Protect significant resource areas by discouraging filling and development of sensitive and unique habitats in the neighborhood, and requiring buffering of new developments adjacent to these sites.

- **Objective 6A: Significant Resource Areas:** The neighborhood has two significant and somewhat unique natural resources - the School District Arboretum and the Marine Drive Slough. Development on these sites and adverse impacts from adjacent activities should be highly discouraged.

Discussion: Both of these sites have been identified as having significant habitat values and are mapped with the City's EC, Environmental Concern, overlay zone. Therefore, a City environmental review and public notification is already required. However, due to the uniqueness of these two sites in this area, they should be preserved and filling, excavating or draining activities should be prohibited. (See Specific Wetland Values Section, pg. *)



Black-crowned Night Heron

POLICY 7: Wetland / Natural Resource Mitigation Areas

Provide quality wetland / natural resource mitigation areas which are of comparable size and design for maximum environmental value.

- **Objective 7A: Landscaping:** Mitigation areas over one acre should be accompanied by detailed grading and planting plans for the reintroduction of desirable wetland plant species through natural and man-made methods.
- **Objective 7B: Comparable Habitats:** Where mitigation is required, comparable habitats should be created unless superseded by regionwide environmental needs or issues.
- **Objective 7C: Aquatic Life:** Where mitigation areas are created with bodies of open water, steps should be taken to reintroduce desirable fish and aquatic life which are beneficial to the food chain.
- **Objective 7D: Locations:** The preferred location of mitigation areas is within the same drainage basin as the wetlands to be filled. They should be located as close to other existing wetlands and significant natural areas, if possible. Nonbuildable or less valuable land next to the recreation trails, open space areas and the levee should be utilized for mitigation opportunities, if possible.
- **Objective 7E: Off-Site Mitigation:** Off-site mitigation areas should be evaluated against local and regionwide environmental needs in order to match the site to the specific type of habitat needed in the area.
- **Objective 7F: Managed Mitigation Areas/ Winter Waterfowl Habitats:** Another preferred option for mitigation is that of planting a wetland with crops or grasses which can be mowed or tilled in the fall to provide winter waterfowl habitat. The tilling can also be done in a manner which reduces mosquito populations.
- **Objective 7G: Application of Environmental Concern Overlay Zone:** In order to preserve and protect mitigation areas, the City's Environmental Concern overlay zone shall be applied to all new wetland and natural resource mitigation areas.

Mitigation areas which are required as part of a City of Portland Environmental Review shall be mapped with the Environmental Concern overlay zone, as part of that Type II review process (Section 33.635.070).

Mitigation areas which are required as part of a State or Federal fill permit and are not part of an Environmental Concern overlay zoned area, shall also be mapped with the Environmental Concern overlay zone. Following the completion of the construction of the mitigation area and final approval of the fill permit(s), the applicant shall initiate a pre-application conference and Zone Change (Type II) procedure to apply the Environmental Concern Overlay zone to the required mitigation area.

The Environmental Concern overlay zone should be applied to all required mitigation areas as a means of protecting these resources and tracking them over time. The application procedure to apply this overlay zone is intended to be an inventory and recording keeping function and should not delay other city permit approvals.

Since many of the existing wetlands have poor water quality and plant diversity, there are many opportunities for enhancement and mitigation. These options include introducing new wetland emergent plants, creating new ponds and open water areas as well as creating managed mitigation areas which are tilled for winter waterfowl habitats. Permittees are encouraged to utilize local and state resources for reintroducing plan and aquatic life and managing wetlands.



POLICY 8: Wildlife Corridors

Provide a wildlife corridor for birds and other wildlife for movement through the neighborhood area to link up existing open spaces, wetlands and wildlife habitat areas.

- Objective 8A: Protect the identified three wildlife corridors within the neighborhood by maintaining an adequate amount of wetlands and other habitat area to allow wildlife movement.

Discussion: The neighborhood residents have observed the movement of birds and mammals such as fox and coyote through the neighborhood's linear wetlands and undeveloped corridors. The three wildlife corridors identified on Map #4, link up linear wetlands and low-lying areas which run primarily east to west and connect the wetlands and open space areas to the Columbia Edgewater Golf Course and Peninsular Canal on the east side of the neighborhood. The properties within these corridors are the more difficult sites to develop and several of them have a high habitat value.

The planning staff has also identified some of these linear wetlands such as the Marine Drive Slough as significant wildlife habitats. Both the City's ESEE analysis and the field observations made by SRI have revealed information on the habitat value of the Marine Drive Slough, School District Arboretum site and other wetlands within these three wildlife corridors. The Environmental Concern, EC zone has been applied to the entire length of Corridor "A". Corridor "B" is made up of the largest undeveloped concentration of wetlands within a low basin area. Corridor "C" links up the School District Arboretum site, drainage ditches and the Buffer zoned area and mitigation site on the north side of the Merritt property.

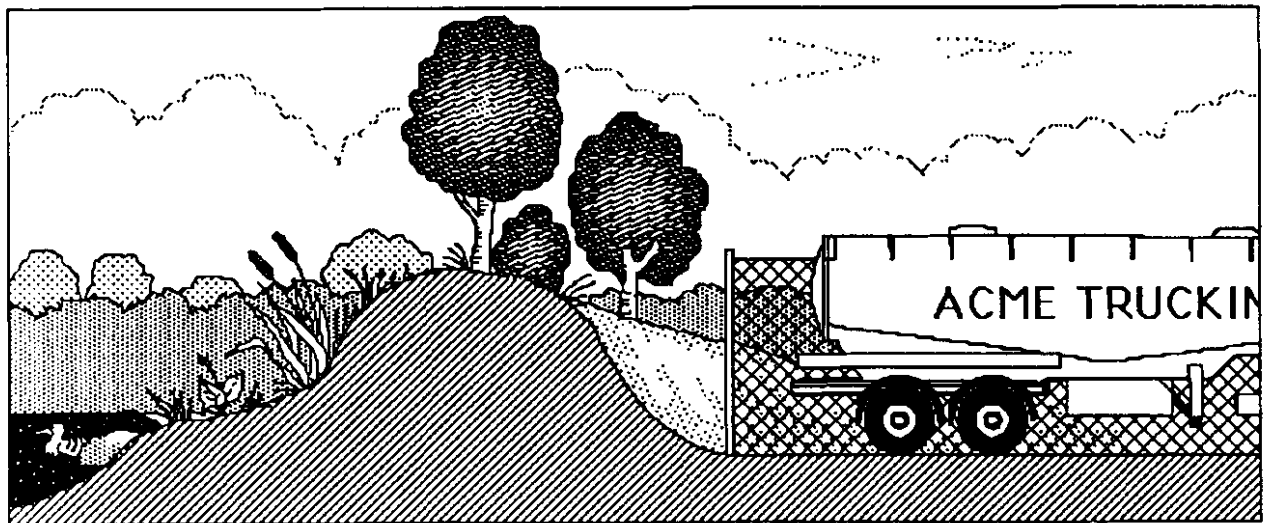
The wildlife corridors on Map #4 are intended to be conceptual guidelines for future developments to take into consideration when creating mitigation areas and planting new trees and landscaping. Mapping these corridors also provides an educational function for new residents and children to become aware of wildlife habitats and wetlands in this neighborhood.

POLICY 9: Buffering

Separate existing and new wetlands from new residential, commercial and industrial uses with setbacks and buffer areas.

- Objectives 9A: Existing Wetlands and Natural Resource Areas: Minimize disturbance to existing wetlands and natural resource areas by creating a minimum 25-foot wide landscaped buffer areas to include such things as berms, fences and trees.
- Objective 9B: New wetlands and natural resource mitigation areas: The Environmental Concern overlay zone shall be applied to all new required mitigation areas and shall include a minimum of 25-feet from top-of-bank or the edge of the jurisdictional wetland.

Discussion: New site developments which are adjacent to wetlands not identified by the City Environmental Concern Overlay Zone should have a setback and buffer area between the new use and the natural resource area. Given the wide range of types and sizes of wetlands that may be involved, this plan will not attempt to specify an exact type of setback or screening requirement. However, a minimum of 25-feet of buffer area should be established. Each case should be evaluated individually to incorporate as much buffering as possible in order to adequately protect the existing or new man-made wetland.



Pond

Mitigation
Area

Berm

Fence

Industrial Site

POLICY 10: Wetlands/Residential Sites

Support residential development patterns which preserve existing wetlands and overall residential densities established by the Comprehensive Plan.

- Objective 10A: Support Planned Unit Developments and Cluster Subdivisions which preserve wetlands and support other housing needs and residential densities established by the Comprehensive Plan.

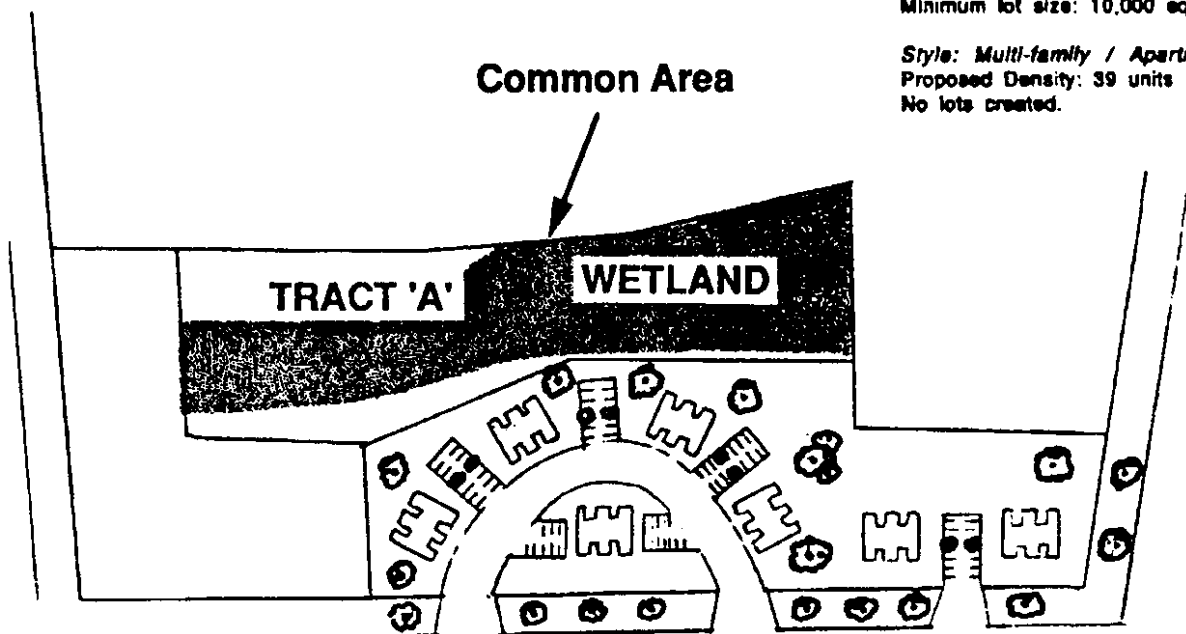
Discussion: Since a large amount of the vacant residential land in the neighborhood has been identified as wetland, there are fewer options for standard residential subdivisions. Therefore, the neighborhood residents would be supportive of Planned Unit Developments in cases where mitigation is not viable because the wetlands are too large to fill or too valuable to relocate. This provides the developer with the incentive to preserve the wetlands while still achieving the number of residential units necessary to make the project viable and meet the densities set forth in the Portland Comprehensive Plan.

EXAMPLE

PLANNED UNIT DEVELOPMENT

Zone : R10
Parcel Size : 9 acres
Allowable Density : 39 lots/units
Minimum lot size: 10,000 sq. ft.

Style: Multi-family / Apartments
Proposed Density: 39 units
No lots created.



SPECIFIC WETLAND VALUES, ENHANCEMENT PRACTICES AND VISION STATEMENTS

The wetlands within the neighborhood project area that were inventoried were categorized into seven areas (See figure 9). These seven wetlands were visited and evaluated by the environmental consultants (SRI) and were ranked according to the Wetlands Wildlife Habitat Assessment (WWHA) and the Wetland Evaluation Technique (WET). A description of these areas and their rankings are included in the SRI report, page 6 in the second part of this document. Three of these wetlands were inventoried using the ESEE analysis (analysis of economic, social, environmental and energy consequences) by the City Planning Bureau for the adoption of the environmental mapping project and E zone. The results of the ESEE analysis are also included in the following discussion. One of the wetlands on the Overnite Transportation Inc. property, adjacent to the Matlack Trucking site was inventoried by SRI, but is actually outside the neighborhood association and Peninsular Drainage District boundaries. This wetland will be eliminated from further discussion in the natural resource management plan due to its remote and isolated location. Two other wetlands within the study area were not inventoried by SRI since they had been previously delineated and were in various stages of the fill permit process. These are the Merritt and Jubitz (TEC) wetlands.

The following pages contain a summary of the resource values of the six major wetlands in the neighborhood study area. The summary also includes suggested enhancement practices for the wetlands as well as a vision for how the wetlands can be integrated into land use/development and how the natural resources can be preserved and/or enhanced. Maps 2-4 contain schematic drawings of the neighborhood vision on the 40-Mile Loop Trail, Mitigation Areas and Wildlife Corridors.

The entire neighborhood study area is within the Peninsular 2 Drainage District. Historic flooding and the complex hydrological factors which influence this area make flood control and storage an important issue within the drainage basin. All of the major wetlands described in the following pages provide an important function and resource value in flood control and storage. Therefore, an important factor throughout the area is a need to preserve enough flood control capacity to sustain the increase in impervious (paved) areas that will result with new residential and industrial development. This is one of the main reasons why the preferred location of mitigation areas is within the same drainage basin as the wetlands to be filled.

Highest Value Wetlands

The wetlands which received the highest ranking were the School District Arboretum ditches and moat and the Marine Drive Slough(s). These two wetland systems provide excellent wildlife habitats, year round and are highly valued by the neighborhood residents as places to walk to and observe wildlife.

The **Marine Drive Slough** refers to a long section of a wetland running parallel to Marine Drive and Bridgeton Road on the north end of the neighborhood. The entire extent of this

wetland has been identified as a significant resource by the City and other environmental agencies and has received the City's EC, Environmental Concern Overlay Zone. The westernmost section of this slough has a high quality yellow-flag iris (*Iris Pseudacorus*) emergent wetland cover type. The main section of the slough, on the north side of Marine Drive, east of NE Gantenbein, has a excellent variety of tree cover, emergent plant species, food source and open water. The easternmost section of the slough, on the south side of Marine Drive has been identified as a Black-Crowned Night Heron winter roosting area and has received a 200-foot wide E zone designation. The slough bank along this section of the wetland is highly disturbed due to ditch maintenance and consists of largely blackberries.

The **resource values** of the Marine Drive Slough include the good water quality, riparian strip, trees along the slough banks for cover, roosting and nesting waterfowl and the diversity of food and wetland emergent species. The ESEE analysis done by the City in 1988 notes a considerable diversity of birds and habitat types. The Marine Drive slough also has environmentally sensitive areas such as a Black-Crowned Night Heron winter roosting area which was noted by the ESEE analysis and adoption of the EC zone, resulting in a 200-foot wide segment of the EC zone on sections of the slough east of Marine Drive.

Enhancement practices along the Marine Drive slough should focus on replanting native riparian plant, shrub and tree species and water quality treatment for stormwater runoff to preserve the water quality.

The **neighborhood vision** here is to discourage filling of this wetland. The primary focus should be protection of the wildlife habitats along the Marine Drive slough and replanting the banks and adjacent disturbed areas with native riparian species to enhance this significant wildlife corridor.

The **School District Arboretum site** consists of a number of drainage ditches which border the site on the west and south. This site has the most diverse cover type and habitat area within the neighborhood. There are large open grassy areas which are mowed, dense tree canopies on the perimeter and open water ditches. The site also has an tree covered island surrounded by a moat adjacent to one of the main ditches along the west side of the site. The hydrological connection to that ditch is such that water doesn't flow into the moat in summer months and the ditch dries out.

The **resource values** of the School District site include the diversity of cover types, year-round water regime and a variety of food sources for wildlife. The ditches also function in sediment and toxicant trapping and removal. This site also provides a park-like educational setting which provides an additional amenity.

Enhancement practices here should focus on improving the water quality of the moat and ditch system. The resource value of the moat and island would be vastly improved by reconstructing the ditch connection to the moat to maintain an year-round water level. Trees along the ditches and within the open upland areas should be preserved to maintain a canopy and place for birds and other animals to nest, roost, feed, etc. Areas along the ditch route which are not disturbed periodically by maintenance activities should be re-

planted with riparian and native species to enhance this second significant wildlife corridor.

The **neighborhood vision** here is to preserve and enhance the water quality of the moat and ditches and reinforce the educational value of the Arboretum site through the creation of viewing areas, signs and other conservation efforts.

Intermediate Value Wetlands

The wetlands with an intermediate ranking were the Columbia Edgewater/Shragg property, south of the golf course, and the School District Cottonwoods, adjacent to NE Meadow Drive. These two wetlands have stagnant water quality and consist of largely Reed-Canary Grass, yet they have the potential to be more useful for both wildlife areas and sediment stabilization.

The **Columbia Edgewater/Shragg wetland** consists of a large meadow of Reed-Canary Grass and Meadow Foxtail. This site is mowed up to twice a year for animal feed. There is an open ditch running through the center of the wetland in an east-west direction.

Resource values for the Columbia Edgewater/Shragg property include food diversity/quantity for wildlife and a year-round water regime, although water quality is poor.

Enhancement practices here should focus on replanting the area with other emergent plant species and diversifying the wetland in terms of cover type and habitat. Some filling may occur and mitigation efforts should include enhancement practices to improve water quality, vector (mosquito) control and plant diversity.

Since this site is zoned for residential development, the **neighborhood's vision** for these wetlands is that they should be altered to provide a better wildlife habitat and possibly function as a site amenity for new residential developments.

The wetland referred to as the **School District Cottonwoods** is actually off the School District site. This wetland consists of a small depression of Reed-Canary Grass on the rear portion of some vacant platted residential lots along NE Meadow Drive.

The **resource values** of this site include adjacency to tree cover and diversity, and a moderate water regime.

Again, the water quality is stagnant and **enhancement practices** may involve the replacement of Reed-Canary Grass with other emergent plant species.

The **neighborhood vision** for this wetland is to alter and replant this wetland to provide a better wildlife habitat and possibly function as a site amenity for new residential developments. If filling is necessary for residential development, then mitigation areas should be sited adjacent to the cottonwood stand to compensate for the lost resource value.

Lowest Value Wetlands

The wetlands which received the lowest ranking were the Rovang property (Sycamore Farms) and the Fazio Farm.

The Rovang property wetland consists of a large undeveloped tract of land west of the residences and stables on the site. The site is zoned Farm and Forest (residential) and consists of mostly Reed-Canary Grass with several adjacent ditches.

The **resource values** for the Rovang site include, proximity to tree cover, a high degree of sediment and toxicant retention and stabilization, and a year-round water regime, although water quality is poor.

Again, **enhancement practices** may involve the replacement of Reed-Canary Grass with other emergent plant species and replacing the blackberries along the ditch banks with riparian native plant species.

The **neighborhood vision** for this wetland is to alter and replant this wetland to provide a better wildlife habitat and possibly function as a site amenity for new residential developments. If filling is necessary for residential development, then mitigation areas should include enhancement practices for the remaining wetlands to introduce diversity in wetland emergent species, improve water quality and vector (mosquito) control and possibly create waterfowl (winter) habitats.

The **Fazio Farm** is a highly disturbed wetland which is farmed for corn, yet zoned for general industrial use. There is a new large roadway bisecting the wetlands, which was constructed to facilitate industrial development. Drainage ditches also flow through the wetlands to one of two pump stations operated by the drainage district.

Resource values for the Fazio Farm include: a year round water regime, proximity to cover, a moderate degree of food variety/quantity, and a high degree of sediment and toxicant retention and stabilization. The ESEE analysis notes that during the fall, winter and early spring months, the site supports large numbers of migratory waterfowl. The ESEE analysis also notes the ponding and flood storage value of this low-lying area within the drainage basin. The Planning Commission rejected a proposal to map large areas of the Fazio and Merritt properties with the EC zone, and limited application of the Environmental Concern Overlay zone to the main main drainageways that cross the Fazio Farm. The Planning Commission decision reflects a balancing effort of protecting the site's resources while permitting filling of the majority of the site to enable industrial development to occur.

Although the waterfowl are attracted to this site due to the large plowed open areas and abundant feed supply, abandonment of the farming practices would most likely lead to a wetland similar to the Rovang site, possibly Reed-Canary Grass. Due to the significant industrial development potential of this site, the majority of the mapped wetlands on this site may filled. Mitigation may be located off-site in a location where migratory waterfowl habitat may be enhanced. However, some wetlands will have to be preserved or created

on-site to assist in flood storage and water quality treatment for future industrial uses.

Since the wetlands on this site are highly disturbed and lack wetland plant species, **enhancement practices** should be incorporated into future industrial site developments to restore emergent plant species in the remaining wetlands and mitigation areas. On-site mitigation areas should be located in two areas: Along the south perimeter of the site, adjacent to the levee and the large stand of cottonwoods, or in the northeast corner of the site, adjacent to and within the B, Buffer Overlay Zone. These two areas will function in protecting the wetland resources from industrial developments and will diversify the wetlands by locating them next to tree cover and other wetland and wildlife habitats. (See Map #3)

The **neighborhood's vision** for this site is that most of the mapped wetlands along the road frontage may be filled provided that there is no net loss in functional value of the wetlands in some form of on-site or off-site mitigation. Although the majority of the wetland mitigation may take place off-site, some wetlands should be created or enhanced on-site to contribute to water quality treatment, flood control and local waterfowl habitat needs. A wetland mitigation area on the northeast corner of the site could also function in buffering the residences to the north from new industrial developments. If off-site mitigation is necessary, then steps should be taken to ensure that adequate flood storage capacity is provided elsewhere locally to off-set the loss of the high flood storage value of this wetland.

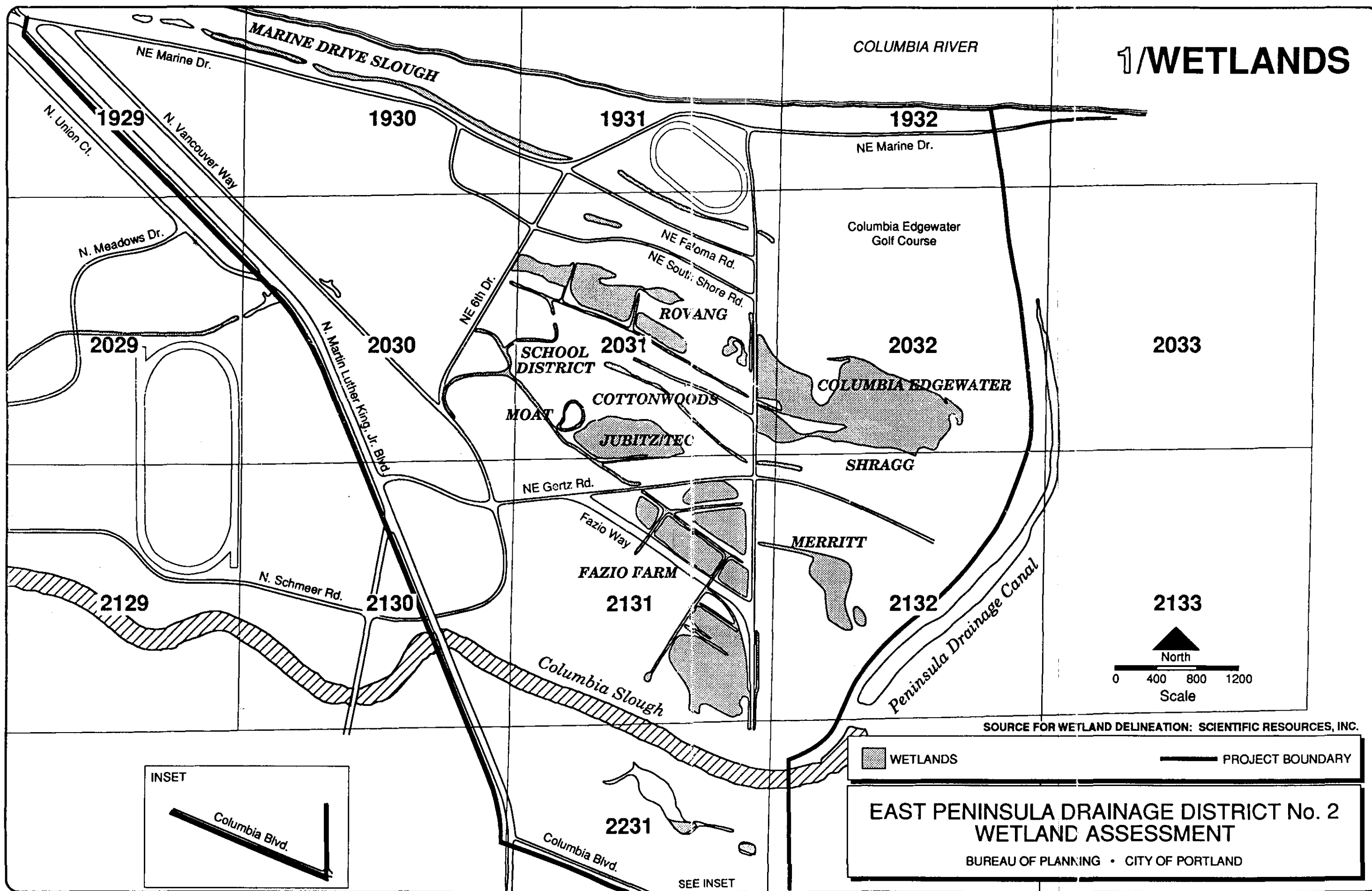
The remaining natural feature which is perhaps most important to the neighborhood is the **Columbia Slough and Peninsular Canal** which borders the neighborhood on the south and east. This is the largest water body in the neighborhood and has excellent value for both wildlife habitat and recreation. The proposed 40-Mile Loop Trail runs along the top of the levee adjacent to the canal (see Map #2). Since this is the highest elevation in the neighborhood, the trail provides excellent viewing opportunities for wildlife, wetlands, and Mt. Hood to the east.

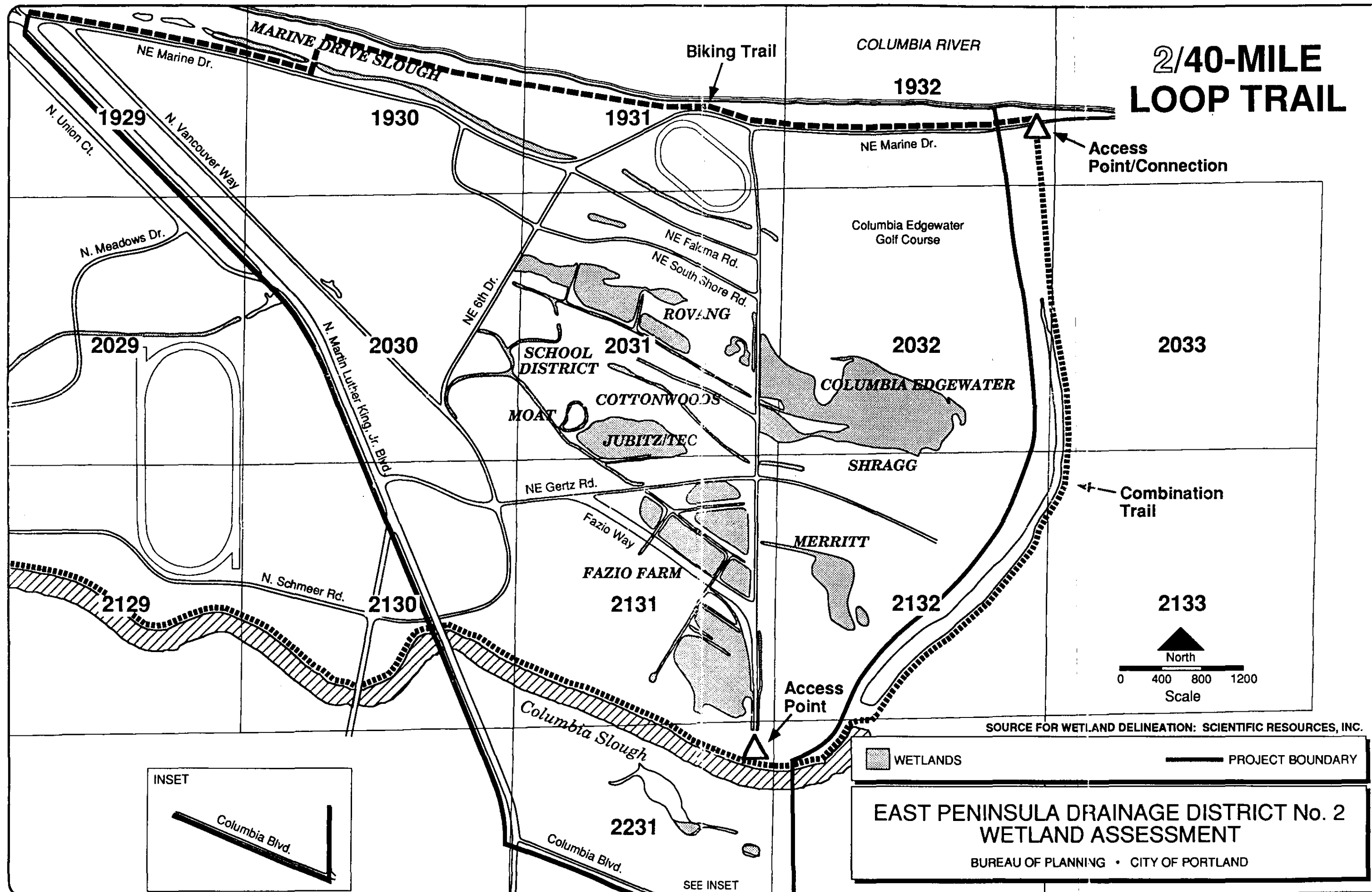
Enhancement practices should include improving the lacustrine/riverine habitat along the banks of the slough and canal through planting of appropriate native riparian plant species.

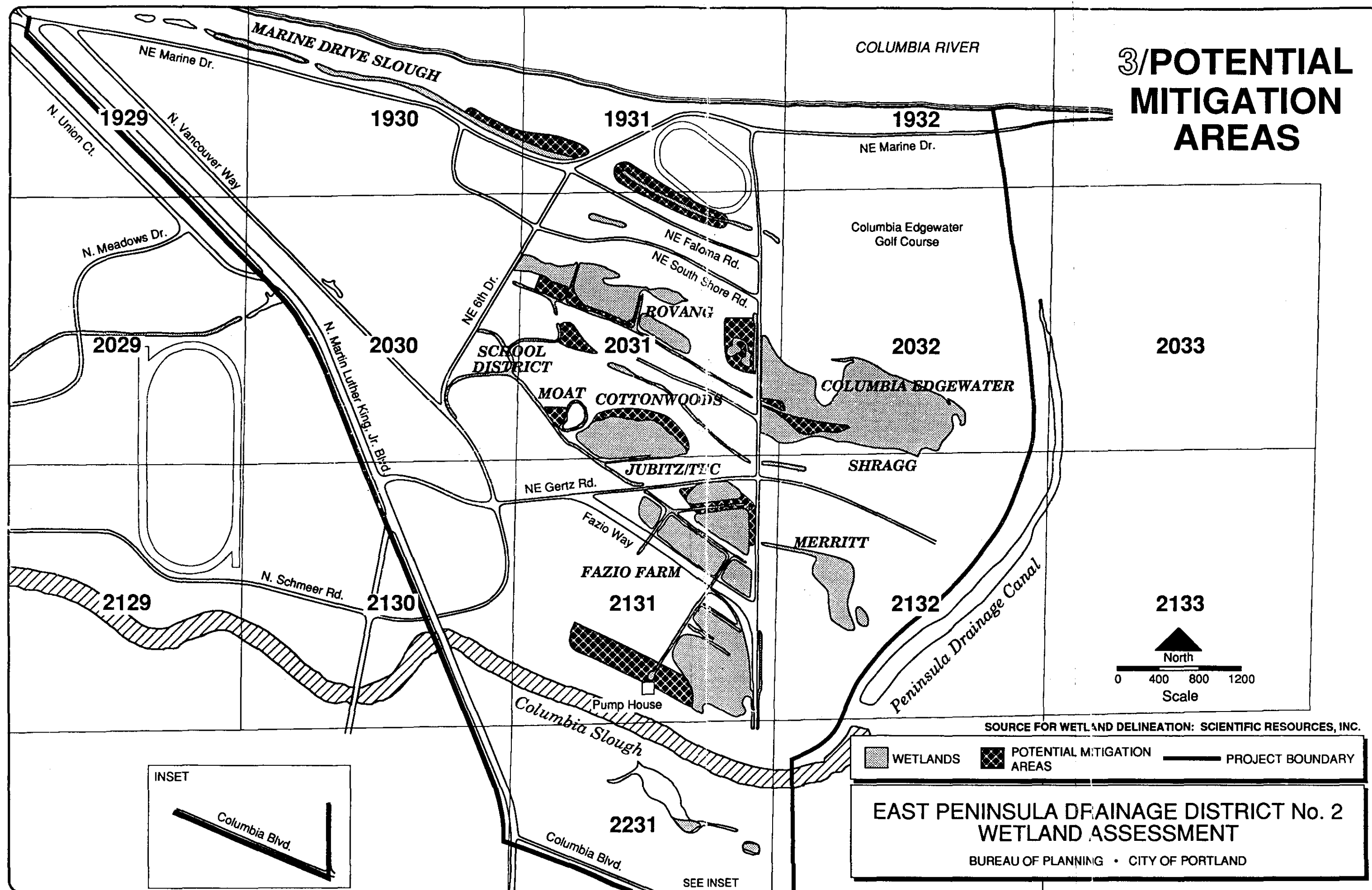
The **neighborhood's vision** for this area is that the trail system should be developed with connections from the neighborhood and that signs, plaques and benches be located along the trail to create a key destination along the 40-Mile Loop trail route—the **East Columbia Basin/Wetlands and Water Bodies**.



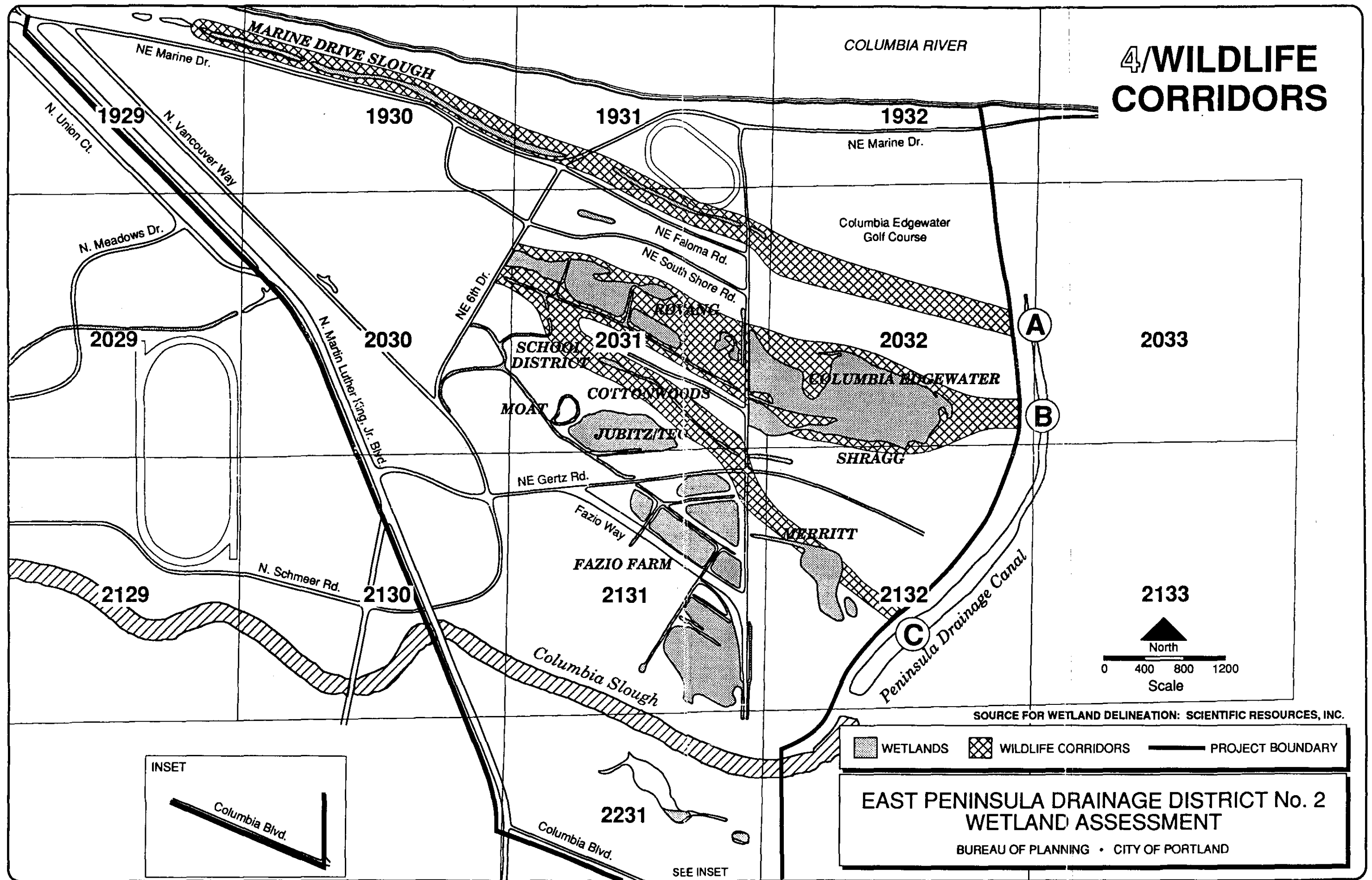
1/WETLANDS







4/WILDLIFE CORRIDORS



5/ZONING

LEGEND

City Land Use Designations

Base zones

- FF Farm and Forest
- R20 Limited Single-Family Residential
- R10 Low-Density Single-Family Residential
- C2 General Commercial
- M3 Light Manufacturing
- GE-2 General Employment
- GI-2 General Industrial
- HI Heavy Industrial

Overlay zones

- B Buffer
- EN Environmental Natural
- EC Environmental Concern
- L Aircraft Landing
- N Noise Impact

Comprehensive Plan Designations

- IS Industrial Sanctuary
- OS Open Space

EAST PENINSULA DRAINAGE DISTRICT No. 2 WETLAND ASSESSMENT

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