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Staff Report: In Consideration of Ordinance No. 05-1077 Amending the Regional Framework Plan and the Urban Growth Management Functional Plan Relating to Nature in Neighborhoods

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STAFF REPORT

IN CONSIDERATION OF ORDINANCE NO. 05-1077 AMENDING THE REGIONAL FRAMEWORK PLAN AND THE URBAN GROWTH MANAGEMENT FUNCTIONAL PLAN RELATING TO NATURE IN NEIGHBORHOODS.

Date: April 14, 2005

Prepared by: Andy Cotugno and Chris Deffebach

Residents of the Metro region value having nature near where they live, work, and play and have expressed the desire to keep nature in neighborhoods as a legacy to future generations. The Metro Council has expressed, as one of four central goals for the region, the aspiration that “(t)he region’s wildlife and people thrive in a healthy urban ecosystem.” Nature in Neighborhoods is a regional habitat protection, restoration and greenspaces initiative that inspires, strengthens, coordinates, and focuses the activities of individuals and organizations that share an interest in the region’s fish and wildlife habitat, natural beauty, clean air and water, and outdoor recreation. Metro plays a leadership role in Nature in Neighborhoods, but recognizes that the protection and restoration of fish and wildlife habitat and the integration of greenspaces into the urban environment is a task of scope and magnitude beyond the reach of any one organization; it will take the coordinated and strategic action of many. This Ordinance addresses one component of the Nature in Neighborhoods initiative, establishing a consistent regional standard for fish and wildlife habitat protection that provides additional support for improving water quality.

CONTEXT AND BACKGROUND

Metro’s authority to plan for fish and wildlife habitat protection in the region derives from State Land Use Planning Goal 5: Natural Resources, Scenic and Historic Areas, and Open Spaces. The Goal 5 administrative rule (OAR 660-023) recognizes Metro’s unique planning role and gives Metro the option to develop a functional plan to protect regionally significant fish and wildlife habitat (OAR 660-023-080(3)). In 1996 the Metro Council voted to recognize the regional significance of fish and wildlife habitat and include protection in the functional plan.

The region’s 2040 Growth Concept and other policies call for protection of natural areas while managing housing and employment growth. In 1998 the Metro Council adopted Title 3 of the Urban Growth Management Functional Plan to protect water quality and for flood management. Title 3 also included a commitment to develop a regional fish and wildlife habitat protection plan. As defined in a Vision Statement (Attachment 1) that was developed in cooperation with local governments through the Metro Policy Advisory Committee (MPAC) in 2000, the overall goal of the protection program is: “...to conserve, protect and restore a continuous ecologically viable streamside corridor... that is integrated with the urban environment.” The Vision Statement also refers to the importance that “...stream and river corridors maintain connections with adjacent upland habitats, form an interconnected mosaic of urban forest and other fish and wildlife habitat...”

Metro’s program is part of an agency-wide effort called “Nature in Neighborhoods,” which is described in Metro Resolution No. 05-3574. The Nature in Neighborhoods initiative includes

voluntary, incentive-based components that complement the development standards proposed in this ordinance.

The development standards proposed in this ordinance are consistent with one of the goals described in the Vision Statement to ensure contribution towards compliance with the federal Clean Water Act (CWA) and Endangered Species Act (ESA). Despite the adoption of Title 3 in 1998, the region's waterways are nevertheless still not in compliance with the water quality requirements of the CWA, and are soon to be the subject of a Total Maximum Daily Load rule promulgated by the Oregon Department of Environmental Quality. More needs to be done to improve the quality of the region's waterways and prevent future listings of species as threatened or endangered, and this program will take additional steps toward doing so.

Metro has completed development of a program to protect and restore fish and wildlife habitat, following the 3-step process established by the State Land Use Planning Goal 5 administrative rule (OAR 660-023). In the first step, Metro conducted a scientific analysis and inventory of the following Goal 5 resources: riparian corridors, associated wetlands, and wildlife habitat. A regional approach to inventorying natural resources required a consistent level of data and analysis across the entire Metro region. Metro's Fish and Wildlife Habitat Inventory is based on the best available information that can be applied consistently at a regional scale. Metro took an ecological functions approach to define and identify riparian corridors and wildlife habitat, based on its extensive scientific literature review. This approach combined geographic information system (GIS) mapping technology, scientific recommendations, and fieldwork. The methodology assigned values to resource features that allowed comparison of their cumulative importance. The upland wildlife habitat was evaluated separately from the riparian wildlife habitat areas. In 2002, after review by independent committees, local governments and residents, Metro Council endorsed the inventory of regionally significant fish and wildlife habitat lands (Resolution No. 02-3176 – riparian corridors, Resolution No. 02-3177A – upland habitat). The inventory includes about 80,000 acres of habitat land inside Metro's jurisdictional boundary. The habitat inventory is included in Exhibit F of this ordinance.

Upon completion of the habitat inventory, staff reviewed the habitat protection in each city and county within Metro's jurisdiction. The *Local Plan Analysis* (approved by Metro Council in Resolution No. 02-3218A, available in Metro Council office and on the internet at <http://www.metro-region.org/article.cfm?ArticleID=1047>) concluded that the standards to protect habitat varied from city to city, and that the most regionally consistent standards were those adopted by cities and counties to comply with Metro's water quality standards. The Metro Council directed staff to complete the second step of the Goal 5 planning process based on the conclusion that, while some cities and counties may provide adequate protection to regionally significant habitat, the level of protection varied substantially.

As described in Metro's *Local Plan Analysis*, cities and counties in the region currently have varying levels of protection for fish and wildlife habitat. As a result, cities and counties approach similar quality streams or upland areas in different parts of the region with inconsistent levels of protection. In addition, one ecological watershed can cross several different political jurisdictions – each with different approaches to habitat protection. With the adoption of the regional habitat protection program, cities and counties will adjust their protection levels to

establish a consistent minimum level of habitat protection. For some, this will mean minor modifications to their plans, for others more substantive changes will be necessary.

The second step of the Goal 5 review process is to evaluate the Economic, Social, Environmental and Energy (ESEE) consequences of a decision to allow, limit or prohibit conflicting uses on these regionally significant habitat lands and on impact areas adjacent to the habitat areas. As defined in the ESEE process, the impact areas added about 16,000 acres to the inventory. For the ESEE analysis, Metro classified fish and wildlife habitat based on the ecological function scores into six classes, under two main categories: Riparian/wildlife and Upland wildlife. Each class covers a geographically discrete portion of the inventory, and may include riparian and/or wildlife functions and also may be a Habitat of Concern. Class I Riparian/wildlife and Class A Upland wildlife are the highest value habitat. Metro Council endorsed combining the inventories for the ESEE analysis in Resolution No. 02-3218A. The September 2004 update of the fish and wildlife habitat inventory by habitat class and development status provides the most current acreage information on the habitat inventory (Exhibit F, Attachment 5).

As Metro began its work on the ESEE analysis, several local governments and special districts in the Tualatin Basin approached Metro with a proposal to conduct their own separate ESEE analysis and develop their own habitat protection program using Metro's habitat inventory. In January 2002 Metro entered into an intergovernmental agreement ("IGA") with these local governments and special districts in the Tualatin Basin setting forth a cooperative planning process to address regional fish and wildlife habitat within the basin. The IGA provided that the Tualatin Basin partners would submit their program and analysis to Metro for review and, if it met standards for habitat protection described in the IGA, then Metro would include it as part of the regional habitat protection program. Approximately 16,650 acres of Metro's habitat inventory are located within the jurisdiction of the local governments participating in the Tualatin Basin partnership and within the Metro boundary. Thus, as Metro began its ESEE analysis, the Tualatin Basin partners began their own analysis on a separate track, but closely coordinated with Metro's work.

Metro conducted the ESEE analysis in two phases. The first phase was to evaluate the ESEE consequences at a regional level. This work was completed and endorsed by the Metro Council in October 2003 (Resolution No. 03-3376B). The resolution directed staff to evaluate six regulatory program options and non-regulatory tools for fish and wildlife habitat protection in Phase II of the ESEE analysis.

The Phase II ESEE analysis, endorsed by Metro Resolution No. 04-3440A in May 2004, evaluated the ESEE consequences of possible protection and restoration options that included a mix of regulatory and non-regulatory components. Five potential regulatory treatments were applied in each of the six regulatory options, ranging from allowing conflicting uses to prohibiting conflicting uses in habitat and impact areas. The consequences identified the effects on key ESEE issues identified in the Phase I analysis, including:

- Economic implications of urban development and ecosystem values;
- Environmental effects including ecological function loss, fragmentation and connectivity;

- Social values ranging from property owner concerns about limitations on development to concerns about loss of aesthetic and cultural values; and
- Energy trade-offs such as temperature moderating effects of tree canopy and potential fuel use associated with different urban forms.

In addition, the analysis considered how well the six regulatory options would assist in meeting the requirements of the federal Endangered Species Act and the Clean Water Act. Phases I and II of the ESEE Analysis are as attachments to Exhibit F of this ordinance.

The third and final step of the Goal 5 review process is to develop a program that implements the habitat protection plan by ordinance through Metro's Urban Growth Management Functional Plan (UGMFP or Functional Plan) and Regional Framework Plan policies. After acknowledgment by the State Land Conservation and Development Commission, cities and counties within the Metro jurisdiction will be required to amend their comprehensive plans to be in compliance with the regional habitat protection program.

To develop a program that includes the development standards proposed in this ordinance, Metro reviewed local plans that protect fish and wildlife habitat, researched innovative habitat protection approaches in the Pacific Northwest and throughout the country, and consulted with local practitioners. This research, contained in the *Habitat Protection Tools Summary* (Attachment 3), informed the proposed development standards in the Functional Plan and the Model Ordinance.

Based on the Metro Council's review and consideration of the ESEE analysis and public comment, the Council further informed the direction of the habitat protection program. In August 2004, Council clarified that the regulatory program would not restrict currently allowed uses of residential properties in Resolution No. 04-3489A. In December 2004, the Metro Council approved Resolution No. 04-3506A, which directed staff to develop a fish and wildlife habitat protection program to reflect the following principles:

- Focus the regulatory element of the program on the most valuable Class I and II Riparian Habitat. This significantly reduced the area subject to new regulations. Thirty-six percent of the Class I and II habitat is covered by Title 3 Water Quality Resource Area standards, 21 percent is covered by Title 3 Flood Management Area balanced cut and fill requirements;
- Develop a strong voluntary, incentive-based approach to protect and restore regionally significant habitat, including Class III Riparian, and Class A and B upland habitat (described in *Nature in Neighborhoods Initiative*, Resolution No. 05-3574); and
- Apply regulations to limit development in Class III Riparian, and Class A and B upland habitat in future urban growth boundary expansion areas.

The Tualatin Basin partners completed their ESEE analysis and approved a program proposal on April 4, 2005, and forwarded it to the Metro Council for consideration (Resolution No. 05-3577). If approved by the Metro Council, the Tualatin Basin's final program will be incorporated into this ordinance. About 9,600 acres of Class I and II Riparian habitat on Metro's inventory are located within the Tualatin Basin partner jurisdictions and within the Metro boundary.

Current Action

Based on substantial committee review and outreach to stakeholders, Ordinance No. 05-1077 presents the staff recommendation for public comment and Metro Council consideration on an important component of the Nature in Neighborhoods program, the development standards for Class I and II riparian fish and wildlife habitat within the urban growth boundary, with the inclusion of additional protection for Class A and B upland habitats in future urban growth boundary expansion areas. These recommendations and the key issues for Council consideration are highlighted below.

REVIEW PROCESS

Public comment

The development standards in the proposed new Title 13 of the Urban Growth Management Functional Plan, Model Ordinance, and amendments to the Regional Framework Plan policies are being proposed for public review. It is intended that the public will review this proposal in late April and May, with more opportunity for public comment in late summer/early fall 2005 prior to final consideration by the Metro Council. A summary of public comments will be provided prior to final Council consideration.

Staff has met with numerous stakeholder groups on an on-demand basis throughout the program development phase.

Policy Review

The Metro Policy Advisory Committee reviewed the items proposed in this ordinance at several meetings. MPAC comments on larger policy issues have been incorporated into the proposal. Additionally, staff met with city and county councils upon request to provide further information on the proposal as it was developed.

The Water Resources Policy Advisory Committee (WRPAC) reviewed the development standards proposed in Title 13. Policy comments to date have been conveyed to the Metro Council and have been incorporated into the current proposal.

Technical Review

Several committees reviewed Metro's proposed amendments to the Functional Plan, and many of their comments and suggestions have been included in the proposal.

- The Fish and Wildlife Habitat Program Implementation Work Group was charged with providing advice to staff on the workability of proposed requirements to be included in the Functional Plan or a Model Ordinance. Members included developers, property owners, and local government planners who shared experiences and tools with staff as the program was developed.
- The Metro Technical Advisory Committee reviewed the Functional Plan and Model Ordinance.
- The Goal 5 Technical Advisory Committee reviewed the Functional Plan.

1. RECOMMENDATION ON DEVELOPMENT STANDARDS FOR CLASS I AND II RIPARIAN HABITAT AND CLASS A AND B UPLAND HABITAT IN NEW URBAN AREAS

Resolution No. 04-3506A, adopted by the Metro Council, supports developing flexible development standards that will protect streamside habitat (Class I and II Riparian) within the urban growth boundary and within the current Metro jurisdictional boundary, as well as upland habitat (Class A and B) in future urban growth boundary expansion areas. Of the 80,000 acres in Metro's regionally significant habitat inventory, about 44,000 are in Class I and II riparian habitats that are designated as Habitat Conservation Areas. Streamside habitat areas have the highest functional values in Metro's habitat inventory. Key facts about the streamside habitat areas include:

- ***Much of the area is covered by some standards.*** 36% of Class I and II is covered by Title 3 WQRA (subject to avoid-minimize-mitigate standard), an additional 21% is covered by FMA balanced cut and fill standard, for a total 57% covered by existing regional standards.
- ***Impact on vacant unconstrained land.*** 8,460 acres of vacant unconstrained land, most of which is located in the unincorporated portions of Clackamas, Multnomah and Washington counties and the City of Portland.
- ***Much of the Class I and II habitats are in parks.*** 35% of Class I and II habitat is in park use.

Expectations for urban-style development are different in areas that are brought inside the urban growth boundary in the future. Resolution No. 04-3506A supports protecting more types of habitat in these areas where it is easier to plan for a system of natural habitats integrated with the built environment. The proposed amendments to the Functional Plan and Framework Plan will guide how to plan for growth in new urban areas to account for the most valuable streamside (Class I and II) and upland (Class A and B) habitats.

The development standards included in proposed Title 13 of the Functional Plan would require changes in the way development occurs within Habitat Conservation Areas (HCAs) to ensure that impacts on fish and wildlife habitat are minimized while allowing urban-style development to occur. As proposed, Title 13 includes the following elements:

- Expansion of the water quality protection approach currently in place to encompass all of the most valuable streamside habitats (Class I and II Riparian) identified in Metro's inventory. The approach includes a requirement to first try to avoid habitat, then to minimize development impacts, and last to mitigate for lost habitat function. Metro includes a clear and objective approach (in the Model Ordinance – Exhibit E) and discretionary approach (in Model Ordinance – Exhibit E, and Functional Plan – Exhibit C), consistent with the Goal 5 rule.
- Under Title 3, certain geographic areas were exempted from the requirements to establish Water Quality Resource Areas and Flood Management Areas. These areas include portions of lower Willamette River (Portland Harbor), portions of the Rivergate industrial area in the Columbia Corridor, downtown Beaverton and Tualatin, and other areas determined to support water-dependent industrial uses. The Title 3 exemptions were given for a variety of reasons, a central one being to account

for the economic issues on these sites. Title 3 was carried out for flood management and water quality protection, and did not address fish and wildlife habitat protection. Additionally, Title 3 did not include an examination of the ESEE tradeoffs for fish and wildlife habitat. Substantial consideration to the economic concerns and unique role marine terminals play was included in Metro's ESEE analysis for this program. Therefore, the Title 3 exemptions have not been carried forward in Title 13.

- Habitat-friendly development practices such as clustering, density relaxation, and on-site stormwater management would be required where technically feasible in Habitat Conservation Areas.
- Development standards for Class A and B Upland Habitat in addition to streamside habitats in urban growth boundary expansion areas.
- Several options for city and county compliance, providing flexibility, but also development of a ready-to-implement Model Ordinance. Many cities could use or expand on existing programs to meet regional standards.
- Monitoring and reporting on regional progress.

Each section of Title 13 is described briefly below.

Section 1. Intent.

This section describes that the purpose of the program is two-fold, to achieve the goals described in the Vision Statement and to maintain and improve water quality. It states that the program will include an integrated approach combining voluntary, incentive-based and regulatory tools.

Section 2. Inventory and Habitat Conservation Areas.

This section describes the maps that form the basis of Metro's fish and wildlife habitat protection program. The maps include the inventory map and the Habitat Conservation Area (HCA) map. The HCA map identifies the areas subject to regulatory protection.

A limited few properties that would otherwise have been mapped as HCAs do not appear on the map, as they have been identified as so unique that their economic importance outweighed their fish and wildlife habitat values. Four properties are listed (International Terminal and Port of Portland Marine Terminals 4, 5 and 6), and the following criteria are included for the identification of other, similarly situated sites:

- Property is developed for use as an international marine terminal capable of mooring ocean-going ships, and
- The property is without substantial vegetative cover.

This section also provides that, for properties outside the Metro urban growth boundary but inside the Metro jurisdictional boundary, agricultural and forest activities may continue without new restrictions.

Section 3. Implementation Alternatives for Cities and Counties.

Consistent with Metro's goal of providing regional consistency and local opportunity for flexibility when implementing regional policies, Title 13 as proposed includes several options for a city or county to comply. Compliance with regional habitat protection requirements will also satisfy state requirements, reducing duplicative efforts. A Model Ordinance is included that

serves as one example of how cities and counties could comply with the Functional Plan.

Options for compliance include:

- Adopt Metro’s Model Code and habitat maps;
- Describe how an existing plan substantially complies with the provisions of the Functional Plan;
- Develop an innovative combination of regulatory and incentive-based programs that meet the habitat protection and restoration objectives; or
- Conduct a special planning process for an area (district) that comprises unique circumstances or challenges for a portion of a city or county (and apply one of the approaches in the previous three items across the rest of the city or county).

Metro’s Intergovernmental Agreement with the cities, counties and special districts in the Tualatin Basin is recognized in this section. The Tualatin Basin Partners include Washington County, the cities of Beaverton, Cornelius, Durham, Forest Grove, Hillsboro, King City, Sherwood, Tigard, and Tualatin, as well as Clean Water Services and the Tualatin Hills Parks and Recreation Department. Cities and counties who have partaken in this agreement must amend their comprehensive plans and implementing ordinances to be in compliance with the provisions of the Tualatin Basin approach, which is under consideration by the Metro Council (Resolution No. 05-3577).

This section also includes additional items cities and counties must comply with, including:

- Providing a clear and objective standard as well as a discretionary option for property owners, consistent with the Goal 5 rule.
- Removing barriers in comprehensive plans and implementing ordinances to habitat-friendly development practices in all regionally significant fish and wildlife habitat areas.
- Including a reasonable, timely, and fair process for property owners to verify the location of habitat.
- Provisions to allow for the reduction of density requirements to protect all regionally fish and wildlife significant habitat.

Section 4. Performance Standards and Best Management Practices for Habitat Conservation Areas.

This section describes the performance standards and best management practices that allow development to occur in Habitat Conservation Areas while protecting habitat. Several general standards include:

- Title 3 Water Quality Resource Areas and Flood Management Areas standards still apply.
- Any activity on a property with a single-family home constructed prior to the effective date of the ordinance that would not have required a building, grading, or tree removal permit would be exempt from these standards. If a permit were required the standards would apply.
- Habitat-friendly development practices are required where technically feasible and appropriate to reduce the impacts on the habitat and water quality.

- Publicly-owned parks and open spaces that have been designated as natural areas must be provided with extra protection and special management practices to maintain habitat functions and values.
- Planting of native vegetation is encouraged, planting of invasive non-native species is prohibited, and removal of invasive non-native species is allowed.
- Routine repair, maintenance and replacement of existing structures, roads, utilities and other development are allowed, consistent with other applicable rules.
- Intensification of uses and/or upzoning on sites with HCAs is conditioned upon the restoration of habitat on the site.
- *Federal Aviation Administration Wildlife Hazard Management Plan.* Any activity that is undertaken on Port of Portland property within 10,000 feet of an Aircraft Operating Area that is necessary to comply with the Wildlife Hazard Management Plan is exempt from the requirements to avoid if practicable and to minimize intrusion into a Habitat Conservation Area. Any such intrusion must be mitigated, and the mitigation may occur off-site anywhere within the Metro region.
- *Multnomah County Drainage District No. 1, Peninsula Drainage Districts 1 & 2, and the area managed by the Sandy Drainage Improvement Company.* All of the activities undertaken to manage these flood areas are exempt from the development standards, subject to other applicable laws and the requirement to maintain native vegetation where practicable.

City and county comprehensive plans and implementing ordinances must contain development review standards that include a clear and objective approach and a discretionary approach. Metro has provided an example of a clear and objective approach in the Title 13 Model Ordinance (Exhibit E). The discretionary approval standards include a requirement for all development to first avoid the Habitat Conservation Areas, if practicable, then to minimize intrusion into them, and finally to mitigate to restore the habitat functions and values that were impacted. When implementing the avoid, minimize, and mitigate standard cities and counties are directed to consider the level of Habitat Conservation Area (high, medium, or low) to determine the “practicability” of avoiding habitat and the level of mitigation required. High Habitat Conservation Areas have high habitat value and medium or low urban development value, while Low Habitat Conservation Areas have lower-valued habitat and higher urban development value.

This section also describes the requirements to administer the Habitat Conservation Areas Map and provides a method for site-level verification of the habitat. The city or county is responsible for administering the Habitat Conservation Areas map, or a map that has been deemed by Metro to be in substantial compliance. A process for site-level verification must be included that is consistent with general requirements described in Title 13. The process described includes:

- Locating the habitat boundaries based on site-specific information and Metro’s maps.
- Determining the urban development value. There are two ways for the urban development value to change: 1) a change in the 2040 design type designation and 2) the property is owned by a regionally significant educational or medical facility.
- Cross-referencing the habitat class with the urban development value to determine the location of the high, moderate and low Habitat Conservation Areas on a property.

Section 5. Program Objectives, Monitoring, and Reporting.

As part of the Nature in Neighborhoods Initiative, Metro will lead the monitoring of the region's progress towards regional habitat objectives and also coordinate data collection throughout the region. As part of the monitoring and reporting element, Metro will track progress in habitat acquisition and restoration efforts and will continue to map the streams, wetlands, floodplains, vegetation and habitats of concern to monitor habitat quality and quantity by watershed. By coordinating with other agencies and jurisdictions that track stream and upland health Metro will present a regional scorecard of progress in achieving performance objectives. Keeping track of regional progress towards the objectives and targets for habitat protection and restoration will enable policy makers to evaluate the effectiveness of the Nature in Neighborhoods Program and consider altering course if necessary. This section describes the responsibilities of Metro, cities, counties, and special districts in regional data coordination and inventory maintenance, monitoring, reporting, and program evaluation.

Four performance objectives are established to measure the quantity and quality of the region's fish and wildlife habitat. Aspirational targets are included for a ten-year timeframe that are based on existing conditions, a successful protection and restoration commitment, and public ownership patterns. Two implementation objectives are included that help describe the actions to look for as the region moves towards achieving the habitat performance objectives. These include efforts made to increase and allow habitat-friendly development practices and increase restoration and mitigation efforts.

2. POLICY ISSUES

Since January, staff has been soliciting comments on draft versions of proposed Title 13 Functional Plan amendments from the Metro Council, Program Working Group, MTAC, MPAC, Goal 5/WRPAC, private business representatives, non-profit groups, and city and county commissioners throughout the region. These discussions helped to refine the proposal from a technical and policy perspective. Below is a summary of the main policy issues, including potential choices and the direction taken in the proposed Title 13.

A. Measure 37

Voters passed Ballot Measure 37 in November 2004, which required governments to either provide compensation or waive regulations that reduced the fair market value (FMV) of properties. The measure includes exemptions for regulations intended to address public health and safety concerns and that are required to meet federal laws, such as the Clean Water Act and the Endangered Species Act. In response to M37's passage, Council directed staff in their December 2004 resolution (No. 03-3506A) to ensure that the habitat protection program did not result in reductions in FMV of properties unless it provided a source of funds for compensation.

Alternatives staff considered for addressing M37 were:

- Include an explicit statement that the program goal would be to increase fair market value of each property affected (by using flexible development approaches such as clustered development; reducing density requirements, etc.)
- Provide a procedure to allow a property owner to obtain a variance if the rules resulted in a loss in FMV of a property; process is a land use decision (i.e. appeals to

LUBA—bringing these claims “within” the land use system, unlike M37 claims); only minimum variance necessary may be granted; includes waiver of future M37 claims based on functional plan; one incentive for property owners to use the variance procedure is that the variance could be transferred to future property owner (unlike M37 waiver).

Some of the main reasons for not recommending this approach include:

- The intent to increase fair market value went beyond Measure 37’s requirements to compensate for losses in fair market values;
- Forcing jurisdictions to establish a separate variance procedure parallel to the Measure 37 procedure and separate from the jurisdictions’ other variance procedures would be unnecessarily duplicative, and having the variance process “within” the land use decision arena (i.e. decisions can be appealed to LUBA, unlike Measure 37 decisions) could result in confusing and inequitable results for property owners;
- Early drafts of Title 13 would institutionalize Measure 37 and did not take into account the possibility that the measure could be amended in the future; and
- The approach did not seek to take advantage of any of the exceptions provided in Measure 37, such as an argument that these new rules are necessary to implement the soon to be finalized TMDL rule issued pursuant to the federal Clean Water Act.

Staff has addressed the issue of whether this ordinance will create additional M37 claims by including provisions that give local governments discretion to implement the program in a way that will not result in the reduction in fair market value of any property.

It is also important to note that the flexible development standards in the functional plan will not prevent development on any property, but will simply require a change in the way development occurs within Habitat Conservation Areas. In some cases, a requirement for cities and counties to remove barriers to habitat-friendly development practices may, in fact, increase property values by allowing more innovation and a potential reduction in storm water impact fees.

B. Appropriate level of regional requirements

Title 13 establishes a set of development standards to provide regional consistency for conserving habitat in Class I and II Riparian areas. The primary issue that has been raised is whether the avoid-minimize-mitigate standard (required in Title 3 Water Quality Resource Areas, which covers about 36% of the HCAs) should be applied to development in High, Moderate, and Low Habitat Conservation Areas.

Council’s December 2004 Resolution (No. 04-3506A) directed staff to vary the level of protection in accordance with the ESEE analysis. Accordingly, staff considered applying avoid-minimize-mitigate to High HCAs, minimize and mitigate to Moderate HCAs, and only mitigate in Low HCAs. The different levels of protection carried out the intent of the ESEE decision to apply less restrictive standards in 2040 mixed-use areas and regionally significant industrial areas.

However, further discussion among a number of review groups led to reconsideration of the application of the avoid-minimize-mitigate standard. The avoid test as defined in Title 3

includes a “practicability” requirement. The definition of practicable includes an economic test, in effect accounting for the need to apply different levels of protection to High, Moderate, and Low HCAs. Generally, the economic practicability of protecting more habitat in a Low HCA with high urban development value would be greater, resulting in less protection.

Therefore, the proposed development standards in Title 13 apply the avoid-minimize-mitigate standard to all three types of HCA. When implementing the “avoid if practicable” test and mitigate requirements, cities and counties are directed to consider the type of HCA. For example, High Habitat Conservation Areas have been designated as such because they have lower urban development value and the highest value habitat, while Low Habitat Conservation Areas have higher urban development value and lower-valued habitat. In addition, this ordinance would refine the definition of “practicable” for purposes of Title 13 requirements to include a provision that any requirement that would result in a decrease in the fair market value of a property would not be considered practicable. This is how the program is designed to avoid the creation of new M37 claims.

The application of avoid-minimize-mitigate requires discretion. The Goal 5 rule requires a city or county to include a clear and objective approach in its land use ordinances, and the option of adopting a discretionary approach. The proposed ordinance would pass this requirement through to the cities and counties upon implementation, providing the Title 13 Model Ordinance as an option to meet the Goal 5 rule requirements.

C. Habitat-friendly development practices

Using habitat-friendly development practices, or low impact development (LID), can help a community better protect its streams, fish and wildlife habitat, wetlands, and drinking water supplies as it grows. Several cities in the region are already encouraging the use of these practices, and some developers are making a point of reducing the impacts of the built environment by meeting environmental standards.

The use of these habitat-friendly practices can serve to increase the value of developments both at the outset and over time. Studies have shown that residential and commercial uses near open space and water features are more valuable and desirable. Additionally, innovative storm water management practices that use natural processes to retain and detain storm water runoff on-site may be less expensive to construct and maintain.

The difficulties in using these habitat friendly practices today range from concerns about capital and maintenance cost, barriers in local codes that make the practices difficult to apply, and lack of up to date familiarity or knowledge on the part of all parties involved on how to apply the quickly evolving technologies. The advantages of using these practices are their benefits to water quality and channel conditions as well as opportunities to retain green infrastructure on the site.

Title 13 would require revision of city and county codes to require the use of these practices in Habitat Conservation Areas. Since there is not a set menu of practices that can be consistently required, the requirements would apply only when technically feasible and appropriate. Cities and counties would also be required to remove barriers to these practices in all other regionally

significant habitat areas. Alternatives considered included requiring cities and counties to remove barriers in all areas and not requiring habitat-friendly development practices in Habitat Conservation Areas.

D. New UGB expansion areas

Council direction in the December 2004 resolution (No. 04-3506A) was to extend the regulatory requirements that would apply inside the urban growth boundary (UGB) to Class I and II Riparian Habitat to Class III Riparian, Class A and B Upland Habitat in future UGB expansion areas.

The proposed Title 13 requirements, and associated amendments to other Functional Plan, Framework Plan, and Metro Code amendments related to new urban area planning, would extend regulatory protection to the four highest value habitat classes, Class I and II Riparian and Class A and B Upland Habitat. Class III Riparian encompasses areas providing two habitat functions. First, developed floodplains are included that are providing the water storage function. Second, forest canopy within 780 feet of a stream is included that is providing microclimate to reduce stream temperatures. The large search area for the microclimate habitat function is important when considering ecological values for the habitat inventory, but the arbitrary cutoff at 780 feet results in slivers of forest patches falling within the riparian inventory. Staff has concluded that developing map verification and program elements for these slivers of habitat would be too burdensome and costly for local governments and citizens as compared with the benefits of protecting such habitat. For this reason staff has recommended not including Class III habitat in the HCAs for new urban areas.

The same avoid-minimize-mitigate standard developed for riparian areas inside the current UGB would be applied to upland areas in new urban areas. However, new urban areas also offer opportunities to avoid the habitat in the initial concept planning in ways not possible inside the UGB. Several tools may be more useful in new urban areas prior to upzoning, such as transfer of development rights to address equity concerns of “windfalls and wipeouts.” This is addressed by including the following policy statements in the Regional Framework Plan Chapter 1 and Titles 10 and 11 of the Functional Plan:

- Explicitly stating the intent to protect habitat and limit development in new urban areas;
- Metro will assume lower housing and employment capacity and capture rates for habitat areas when calculating the size of future UGB expansions; and
- Future UGB expansions will be conditioned in such a way to ensure that habitat areas are protected without giving rise to Measure 37 claims.

E. Residential densities

Metro Council has indicated, in multiple Resolutions, its intent to reduce density targets for residential capacity if necessary to protect natural resources. Title 8 allows a process for a city or county to apply to Metro, in March of each year, for approval of a density requirement reduction to support protection of natural resource areas. To date, no local jurisdiction has made a request under these provisions.

Title 13 proposes a process that would not require further approval by Metro. Approval would occur automatically if the decision was documented as necessary to protect regionally significant

habitat from development and offered permanent protection of the habitat. The loss of housing units would be taken into consideration when sizing the next UGB expansion. Cities and counties are encouraged to consider transferring development rights to minimize the effect on land supply.

This ability to reduce density would apply only to areas on Metro's Habitat Inventory Map and to local Goal 5 inventories if they were on a map prior to the adoption of Metro's program. This would apply to all habitat areas, both upland and riparian.

The reduction in residential density offers the ability to build larger lots at a lower density than currently allowed within the UGB. Minimum density requirements would be calculated after subtracting out the regionally significant habitat that would be protected. There are about 11,730 acres of vacant unconstrained residential regionally significant habitat (including all habitat classes) land inside the UGB to which this density relaxation could apply. This density reduction would not apply to land brought in the UGB after January 2002, such as the area that is now the City of Damascus, since these areas have not yet been upzoned and there are more opportunities to plan around the habitat.

F. Restoration requirements upon redevelopment

Past development practices have had a significant detrimental impact on fish and wildlife habitat and water quality in this region, adversely affecting the habitat of several fish and wildlife species listed as threatened or endangered. While existing development is not affected by the development standards described in Title 13, over time many of the properties near and next to streams and wetlands may be redeveloped. Upon redevelopment, some mitigation can be conducted to help restore habitat functions and values. For example, the intensive redevelopment that is underway in the South Waterfront area of Portland is including habitat restoration and improvement, and the redevelopment will likely result in significantly increased property values in that area.

The developed areas in which restoration opportunities may exist include both areas that have been mapped as Class I and II riparian habitat, as well as some areas identified as Class III riparian habitat and riparian impact areas. This includes:

- Developed areas that have been mapped as Class I and II resources, such as fully developed areas near streams and underneath tree canopy and all areas within 50 feet of streams (with or without vegetation);
- Developed floodplains (3,460 acres), which are included within Class III riparian areas; and
- Riparian impact areas—those areas within 150 ft. of the stream that would have qualified as riparian habitat but for the fact that they are developed.

The proposed functional plan addresses only those areas that are identified as Habitat Conservation Areas through regulations, leaving cities and counties the option of working with developers in Class III and Riparian Impact Areas to restore habitat function to those areas upon redevelopment. In Habitat Conservation Areas, the following standards are described for redevelopment:

- All redevelopment would be allowed provided that it does not encroach further into undeveloped habitat areas or closer to the relevant water feature. If it would encroach into such areas, then the program’s general development rules would apply (e.g. avoid-minimize-mitigate standard). Title 3 currently applies the avoid-minimize-mitigate standard to redevelopment within the WQRA (typically within 50 feet of streams).
- Mitigation would be required upon redevelopment that required upzoning or significantly increased the intensity of the development on a site. For example, if a site had heavy industrial use and was redeveloped as mixed-use residential it would require mitigation to reflect the new, additional impacts that the new development would have on the habitat areas.

G. Similarly situated sites to receive an “allow” decision

Council, in Resolution No. 04-3440A, adopted May 20, 2004, determined that the economic importance of the International Terminal Site on the Willamette Harbor outweighed the identified habitat values and directed staff to identify any other “similarly situated” sites that would be subject to an “allow” decision in the ESEE analysis. The “allow” decision means no further requirements under Metro’s Goal 5 program. Since then, staff has worked with several stakeholder groups to identify other sites that might qualify as similarly situated.

Title 13 addresses these unique facilities and the sites where they are located by allowing all conflicting uses, unless a change of zoning occurs (i.e., heavy industrial to mixed-use residential). The functional plan names four sites by name (the International Terminal site, and Port of Portland Marine Terminals 4, 5 and 6) and includes criteria to identify future sites that are similarly situated. The criteria state that a site must be in use as an international marine terminal and must be substantially without vegetative cover.

H. Adjustment in Urban Development Value for Regionally Significant Educational and Medical Facilities

The economic model Metro used to determine urban development value underwent significant peer review, and was developed with the guidance of an Economic Technical Advisory Committee. The model incorporated potential job density, land value (except for residential land), and 2040 design types to determine the urban development value of land within the UGB. Generally, the model worked well, but it did not account for certain unique circumstances. Regionally significant educational and medical facilities typically locate in residential areas to better serve their users. This frequently results in their location in a low-priority 2040 design type, inner and outer neighborhoods, potentially undervaluing the economic importance of these facilities. In May 2004, Council directed staff (Resolution No. 04-3440A) to develop a proposal to consider the urban development value of regionally significant major institutions.

One of the major reasons for this adjustment process was the inclusion of upland habitats in the proposed regulatory treatments under Council Resolutions Nos. 03-3376B and 04-3440. Some medical and educational facilities may have Class A and B upland habitat areas on their campuses that are also identified as future facility expansion areas. Since the Council is applying a regulatory approach for Class I and II riparian areas only, and not upland habitat areas, this lowers the degree of conflict between habitat protection and facility expansion plans.

Title 13 includes the following approach to recognize the economic importance of regionally significant educational and medical facilities:

- Identifies by name ten existing regionally significant educational and medical facilities that have Class I and II Habitat on their properties.
- Adjusts the urban development value for these facilities to high, resulting in either moderate or low Habitat Conservation Areas depending on the habitat value.
- Describes criteria to identify future regionally significant educational and medical facilities to be determined by the Metro Council (not at the city or county level).

I. Program objectives, monitoring and reporting

Resolution No. 04-3506A, adopted by the Metro Council on December 9, 2004, directed staff to develop regional outcome measures to evaluate the region's progress toward meeting the vision of conserving, protecting, and restoring fish and wildlife habitat in the region. The resolution also called for an annual assessment of progress including, but not limited to, an evaluation of the habitat inventory. Title 13 proposes to assess progress every two years, since more frequent reporting is unlikely to detect measurable changes, and to tie it to Metro's overall Performance Measures Report.

As part of the monitoring and reporting element, the functional plan proposes to track progress in habitat acquisition and restoration efforts and changes in streams, wetlands, floodplains, vegetation and habitats of concern to monitor habitat quality and quantity by watershed. This will require substantial coordination with cities, counties, agencies, and special districts, which are required to update Metro with new data when it is available. Keeping track of regional progress towards the objectives and targets for habitat protection and restoration will enable policy makers to evaluate the effectiveness of the Nature in Neighborhoods initiative and consider altering course if necessary.

Title 13 includes four performance objectives to measure the quantity and quality of the region's fish and wildlife habitat. The aspirational targets for each of the performance objectives are included as part of the monitoring section, and are not tied to any city or county compliance alternative. These targets, 2004 baseline, considerations that played a role in determining the targets, and a numeric description of what it would require to meet the target within a ten-year period is included in Table 1 below.

Table 1. Targets, 2004 Baseline, and Considerations in setting targets.

Targets	2004 Baseline and Targeted Condition	Considerations in setting the target
<p>1a. <u>10% increase in forest and other vegetated acres within 50 feet</u> of streams (on each side) and wetlands in each subwatershed over the next 10 years (2015).</p>	<p>1a. 2004 Baseline Condition (regional data):</p> <ul style="list-style-type: none"> • 64% vegetated • 14,000 vegetated acres 	<ul style="list-style-type: none"> • Most local and regional riparian regulatory programs are focused within the first 50 feet of streams and wetlands. • Mitigation, enhancement and restoration projects typically occur in this area. • A higher target for increasing vegetation cover within 50 feet of streams and wetlands will help achieve DEQ established Total Maximum Daily loads for stream temperature. • As redevelopment occurs, habitat within 50 of streams and wetlands can be restored.
	<p>10% increase:</p> <ul style="list-style-type: none"> • 70% vegetated • 1,400 acre increase in vegetation over 10 years 	
<p>1b. <u>5% increase in forest and other vegetated acres within 50 to 150 feet of streams</u> (on each side) and wetlands in each subwatershed over the next 10 years (2015).</p>	<p>1b. 2004 Baseline Condition (regional data):</p> <ul style="list-style-type: none"> • 59% vegetated • 15,250 vegetated acres 	<ul style="list-style-type: none"> • Some local regulatory programs protect land between 50 and 150 of streams and wetlands, especially in steep slope areas. • The 150-foot distance includes the outer distance of all primary (most important) ecological functions for riparian areas (with the exception of large undeveloped floodplains). • Reducing regional residential capacity requirements can help to preserve habitat within 150 feet of streams inside the 2002 UGB. • As redevelopment occurs, habitat within 150 of streams and wetlands can be restored
	<p>5% increase:</p> <ul style="list-style-type: none"> • 62% vegetated • 760 acre increase in vegetation over 10 years 	
<p>1c. <u>No more than 20% increase in developed floodplain acreage</u> in each subwatershed over the next 10 years (2015).</p>	<p>1c. 2004 Baseline Condition (regional data):</p> <ul style="list-style-type: none"> • 10% of all floodplain acres are developed • 3,450 acres of developed floodplains 	<ul style="list-style-type: none"> • Applying the “avoid, minimize, and mitigate” tests to undeveloped floodplains would increase protection levels compared to existing Title 3 “cut and fill” requirements. • Loss of undeveloped floodplains in industrial and mixed-use areas is expected to continue to occur but at reduced amounts compared to current trends.
	<p>20% increase:</p> <ul style="list-style-type: none"> • 4,200 acres of developed floodplains 	
<p>2a. <u>Preserve 75% of vacant Class A and B</u> upland wildlife habitat in each subwatershed over the next 10 years (2015).</p>	<p>2a. 2004 Baseline Condition:</p> <ul style="list-style-type: none"> • 15,500 acres of vacant Class A and B upland 	<ul style="list-style-type: none"> • Vacant Class A and B upland wildlife habitat within the UGB is most vulnerable to loss over time compared to other upland wildlife habitat located in developed areas or in parks. • Regional development standards focused on Riparian Class I and II habitats will place development pressure on upland habitats. • Acquisition programs and habitat friendly development practices can help preserve some upland wildlife habitat. • Reforestation programs can help restore upland wildlife habitat. • Reducing regional residential capacity requirements can help preserve upland habitat. • New urban area planning (e.g., Damascus area) offers opportunities to better protect upland habitat. • Council’s decision to protect Class A and B habitats in future UGB annexations will increase retention of upland habitats.
	<p>75% retention:</p> <ul style="list-style-type: none"> • 11,600 acres of vacant Class A and B upland remaining 	
<p>2b. Of the upland habitat preserved, <u>retain 80% of the number of patches 30 acres or larger</u> in each subwatershed over the next 10 years (2015).</p>	<p>2b. 2004 Baseline Condition:</p> <ul style="list-style-type: none"> • 23,400 acres of upland habitat in 133 patches that contain 30 acres or more of upland wildlife habitat 	
	<p>80% retention:</p> <ul style="list-style-type: none"> • 106 upland habitat patches that contain 30 acres or more of upland habitat 	

<p>3a. <u>Preserve 90% of forested wildlife habitat acres located within 300 feet of surface streams</u> in each subwatershed over the next 10 years (2015).</p>	<p>3a. 2004 Baseline Condition:</p> <ul style="list-style-type: none"> • 28,300 acres within 1,453 patches of forested wildlife habitat located within 300 feet of surface streams 	<ul style="list-style-type: none"> • Vacant upland wildlife habitat is vulnerable to loss, and connectivity between riparian corridors and adjacent upland wildlife habitat can be expected to decline, especially within the 2002 UGB. • Non-forested wildlife habitat within 300 feet of surface streams is more vulnerable to loss compared to forested habitat. • Forested wildlife habitat located within parks and developed residential areas is more stable and will support higher connectivity for wildlife between riparian corridors and upland wildlife habitat. • Acquisition and habitat friendly development practices (cluster development, on and off site density transfers) can help slow the loss of habitat connectivity. • Reducing regional residential capacity requirements can help preserve connectivity between riparian corridors and upland wildlife habitat. 	
	<p>90% retention:</p> <ul style="list-style-type: none"> • 25,500 acres of forested wildlife habitat located within 300 feet of surface streams 		
<p>3b. <u>Preserve 80% of non-forested wildlife habitat acres located within 300 feet of surface streams</u> in each subwatershed over the next 10 years (2015).</p>	<p>3b. 2004 Baseline Condition:</p> <ul style="list-style-type: none"> • 14,400 acres within 1,633 patches of non-forested wildlife habitat located within 300 feet of surface streams 		
	<p>80% retention:</p> <ul style="list-style-type: none"> • 11,500 acres of non-forested wildlife habitat located within 300 feet of surface streams 		
<p>4a. <u>Preserve 95% of habitats of concern acres</u> in each subwatershed over the next 10 years (2015).</p>	<p>4a. 2004 Baseline Condition:</p> <ul style="list-style-type: none"> • 33% of all habitat designated as HOCs • 26,700 total acres of HOCs 		<ul style="list-style-type: none"> • Habitats of concern are located in Class I riparian areas and Class A upland wildlife habitat, a majority of which are located in parks, riverine islands and deltas, wetlands, floodplains, and riparian corridors. These areas are less vulnerable to loss due to development constraints and public park ownership. • Acquisition, habitat friendly development practices, and reducing regional residential capacity requirements can help slow the loss of Habitats of Concern.
	<p>95% retention:</p> <ul style="list-style-type: none"> • 25,400 total acres of HOCs 		

Two implementation objectives are included that help describe the actions to look for as the region moves towards achieving the habitat performance objectives. These would measure how well cities and counties are allowing and encouraging habitat-friendly development practices and the number of mitigation and restoration projects conducted.

J. Tree protection and vegetative clearing

Tree canopy located in vacant Class I and II riparian habitat areas (19,230 acres including constrained and unconstrained) is vulnerable to loss outside the development review process. For example, a landowner could remove trees on a vacant parcel unless doing so required a tree removal permit from the city or county. Some cities and counties already have tree protection ordinances in place while others do not. Including language in the Functional Plan to protect trees would help address this situation. The tree protection would apply to forested land within Class A and B upland habitats coming into the UGB.

Policy options include:

- Establish mandatory tree protection requirements in the functional plan to address tree removal outside the development process;

- Rely on regional education efforts to increase awareness of the value of trees and to inform property owners about the new regulations in a way that reduces interest in cutting trees before applying for a development permit.
- Expand existing Title 3 approach to development, which is defined to include “removal of more than 10 percent of the vegetation on the lot,” to Habitat Conservation Areas.

The proposed Title 13 extends the current Title 3 approach to vegetation removal and tree protection beyond the WQRA to include all HCAs. Removal of more than 10% of the vegetation within an HCA is considered development, and will thereby be subject to the requirements established pursuant to Title 13 (except for excepted activities as noted above, such as for currently developed residential properties).

3. TITLE 13 MODEL ORDINANCE

Metro’s Title 13 Model Ordinance serves two purposes: as an example for cities and counties to guide substantial compliance and as an alternative for cities and counties to adopt and be in substantial compliance without further efforts. The model ordinance is written to be consistent with the Goal 5 rule, including a clear and objective standards approach and a discretionary review approach. The main components of the model ordinance are described below.

A. Section 3. Applicability and map administration

This section describes when the ordinance applies, upon development and redevelopment, and includes a site-specific habitat verification process. There are three basic approaches for verification:

1. Basic approach, property owner must use clear and objective development standards
 - Property owner believes map is accurate,
 - Lot lines do not match with HCA boundaries, or
 - Property was developed before Title 13 came into effect
2. Intermediate approach, property owner must use clear and objective development standards
 - HCA map is inaccurate due to incorrect location of a landscape feature
3. Detailed approach, required for all property owners using the discretionary review standards
 - Application must be completed by qualified professional
 - Detailed criteria must be completed

B. Section 4. Uses and activities that are exempt

This section carries forward the activities that were identified in Title 13 and adds to the list other items that can be exempted from further review in this ordinance. Emergency procedures, routine maintenance and repair, existing developed residential properties, replacement to structures within the existing building footprint, and minor expansions to structures are included. Other key exemptions include:

- Development on a site that will remain at least 100 feet away from the boundary of the HCA (i.e. sufficient distance to ensure habitat protection even if there were any mapping errors).

- Sites with a phased development plan, once they have followed the procedures for the initial permit and site plan, are exempt from further review so long as building sites and coverages remain consistent with the original permit.
- Removal of nuisance plants and planting of native plants.
- Restoration projects that are part of an approved plan.
- Low-impact outdoor recreation facilities outside of Title 3 WQRAs, so long as they contain less than 500 sq. ft. of new impervious surface.

C. Section 5. Uses Allowed Under Prescribed Conditions

In this section two specific areas are called out for special attention.

- The Port of Portland has developed a Wildlife Hazard Management Plan to minimize the wildlife hazards, primarily from birds, to jets arriving and departing from international airports in the region. Port of Portland activities required to comply with a Federal Aviation Administration wildlife hazard management plan are exempted from all standards except mitigation, and mitigation is allowed off-site anywhere within the region.
- Within Multnomah County Drainage District No. 1, Peninsula Drainage District No. 1, Peninsula Drainage District No. 2, and the area managed by the Sandy Drainage Improvement Company, activities required to maintain the managed floodplain are allowed so long as native vegetation is maintained or enhanced, further disturbance to the waterways is minimized, and all applicable laws are followed.

D. Section 7. Development Standards

This section describes the clear and objective development standards, if an applicant proposes development that complies with these standards then there is no additional process required. The intent of Title 13, which directs all development within Habitat Conservation Areas to follow the avoid-minimize-mitigate standard, is carried out in this section through incentives for avoiding habitat, disturbance area limitations for High and Moderate HCAs, and mitigation requirements for all development within an HCA.

Flexible development standards are a critical component of this section, providing incentives to avoid and minimize Habitat Conservation Areas. Flexible development standards include:

- *Building setback flexibility*, reducing or eliminating front, side, and back-yard setbacks to allow placement of the building site as far from the HCA as possible.
- *Flexible landscaping requirements* to allow these to be met by preserving the HCA in a natural condition, and allowing certain on-site stormwater management facilities in the HCA. This incentive may be particularly helpful for commercial and industrial developments.
- *Flexible site design, or clustering*, to allow smaller lot sizes and creative configurations to cluster development away from or to minimize disturbance within the HCA.
- *Density bonus for habitat protection*, specifically for multi-family zones.
- *Density reduction for habitat protection*, which allows all habitat that will be permanently protected to be subtracted from calculations to determine minimum density.

- *Transfer of development rights*, an optional provision to transfer density from sites with over 50% in an HCA to 2040 mixed-use areas.

When development does occur within the Habitat Conservation Area there are certain standards that apply.

- *Disturbance area limitations*, to minimize impact to High and Moderate HCAs. There is one calculation method for single-family and another for all other zones.
- *Construction standards* to protect habitat during site development.
- *Utility standards* to minimize disturbance of habitat for utility connections.
- *Subdivision standards* that require new subdivision plats to show a percentage of the High and Moderate HCA as a separate non-buildable tract.

All disturbance within the Habitat Conservation Area must be mitigated. The amount of mitigation is calculated based on the size and number of trees removed or the area disturbed, whichever results in more vegetation planting.

E. Section 8. Discretionary Review

The discretionary review approach closely follows the performance standards and best management practices described in Title 13. An applicant who cannot or chooses not to meet the clear and objective standards may use this approach for development on a site with a Habitat Conservation Area.

All applications for development using these standards must conduct an impact evaluation that includes identification of the ecological functional values on the site, an evaluation of alternative locations, designs, or methods of development to minimize negative impacts, and determination of the development alternative that best meets the approval criteria. The approval criteria include:

- *Avoid.* Applicant must first avoid intrusion into the HCA to the extent practicable. The economic considerations are greater in a Low HCA than in a High HCA. Again, any requirement that would result in a decrease in the fair market value of a property is considered not practicable.
- *Minimize.* All development must minimize, to the extent practicable, detrimental impacts to ecological functions.
- *Mitigate.* An applicant must mitigate for adverse impacts to the HCA. Mitigation must occur on-site to the extent possible, second within the subwatershed, and outside the subwatershed only when the purpose can be better provided elsewhere. Two mitigation options are included; both include requirements to use habitat-friendly development practices. Option 1 allows the applicant to choose from a menu of habitat-friendly development practices and use a set mitigation ratio. Option 2 allows the applicant to reduce the mitigation ratio by achieving a lower percentage of effective impervious area through habitat-friendly development practices.

The other sections of the model ordinance are standard to address:

- Section 1. Intent
- Section 2. Relationship to Water Quality Resource Area and Flood Management Area, Consistency with Other Regulations

- Section 5. Prohibitions – nuisance plants, unauthorized clearing or grading
- Section 9. Variances
- Section 10. Severability
- Section 11. Definitions

4. REGIONAL FRAMEWORK PLAN AMENDMENTS

Several of the policies identified by the Council to implement a fish and wildlife habitat protection program as part of the Nature in Neighborhoods Initiative would be implemented through amendments to the Regional Framework Plan. These amendments are described below.

A. Summary of Growth Concept

This section would be amended to more accurately describe the functional plan requirements related to fish and wildlife habitat.

B. Chapter 1 – Land Use

A new section would be added, 1.9.4 “Protection of Regionally Significant Fish and Wildlife Habitat,” to describe the Council’s policies to protect habitat in new urban growth boundary expansion areas. It includes direction to conduct an inventory and provides direction to limit future conflicts between habitat protection and urbanization.

C. Chapter 3

The Council is currently considering Resolution No. 05-3574 that would direct the regional fish and wildlife protection, restoration and greenspaces initiative to be named “Nature In Neighborhoods.” Chapter 3 of the Regional Framework Plan is currently entitled “Parks, Natural Areas, Open Spaces and Recreational Facilities,” yet describes most of the programs that are proposed to be included within the Nature in Neighborhoods Initiative. Based on this, a key proposed amendment is to change the title of Chapter 3 to “Nature in Neighborhoods.” Other amendments to this chapter include:

- Section 3.2.2 – states that the fish and wildlife habitat program shall be developed to achieve four performance objectives and two implementation objectives
- Several sections through the chapter – minor wording changes to incorporate references to fish and wildlife habitat and Nature in Neighborhoods Initiative

D. Chapter 4

This chapter focuses on water quality issues, but also specifically relates to fish and wildlife habitat protection. The chapter is currently named “Water Management,” but is proposed to be renamed “Watershed Health and Water Quality” to more aptly describe the policies in the chapter. Section 4.18 would be renamed “Water Quality and Riparian Fish and Wildlife Habitat Corridors” and would describe how healthy fish and wildlife habitat and water quality are related. This language explicitly acknowledges as a matter of RFP policy the link between water quality and fish and wildlife habitat, enhancing future ties between Title 13 and federal water quality requirements.

E. RFP Policies and Implementation Recommendations or Requirements Table

Amendments to this table simply reference the appropriate Titles in the Functional Plan, and are purely technical in nature.

5. AMENDMENTS TO TITLES 3, 8, 10 AND 11 OF THE URBAN GROWTH MANAGEMENT FUNCTIONAL PLAN

Implementing Title 13 of the Functional Plan has a cascading effect of simple amendments that are required to several other titles. These amendments are described below.

A. Title 3 – Water Quality and Flood Management

Title 3 addresses water quality and flood management, but also included direction to Metro to conduct planning that would protect fish and wildlife habitat. All references to fish and wildlife habitat have been removed, since these requirements are now placed in Title 13 of the Functional Plan. Two other amendments to Title 3 are included:

- Change to Section B(2)(d) requiring native vegetation to be planted in the Water Quality Resource Area. This amendment loosens the restriction by continuing to allow the removal of non-native or noxious vegetation but removing the requirement to replace it with native vegetation. The amendment encourages the planting of native vegetation but only requires replacement if native vegetation is removed.
- Repeal the variances section, since it applied only to fish and wildlife habitat areas and those provisions are now in Title 13.

B. Title 8 – Compliance with the Functional Plan

Title 8 describes how cities and counties must comply with the Functional Plan. Cities and counties will have to have amended their comprehensive plans and land use regulations to comply with Title 13 within two years of its acknowledgement by LCDC, and will have to make land use decisions compliant with Title 13 at that time (rather than one year after acknowledgement, with is the limit of Metro’s authority under state law). In addition, beginning one year after acknowledgement, any other amendments that cities and counties make to other parts of their comprehensive plans or other land use regulations will have to be consistent with Title 13.

C. Title 10 – Definitions

This title provides the definitions critical for effective implementation of the Functional Plan. Several definitions have been added to further clarify the intent of Title 13. The most important changes, already discussed above, are to the definitions of “Development,” and “Practicable.”

D. Title 11 – Planning for New Urban Areas

This title describes the key items to consider when developing plans for new urban areas. It has been amended to consider Habitat Conservation Areas when developing such plans, and to make efforts to minimize conflicts between protecting Habitat Conservation Areas and urban development of new urban areas.

ANALYSIS/INFORMATION

1. **Known Opposition.** No known opposition to the specific elements in the proposed ordinance, however there has been a substantial public process throughout the course of this project. It is projected that there will be opposition from both sides of the spectrum during the public comment period for this ordinance. Some parties are likely to assert the difficulty of introducing new regulations after the passage of Measure 37, stating the uncertain legal climate and general political environment leading to the measure's success. Other parties will likely convey disappointment in a regulatory program that does not completely protect any regionally significant habitat and has been reduced in geographic scope by half from the time the Council made a preliminary ESEE determination in May 2004.
2. **Legal Antecedents.** Statewide Planning Goal 5, OAR 660-015-0000(5), and the Goal 5 Rule, OAR 660-023, and specifically OAR 660-023-0080. ORS chapter 197, and specifically ORS 197.274. ORS chapter 268, and specifically ORS 268.380, ORS 268.390, and ORS 268.393. The Metro Charter, Regional Framework Plan, and Metro Code sections 3.07.310 to 3.07.370. Metro Resolutions Nos. 02-3176, 02-3177A, 02-3195, 02-3218A, 03-3332, 03-3376B, 04-3440A, 04-3488, 04-3489A, 04-3506A, 05-3574 and 05-3577.
3. **Anticipated Effects.** Approval of this ordinance will allow Metro to complete the three-step process for complying with Statewide Land Use Planning Goal 5 by amending portions of the Regional Framework Plan and Urban Growth Management Functional Plan. This allows Metro to submit a complete package to the Department of Land Conservation and Development for acknowledgement review pursuant to ORS 197.274. Cities and counties would then be required to bring comprehensive plans and implementing ordinances in compliance with Metro's Functional Plan within two years.
4. **Budget Impacts.** Adoption of this ordinance commits Metro to the long-term monitoring and reporting of regional progress in habitat protection and restoration. It also commits staff resources to providing technical assistance to cities and counties in the review of codes for barriers to habitat-friendly development practices. Staff resources will also be necessary to review city and county compliance reports after acknowledgement by DLCDC. The Council President's proposed budget for FY 05-06 includes 2 FTE for monitoring and technical assistance.

RECOMMENDED ACTION

Staff requests that Metro Council adopt the proposed amendments to the Regional Framework Plan and Urban Growth Management Functional Plan to implement new development standards in regionally significant fish and wildlife habitat areas identified as Habitat Conservation Areas.

ATTACHMENTS TO THE STAFF REPORT

Attachment 1. Vision Statement.

Attachment 2. Habitat Protection Tools Summary.

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**Staff Report for Ordinance #05-1077
Attachment #1**

Final DRAFT
October 4, 2000
Streamside CPR*
Program Outline

Purpose, Vision, Goal, Principles and Context

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*CPR = Conserve, Protect and Restore

Purpose, Vision, Goal, Principles and Context

I. INTRODUCTION

A. PURPOSE

This document provides the organizational, definitional and policy approach that will apply to the creation and implementation of Metro's Goal 5 – Fish and Wildlife Program decision. This Purpose, Vision, Goal and Principles document is intended to guide, inform, and be the philosophical underpinnings of the Goal 5 Streamside CPR program. It is not a regulatory document.

The purpose is to develop a streamside conservation, protection and restoration program that balances the goals of:

- building livable, Region 2040 communities and implementing the Regional Urban Growth Goals and Objectives (RUGGO);
- protecting and enhancing fish and wildlife habitat as required by the Metro Urban Growth Management Function Plan;¹
- supporting a strong economy;
- meeting State Land Use Planning Goal 5 standards and procedures;
- addressing Federal Endangered Species Act (ESA) requirements;
- adding to the progress already made by the implementation of Title 3, regional water quality and flood protection requirements; and
- providing the organizational, definitional and policy approach that will apply to the creation and implementation of Metro's Goal 5 – Streamside Fish and Wildlife Program decision.

Cities and counties, as general-purpose governments, are responsible for comprehensive planning including completion of a generalized coordinated land use map and policy statements that interrelate all functional and natural systems and activities relating to the use of land. Cities and counties also are responsible for implementing ordinances, especially zoning ordinances, to regulate land uses. Metro, a regional government, is responsible for addressing issues of metropolitan concern and the Metro Council may determine such issues and adopt regulations directing local governments to change their comprehensive plans and implementing ordinances to address identified regional issues. The Vision Statement, Regional Goal and Program Principles contained in this document provide overall direction to preparation and implementation of the regional safe harbor, local discretionary and riparian district plan option approaches to Metro Goal 5 compliance that will be available to local governments.

B. VISION STATEMENT

Our region places a high priority on the protection of its streams, wetlands and floodplains to maintain access to nature; sustain and enhance native fish and wildlife species and their habitats; mitigate high storm flows and maintain adequate summer flows; provide clean water; and create communities that fully integrate the built and natural environment. As ribbons of green, stream and river corridors maintain connections with adjacent upland habitats, form an interconnected mosaic of urban forest and other fish and wildlife habitat, and contribute significantly to our region's livability.

The RUGGO state that the region should "Manage watersheds to protect and ensure to the maximum extent practicable the integrity of streams, wetlands and floodplains, and their multiple biological, physical, and social values," as well as that "A region-wide system of linked significant wildlife habitats should be developed. This system should be preserved, restored where appropriate, and managed to

maintain the region's biodiversity." The streamside program will contribute to these objectives by balancing, economic, social, environmental and energy considerations as will future efforts to address watershed and upland habitats.

C. OVERALL GOAL

The overall goal is to conserve, protect and restore a continuous ecologically viable streamside corridor system, from the streams' headwaters to their confluence with others streams and rivers, and with their floodplains in a manner that is integrated with the surrounding urban landscape. This system will be achieved through conservation, protection and appropriate restoration of streamside corridors through time.

D. PROGRAM PRINCIPLES

The program will be designed to achieve the following future conditions:

Areas of existing forest cover or areas where it is appropriate to restore forest cover. Conserve, protect and restore the biological, physical and social values of streams, wetlands, riparian areas and floodplains, by encouraging the growth and management of mature forest conditions composed of native forest tree species, appropriate for specific site conditions, mixed with native shrubs and herbaceous species, and containing ample standing snags and downed woody debris. Forest conditions will be managed, where appropriate to address public safety concerns.

Areas where forest cover did not exist historically or where non-forest cover is appropriate, based on a natural resources plan. Conserve, protect and restore the biological, physical and social values of streams, wetlands, riparian areas and floodplains through management of native vegetation appropriate to non-forested conditions.

Developed 2040 Centers and areas where floodplain function is artificially controlled. Contribute to the conservation, protection and restoration of the biological, physical and social values of streams, wetlands, riparian areas and floodplains.

The program will be designed to achieve these future conditions using the following principles:

1. **Ecological Function.** The ecological function of the streamside corridor system will be restored and maintained to the maximum extent practicable given the opportunities and constraints of the urban landscape.
2. **Economically Sound.** Economic vitality and a healthy natural environment are necessary components of sustainable development in the metropolitan area. Investments in protection and restoration of our natural areas contribute significantly to the region's economic health.
3. **Protection and Restoration.**² Given the currently degraded condition of a majority of urban streams, wetlands, riparian areas and floodplains, protection and restoration are of equal importance in order to achieve the region's goals. Both protection and restoration are important in moving toward recovery of threatened and endangered salmonids, and avoiding future endangered or threatened listings of both aquatic and terrestrial species.
4. **Flexible Regulatory Approaches.** Protective regulations shall be based on the best available natural science balanced with economic, environmental, social and energy considerations, and shall provide local governments with flexibility in meeting the overall goals of this program. This

program is also intended to help local governments address the Federal ESA by preventing the need for additional ESA listings and avoiding legal restrictions that may result from current and potential future listings. Implementation of the Federal ESA program for endangered salmonids will need a wide range of actions to be taken by local, state and Federal agencies to recover the species. Metro's requirements are not intended to meet all ESA regulations, but are intended to address recovery obstacles within and along stream corridors. The objective is to obtain Federal approval of this program, so that local governments can use it if they choose. The program is not intended to be the exclusive means available to local governments in the region to address ESA requirements. Local governments can independently seek certification as an alternative.

5. ***Incentives Education and Acquisition.*** Regulatory efforts to conserve, protect and restore natural resources are most effective when combined with incentives, education and acquisition programs that encourage full community participation, therefore, such programs will be an element of the overall program.
6. ***Stewardship Responsibilities.*** All landowners and land users throughout each watershed have an important stewardship responsibility to contribute to the protection and restoration of streams, wetlands, riparian areas and floodplains.
7. ***Urban Form.*** Realization of the region's 2040 Growth Concept requires a compact urban form while protecting natural resources and water quality. This is accomplished in three primary ways:
 - a. Protecting natural areas outside the Urban Growth Boundary (UGB). Accommodate compact development within the UGB in order to minimize land extensive expansion that adversely impacts farm and forest lands and natural areas outside the boundary;
 - b. Accommodating urban growth in a compact form while protecting and enhancing key fish and wildlife habitat, natural areas, and water quality and quantity within the current UGB;
 - c. Protecting and restoring urban stream corridors to provide people with an effective means to access nature, providing ecological linkage to other important fish and wildlife habitats, and compact urban form through integration of the built and natural environments.³
8. ***Measure and Monitor.*** A measuring and monitoring system should be established and should include:
 - Assessment of existing conditions;
 - Use of "properly functioning conditions"⁴ as the description of desired future conditions; and
 - Assessment and regular monitoring over time of streamside conditions to determine progress in achieving the goals of properly functioning conditions.
9. ***Coordination and Cooperation.*** Effective management of the regional streamside resource cannot be achieved without a collaborative approach throughout the region. The Streamside CPR Program will provide local jurisdictions with the flexibility to pursue alternative collaborative management approaches that meet the standards of this programs, such as watershed planning, and will emphasize efforts that ensure coordination and cooperation between and among the region's partners including local governments, business, nonprofits and citizens.

E. CONTEXT

The preamble of Metro's voter-approved 1992 Charter declares that Metro's most important service is to "preserve and enhance the quality of life and the environment for ourselves and future generations."⁵ Through its Charter-mandated responsibilities, Metro Council has provided leadership in addressing growth management issues by working with citizens, elected officials and diverse interest groups to

craft a vision of how the region will grow. Through adoption of policies to achieve that vision, Metro Council has identified the need to balance natural resource protection with urban development while the region grows.

How this balancing will take place, and in what form it will be expressed across the urban landscape, is a key question addressed in various documents. For example, the region's 2040 Growth Concept map includes an environmental greenway along streams in the region to ensure connectivity throughout the urban landscape.⁶ The goal of the Greenspaces Master Plan is to create a cooperative regional system of natural areas, open space, trails and greenways for wildlife and people in the four-county metropolitan area.⁷ Other planning documents which speak to urban natural areas and water resources include the Future Vision⁸, the RUGGO, the Regional Framework Plan⁹, and the Urban Growth Management Functional Plan. A unifying feature of all of these documents is to achieve compact urban form and efficient delivery of urban services while at the same time preserving citizen access to nature and community livability.

A cornerstone of these regional policies is protection of natural systems—regionally significant fish and wildlife habitat, streams, rivers, wetlands and floodplains—because their protection and restoration is essential to maintaining and improving the region's livability, economic well-being and environmental health.

In addition to the regionwide policies, there are State and Federal policies which are also important considerations. The purpose of the State's Land Use Planning Goal 5 is "To protect natural resources and conserve scenic and historic areas and open spaces".¹⁰ At the Federal level, for a large part of the Pacific Northwest Coast and associated inland rivers and streams, the National Marine Fisheries Service (NMFS), is acting under the requirements of the Federal ESA. At this time, NMFS has designated four species of Steelhead and eight other species of salmon as either threatened or endangered in the Columbia River Basin. Local governments, through their comprehensive plans, will be implementing requirements to address natural resource protection. In order to address this status, our region will need to take actions that are consistent with the recovery needs of these species. In doing so, the region, its local government partners and the citizens of the metropolitan area can help ensure that one of the defining symbols of our region once again thrives.

To accomplish the planning work described in these policies, Metro is pursuing adoption and implementation of programs to:

- protect the beneficial uses associated with the region's streams and rivers, including water quality and protect life and property from dangers associated with flooding¹¹
- Protect, conserve and enhance fish and wildlife habitat within regionally significant riparian corridors under Statewide Planning Goal 5¹²
- Protect, conserve and enhance regionally significant upland wildlife habitat under Statewide Planning Goal 5;¹³ and
- Implement the Greenspaces Master Plan.

All of these programs, taken in concert and with full implementation by local governments, will realize the vision for growth enunciated in Metro's Charter, Future Vision and subsequent planning documents described above.

To complete this work effort Metro shall:

1. Establish criteria to define and identify regionally significant fish and wildlife habitat areas;
2. Examine existing Goal 5 data;
3. Identify inadequate or inconsistent data;
4. After considering items 1-3, and after holding public hearings, adopt a map of regionally significant fish and wildlife areas.

II. PROGRAM DESCRIPTIONS (TO BE ADDED)

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¹ The focus of the Purpose, Vision, Goal, Principles and Context Statement is on native species of fish and wildlife whose historic ranges include the metropolitan area and whose habitats are or can be provided for in urban streamside corridors. The Purpose Statement does not intend to include native species such as bear, cougar, lynx and deer, which may be conducive in specific areas such as Portland's Forest Park, but may not be conducive in urban stream corridors elsewhere in the metropolitan area.

² Proposed definition of restoration:

Restoration, in the context of the streamside CPR program, means action taken to return natural riparian functions and values for fish and wildlife. Restoration would be applied where riparian functions are in a degraded condition and are intended to return the riparian functions to good or excellent condition. While there may be instances where restoration to pre-development, natural conditions is possible, in general, restoration should not mean the end-state of re-establishing a totally pristine condition. It should address the improvements or re-introduction of functional values.

Conditions Under Which Restoration Would Occur:

Conditions under which restoration will occur will be established when the program is defined. The current draft of the Goal 5 program does not contemplate that homeowners and other property owners would be required to undertake restoration unless there was a development activity that required a permit for new development, significant modifications to structures, or redevelopment. In the absence of a development permit it is assumed that restoration would be achieved through incentive-based, voluntary, and community-based restoration and enhancement activities. Public education and the promotion of voluntary naturescaping and restoration would be part of the regionwide cooperative effort to improve the existing degraded conditions of our urban waterways.

³ "to provide people with an effective means to access nature" means to help people enjoy, approach or be near to nature. It is not intended to imply the right of any person to enter or make use of private property unless the property owner grants that right of public access.

⁴ Defined by Federal natural resource programs.

⁵ The preamble of Metro's Charter states the following: "We, the people of the Portland area metropolitan service district, [establish an elected regional government] that undertakes, as its most important service, planning and policy making to preserve and enhance the quality of life and the environment for ourselves and future generations." 1992 Metro Charter, page 1.

⁶ The Metro 2040 Growth Concept, acknowledged by the Land Conservation and Development Commission in 1995, states the following: "The basic philosophy of the Growth Concept is: preserve access to nature and build better communities." December 8, 1994, Page 1.

⁷ Other goals of the July 1992 Metropolitan Greenspaces Master Plan include preserving “diversity of plant and animal life in the urban environment, using watersheds as the basis for ecological planning.” The Greenspaces Master Plan is guided by the following ecological principles: “Maintain biological diversity by restoring and enhancing a variety of habitats, including wetlands, riparian corridors, forests and agricultural lands.” And “Protect, restore and recreate stream corridor vegetation by replacing riparian vegetation where it is lacking or dominated by exotic species and removing barriers, where possible, to maintain connections with adjacent upland habitats.”

⁸ The Future Vision states the following: “We value natural systems for their intrinsic value, and recognize our responsibility to be stewards of the region’s natural resources.” March 1995, page 1. In 2045, the region should be characterized by “Improved water quality, and increased biodiversity,” and “restored ecosystems protected from future degradation and decline.” Page 12. Specific actions identified: “Manage watersheds to protect, restore, and maintain the integrity of streams, wetlands and floodplains, and their multiple biological, physical, and social values.” Page 12.

⁹ Chapter 3 of the December 31, 1997 Regional Framework Plan establishes policies for parks, natural areas and open spaces, and identifies the important environmental benefits of maintaining and improving air and water resources, providing flood control, and protecting fish and wildlife habitat. It commits Metro to “develop a strategy and action plan to address inadequacies in the protection of regional Goal 5 resources. This plan will be carried out by Metro.” Page 108, see also page 190.

¹⁰ Goal 5 further states that “Local governments shall adopt programs that will protect natural resources and conserve scenic, historic, and open space resources for present and future generations. These resources promote a healthy environment and natural landscape that contributes to Oregon’s livability.” Procedures and requirements for complying with Goal 5 call for an inventory, a determination of significance, an analysis of the economic, social, environmental and energy consequences of a decision that could allow, limit or prohibit a conflicting use.

¹¹ From Title 3, Sections 1-4 of the 1996 Urban Growth Management Functional Plan

¹² From Title 3, Sections 1, 2 and 5 of the 1996 Urban Growth Management Functional Plan.

¹³ From Title 3, Sections 1, 2 and 5 of the 1996 Urban Growth Management Functional Plan.

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**Staff Report for Ordinance #05-1077
Attachment #2**

Fish and Wildlife Habitat Protection and Restoration Tools

**Summary Descriptions and Recommended
Best Management Practices**

April 2005

Fish and Wildlife Habitat Protection and Restoration Tools

Tool Categories (See attached document for summary descriptions)		Program Objectives					
		Avoid				Minimize	Mitigate
		1: Streamside Connectivity	2: Large habitat patches	3: Wildlife Corridors	4: Habitat of Concern	5: Minimize Impacts	6: Mitigate & Restore
AVOID	1) Acquisition	●	●	●	●	○	○
	2) Tree protection standards	●	●	●	●	●	●
	3) Cluster development	●	●	●	●	●	○
	4) Transfer of development rights (TDRs)	●	●	●	●	●	○
	5) Riparian setbacks	●	○	○	●	○	○
MINIMIZE	6) Flexible site design	○	○	○	○	●	○
	7) Impervious surface reduction	○	○	○	○	●	○
	8) On-site stormwater management and erosion control	○	○	○	○	●	○
	9) Greenstreets standards	○	○	○	○	●	○

Tool Categories (See attached document for summary descriptions)		Program Objectives					
		Avoid				Minimize	Mitigate
		1: Streamside Connectivity	2: Large habitat patches	3: Wildlife Corridors	4: Habitat of Concern	5: Minimize Impacts	6: Mitigate & Restore
MINIMIZE (cont.)	10) Education and awareness	○	○	○	○	○	○
	11) Technical assistance	○	○	○	○	●	○
	12) Incentives	○	○	○	○	○	○
MITIGATE	13) Mitigation	○	○	○	○	●	●
	14) Restoration	●	●	●	●	○	●
	15) Ongoing monitoring	○	○	○	○	○	○

● = directly supports achieving goal; ○ = indirectly supports achieving goal; √ = area most applicable
 SL = strictly limit; ML = moderately limit; LL = lightly limit

Summary Description of Tools

1. Acquisition and conservation easements

Acquisition programs are very effective in habitat protection and restoration and are usually applied to privately-owned lands. Land may be purchased outright or with a conservation easement from willing landowners. Land acquisition programs are used by a select set of organizations. The high cost of land limits the ability of many smaller organizations to purchase land. Primarily city governments, Metro, federal programs, and a few non-profit organizations utilize acquisition programs. Since 1995, all of the programs combined have succeeded in protecting approximately 11,000 acres of land in the Metro region that is explicitly managed for fish and wildlife habitat protection.

Issues to consider for implementation in Metro region

Opportunities	Constraints
Acquisition	
<ul style="list-style-type: none"> • Habitat that is acquired for purposes of conservation may be considered protected in perpetuity. • Land can be donated to non-profits or governments for habitat conservation, property owners receive a tax deduction. • Once acquired, land can be restored and maintained to provide better quality habitat. 	<ul style="list-style-type: none"> • Cost of land in the urban area is very high and an acquisition program depends on willing sellers, limiting the potential for an expansive acquisition program. • Managing donated land is time and labor intensive. • Restoring and maintaining land is expensive. An endowment at the time of purchase can offset these expenses. • Difficult to achieve continuity of habitat.
Conservation Easements/Deed Restrictions	
<ul style="list-style-type: none"> • Conservation easements can be donated to non-profits or governments for habitat conservation; property owners receive a tax deduction. • Easements can be less expensive and allow private ownership of the land to continue. 	<ul style="list-style-type: none"> • Working with landowners with conservation easements is time and labor intensive. • Long-term maintenance and management of habitat land with easements can be expensive and difficult to manage. • While the deed restriction continues when a property is sold, there may need to be education for the new owner.

RECOMMENDED BEST MANAGEMENT PRACTICES

Class I and II Riparian and other habitat:

Metro should consider using existing resources and a variety of additional funding sources to carry out some or all of the following activities:

- a. Coordinate with non-profit agencies and others who are involved in acquisition to help identify prime fish and wildlife habitat for consideration of their acquisition programs.
- b. Apply for grants that can lead to targeted acquisition for prime areas, such as opportunities in Damascus and other new urban area planning.
- c. Use funds to leverage other purchases and target small areas for purchase outright or in easements.
- d. Launch a major acquisition effort tied to the fish and wildlife habitat area preservation and restoration focusing on:
 - Parcels that are so valuable they should not be lost when volunteer efforts and local regulations are not able to protect habitat.

- Key connector habitat areas and other low quality areas that offer important restoration opportunities.

Local jurisdictions should consider acquiring habitat lands through the following programs:

- Purchasing floodplains and/or other special habitats through SDC (system development charges) programs.
- Applying for FEMA grants to purchase floodplains.

2. Forest canopy (tree) protection standards

Tree protection ordinances often stipulate tree and forest retention and/or reforestation standards, and require developers to obtain permits before certain trees or percentages of forest cover can be removed, encroached upon, or in some cases pruned. Tree ordinances can also govern the planting and removal of trees within public rights-of-way, and can resolve conflicts between property owners that result when trees block views or sunlight. Some jurisdictions limit the cutting of trees through site design standards (e.g., cluster development) in their environmental or sensitive area overlay zones. Types of tree ordinances¹ include:

- Street Tree Ordinances
- Tree Protection Ordinances
- Forest Conservation Ordinances
- View Ordinances

Of the ordinance types listed above, the most applicable for the creation and protection of habitat are tree protection and forest/woodland conservation ordinances. The former (tree protection) ordinances typically set protection standards for individual trees, whereas the latter (forest conservation) require the protection of forest patches and/or canopy.

Issues to consider for implementation in Metro region

Opportunities:	Constraints:
<ul style="list-style-type: none"> • Tree protection and forest conservation ordinances can be an effective means for protecting fish and wildlife habitat. • Tree protection has additional benefits such as increase in property values, stormwater reduction, energy savings, air pollution reduction. • Many local jurisdictions already have some form of tree ordinances; effective local ordinances could serve as a model for jurisdictions that do not have them. • Undeveloped forest areas coming into the urban growth boundary (UGB) could be preserved. 	<ul style="list-style-type: none"> • Tree ordinances can be administratively and financially cumbersome to developers and existing property owners. • Tree ordinances may require extended permit processing time. • There may be a perceived loss of developable land as a result of forest protection and other costs. • Non-enforcement of tree ordinances can lead to ineffective protection. • There is a potential high cost to landowners/ developers if in-lieu-of fee approach is used. • Preservation of individual trees may be costly and potentially dangerous; sometimes replacement may be more effective than retention of trees. • Forest management is an important concern (e.g., removing competing vegetation to preserve certain habitat types such as White Oak woodlands).

¹ See appendix for a summary of tree ordinances in the Tualatin Basin.

RECOMMENDED BEST MANAGEMENT PRACTICES

Class I and II Riparian:

Local jurisdictions should protect trees in Class I and II Riparian habitat by adopting tree ordinances or other tools that effectively protect trees. Some provisions of an effective tree ordinance include:

- a. Prioritize tree canopy protection; e.g., natural stands or groups of trees given priority over individual specimens, largest trees with greatest environmental benefit.
- b. Establish minimum standards for tree canopy retention and reforestation standards such as number of trees over 6" dbh per acre; percentage (e.g., 50%) of tree canopy retained; 1:1 replacement according to total DBH; tree planting on site, off site, or in lieu payment.
- c. Promote retention of individual tree specimens within Habitats of Concern (such as white oak woodlands).
- d. Maintain or enhance understory of shrub and herbaceous layers within forest canopy habitat; require planting of native species and removal of noxious plants.
- e. Require a project arborist to oversee construction activities; protect critical root zone during all phases of construction including excavation around trees, grading and filling, placement of impervious surfaces, construction equipment and storage, etc.
- f. Include costs for maintenance of trees, or allow developers to contribute to a fund for maintenance rather than replace trees.
- g. Include provisions for enforcement of tree protection standards; incentive enforcement of tree code should be considered (see Appendix for description; city of Tigard).

Other habitat areas:

Local jurisdictions are encouraged to protect trees in other regionally significant habitat areas by adopting tree ordinances or other tools that effectively protect trees. In addition to the provisions listed above, effective tree ordinance for other habitat areas include:

- a. Retain upland wildlife habitat in as large of units as possible; minimize activities that fragment forest canopy into small units (below 28 acres).
- b. Maintain or enhance forest canopy connectivity between upland habitat patches and between riparian corridors and upland habitat.

3. Cluster development/on-site density transfer

Cluster development is a compact form of development that conserves land on one portion of a site in exchange for concentrated development on another portion of the site.² Typically, road frontages, lot sizes and setbacks are relaxed to allow the preservation of open space areas.

² See Appendix for an example of a proposed cluster development in SE Portland that preserves 17.5 acres of 26.9 acre site and achieves maximum allowed density (65 lots).

Issues to consider for implementation in Metro region

Opportunities	Constraints
<ul style="list-style-type: none"> • Cluster development is most likely to work well in habitat areas with a larger overall site size. • Reducing minimum lot sizes and densities in habitat areas could allow clustering to be more effective. Metro currently has an exemption for density requirements if natural resources are preserved. • Education to developers and public may increase use of clustering. • If the resource covers a small portion of a parcel clustering has more potential. 	<ul style="list-style-type: none"> • Many habitat areas have high minimum densities in place. Clustering would not be possible in these areas without changing the housing type (e.g., from detached single family to attached single family or multi-family). Changing housing types in existing neighborhoods may change neighborhood character, which is contrary to Metro policy (Title 12 of the Functional Plan, protection of residential neighborhoods). • Long-term management of habitat preserved through subdivision platting can be an issue.

RECOMMENDED BEST MANAGEMENT PRACTICES

High minimum required densities to meet 2040 goals may reduce the potential for cluster development in some habitat areas.

- a. Metro should review and amend, if necessary, current density target exemptions for natural resource protection to ensure workability.

Class I and II Riparian:

Local jurisdictions are required to allow cluster development in Class I and II streamside areas to preserve habitat. Some or all of the following actions could be taken to promote cluster development:

- a. Reduce minimum density requirements (zoning) in habitat areas to allow for clustering and larger lots that preserve habitat consistent with Metro direction.
- b. Allow cluster development (on-site density transfer) in habitat areas as a by-right method of development, reducing the level of review necessary and therefore minimizing costs.
- c. Allow for flexible lot design to reduce impervious cover and preserve the most amount of habitat.
- d. Include legal requirements for the long-term maintenance and management of preserved habitat.

Other habitat areas:

Local jurisdictions are encouraged to allow cluster development in all regionally significant habitat areas to preserve habitat.

4. Transfer of Development Rights

Transfer of Development Rights (TDR) is a tool used in many communities to preserve natural features, farmland, and historic landmarks. TDRs encourage a voluntary shift of development from places a community wants to save (sending areas, e.g., Class I riparian corridors) to the places where growth is wanted (receiving areas – e.g., in centers). The owners of the sending areas receive compensation for protecting their land by selling their development rights to another party to be used in a receiving area. Developers in a receiving area may build to a certain extent without using a TDR, but more units or floor space may be allowed with the purchase of a TDR (some jurisdictions have base density, minimum density, and maximum density that can only be reached with the purchase of a TDR). Such a program preserves

important places, encourages growth where the community wants it, does not require a substantial public expenditure, and provides compensation to property owners.

Issues to consider for implementation in Metro region

Opportunities	Constraints
<ul style="list-style-type: none"> • A banking system could be developed for development rights, purchasing the rights from affected landowners who wish to sell and reserving them for sale until needed by jurisdictions for upzoning or in UGB expansion areas. This bank could function at the regional scale or within a specific jurisdiction or planning area, and could be managed by a government or a foundation. • TDRs are particularly useful in UGB expansion areas where a program could be put in place prior to upzoning. This allows all property owners to benefit more equally from inclusion in the UGB and also preserves significant habitat. (Pleasant Valley includes an approach.) • As an alternative to a more traditional TDR program, a density transfer charge imposes a fee any time a developer wishes to build more than allowed on a site, or for any upzoning. Allows for the collection of money to be spent to preserve habitat lands by purchasing them. May not be much application in built out communities, but could apply to growing areas. 	<ul style="list-style-type: none"> • TDR programs have mostly been successful in areas without urban growth boundaries. In Oregon, development is restricted outside of the UGB, and in the Metro region densities have been increased substantially to achieve the 2040 Growth Concept and to focus development in centers. While it would be a relatively simple task to identify sending areas (Class I riparian, Class A upland for example), it is more difficult to identify receiving areas if a market for more density does not exist. • In the Metro region it may be difficult to implement a TDR program due to the existing high densities and the fact that many developers currently build at the minimum density. There does not appear to be much demand for increased densities to be transferred from habitat areas. • Portland has TDRs available for use to preserve habitat in two planning areas; however, they have never been used. • Expansion areas may not have a large capacity for density since there is a substantial amount of existing habitat.

RECOMMENDED BEST MANAGEMENT PRACTICES

- a. Metro should explore the potential of requiring any future upzoning throughout the region to require the purchase of a TDR or a density transfer fee to be used for habitat protection.
- b. Metro should work with local jurisdictions in urban growth boundary expansion areas to implement a TDR program prior to implementing urban zoning (e.g., in areas like Pleasant Valley and Damascus).
- c. Local jurisdictions should consider implementing a transfer of development rights program to preserve habitat.

5. Riparian setbacks

Setbacks are protective corridors of land along shorelines, lakes, streams, and wetlands where development is limited or prohibited. Setbacks provide important ecological and water quality benefits by providing a transition between upland development and adjoining surface waters. In short, they serve as barriers between development and waterways, and are an important resource in themselves. The majority of the region’s wildlife species depends on riparian areas. Setbacks can have either fixed or variable widths depending on a jurisdiction’s needs and the intended purpose of the setback regulations.

Issues to consider for implementation in the Metro region

Opportunities	Constraints
<ul style="list-style-type: none"> • Riparian areas are critical to water quality, fish and wildlife, yet many streams lack setbacks of any kind. Providing even minimal setbacks on all streams can help protect the region's water quality and biological diversity. • Because of their ecological importance, riparian areas represent some of the region's best restoration opportunities. Setbacks and current conditions can help define the target areas for riparian restoration. • Setbacks can create clear and objective standards, which are relatively easy to administer and can minimize map error issues. • A strong nexus may be made between riparian setbacks and compliance with federal laws (CWA, ESA); setbacks may help local jurisdictions meet TMDL and ESA requirements. 	<ul style="list-style-type: none"> • Limited benefit where riparian vegetation has already been replaced with development, but setback enhancements could be negotiated under redevelopment. • Setbacks may result in perceived or actual private property rights infringement; some development likely to occur within setback areas to avoid or minimize this issue. • Setbacks should be based on existing resources, which may require site-specific delineation such as those required by Clean Water Services. Site-specific delineation may be expensive.

RECOMMENDED BEST MANAGEMENT PRACTICES

Class I and II Riparian:

Local jurisdictions should expand the area to which Title 3 Water Quality Resource Area performance standards apply.

- a. Extend Title 3 WQRA performance standards longitudinally to all inventoried streams, including those draining less than 50 acres. Apply the 15-50 foot standard to the smaller streams.
- b. Extend Title 3 WQRA performance standards laterally to Class I and II streamside habitat, consistent with the ESEE treatments.

Local jurisdictions should also consider incorporating the following items in protection regulations for Class I and II habitat:

- a. Maintain or enhance forest cover in setback areas to improve stormwater management, habitat protection, and other benefits.
- b. Maintain or enhance native vegetation in setbacks areas to provide better wildlife habitat.
- c. Minimize stream crossings to promote continuity of riparian corridors.
- d. Delineate setback boundary so that it is visible before, during, and after site construction. Developers should be familiar with the limits of disturbance throughout construction.

6. Green development practices, or low impact development (LID) – impervious surface reduction and stormwater management

Low impact development (LID) is an innovative, ecosystem approach to site development and stormwater management. LID design requires careful evaluation of the physical and ecological characteristics of the site and consideration of how to minimize development impacts. LID design techniques typically serve to conserve native vegetation and soils, minimize impervious surfaces, slow down surface water runoff, detain and retain water on-site, maximize infiltration and remove pollutants in stormwater.

In urban and developing areas where impervious cover can be significant, the objective is to reduce imperviousness in the development process and increase natural areas. Reducing the amount of impervious surfaces reduces the amount of stormwater runoff generated in the first place. Conventional stormwater management practices collect and convey stormwater runoff in costly end-of-pipe facilities to one location. In contrast, LID addresses stormwater through small-scale landscape features located at the lot level. These landscape features, known as Integrated Management Practices (IMP), help to maintain natural flow patterns, filter pollutants and recreate or maintain the hydrology of a site.

Impervious surface reduction standards focus on some of the following areas:

- Native soils and soil amendments
- Driveway, street and sidewalk widths
- Flexible lot setbacks and shape standards
- Smaller building footprints
- Alternative foundations
- Permeable pavement options
- Reduced parking lot area
- Parking ratio requirements

Some of the practices used to manage stormwater include³:

- Bioretention/rain gardens
- Dry Wells
- Filter Strips
- Swales (wet and dry)
- Rain Barrels
- Infiltration Trenches
- Soil Amendments
- Greenroofs
- Greenstreets

³ See appendix for examples of low impact development and other green development practices.

Issues to consider for implementation in Metro region

Opportunities:	Constraints:
<ul style="list-style-type: none"> • Careful site design and stormwater management can allow for urban economic growth while contributing to the protection of sensitive habitat areas. • With better site design, individual developments and road projects can reduce impervious cover and increase natural areas conserved. • Reducing effective impervious surfaces can significantly cut infrastructure costs that developers pay for the construction of roads, sidewalks and stormwater infrastructure. • Permeable pavement can easily be integrated into new construction where soil, slope and traffic conditions are suitable. • Reducing stormwater drainage infrastructure (e.g., pipes, ponds, other structures) can lower infrastructure costs. • Developers using LID practices can potentially increase developable land by reducing size requirements for stormwater ponds. • Using low impact development design techniques assists in meeting Clean Water Act requirements. LID practices have been found to improve hydrologic conditions in a watershed and to remove various urban pollutants from stormwater runoff. • Metro has developed greenstreet standards⁴ to reduce impervious surfaces and manage stormwater that could be either required or encouraged throughout the region. • There are many more case studies in the region that provide working examples. 	<ul style="list-style-type: none"> • Most local jurisdictions' development codes do not allow for many LID practices (e.g., narrower roads or open road sections without curbs and gutters).⁵ • Many engineers and developers are not familiar with LID stormwater techniques and continue to rely on better known conventional practices. • Permeable pavement costs more (however, more materials are becoming available and prices are coming down). • The use of low impact stormwater management techniques is highly dependent on site conditions and is generally not applicable where soils are impermeable or where water soluble pollutants may contaminate an underlying aquifer. • Other barriers may include higher cost for development review, longer permitting process and additional permit requirements.

RECOMMENDED BEST MANAGEMENT PRACTICES

Class I and II Riparian and other habitats:

Metro should:

- a. Help identify barriers to employing the practices listed below,
- b. Determine an appropriate goal(s) for on-site stormwater retention for different sites throughout the region, and

⁴ *Green Streets: Innovative Solutions for Stormwater and Stream Crossings* (Metro, June 2002).

⁵ *Stormwater/Pavement Impact Reduction (SPIR) Project* (Audubon Society of Portland, November 2003) identifies barriers in existing codes for jurisdictions in Washington County. *Economic Growth and Fish & Wildlife Habitat Protection: The Promise of Low-Impact Stormwater Management in the Portland, Oregon Metropolitan Region* (J. Sherman, Master Thesis, University of Washington) analyzes benefits, costs, methods of LID implementation throughout the Northwest, and provides some recommendations and considerations for incorporating low impact development into a fish and wildlife habitat program.

- c. Provide education and technical assistance to local jurisdictions and developers.

Class I and II Riparian:

Local jurisdictions should be required to reduce impervious surfaces in Class I and II habitat areas by removing barriers to allowing some or all of the following actions:

- a. Minimize grading and lot disturbance; use erosion and sediment control practices to protect soil surface and to retain sediment on site.
- b. Amend retained topsoil to regain some of the absorption, infiltration, retention and pollutant removal capabilities of the soil.
- c. Relax residential lot sizes, setbacks and shape standard to minimize extent of impervious surfaces.
- d. Encourage smaller building footprint through building design.
- e. Encourage use of alternative foundations, such as pier, post or piling foundation, that reduce impacts on soils and trees (see Appendix for example of alternative foundation).
- f. Use pervious paving materials in place of traditional impervious materials where appropriate.
- g. Reduce impervious impacts of residential driveways by narrowing widths, moving access to the rear of the site, using more pervious paving materials and promoting the use of shared driveways.
- h. Reduce width of residential streets, depending on traffic and parking needs.
- i. Reduce street length, primarily in residential areas, by encouraging clustering and using curvilinear designs.
- j. Reduce cul-de-sac radii and use pervious vegetated islands in center to minimize impervious effects.
- k. Reduce sidewalks width, place on one side of the street, and graded such that they drain to the front yard of a residential lot or retention area.
- l. Reduce impervious surfaces in parking lots by minimizing car spaces and stall dimensions, using shared parking facilities and structured parking, and using pervious paving materials where appropriate.
- m. Reduce parking ratios to limit excess parking space construction.

Local jurisdictions should be required to remove barriers in their development codes to allow for low impact development stormwater management in Class I and II habitat areas. Some or all of the following actions could be taken to manage stormwater on-site:

- a. Amend retained topsoil to regain some of the absorption, infiltration, retention and pollutant removal capabilities of the soil.
- b. Landscape with rain gardens to provide on-lot detention, filtering of rainwater, and groundwater recharge.
- c. Disconnect downspouts from roofs and direct the flow to vegetated infiltration/filtration areas such as rain gardens.
- d. Retain rooftop runoff in a rain barrel for later on-lot use in lawn and garden watering.
- e. Combine the rain gardens with grassed swales to replace a curb-and-gutter system.
- f. Use permeable pavers for walkways and parking areas.
- g. Design roads to incorporate stormwater management in right-of-ways where appropriate.
- h. Use multi-functional open drainage systems in lieu of more conventional curb-and-gutter systems.
- i. Use bioretention cells as rain gardens in landscaped parking lot islands to reduce runoff volume and filter pollutants.

- j. Use green roofs for runoff reduction, energy savings, improved air quality, and enhanced aesthetics.
- k. Apply a treatment train approach to provide multiple opportunities for stormwater treatment and reduce the possibility of system failure.

Other habitats:

Local jurisdictions are encouraged to remove barriers to reducing effective impervious surface and allowing for low impact development stormwater management practices in other habitats and throughout their jurisdiction to address overall watershed health.

7. Design standards for fish passage and wildlife crossings

Design standards and best management practices can be used in road building and stream crossings that promote fish and wildlife continuity in the region. These include structural design provisions to allow wildlife to cross roads and better fish passage schemes at road crossing to aid in salmon and other fish migration.

Wildlife crossings:

- Bridges and overpasses – grade separation structures designed to allow wildlife to cross over an intersecting highway
- Culverts and underpasses – structures designed to convey wildlife under an existing roadway (bottomless culvert, arch culvert)
- Roadside escape structures – structures designed to allow an animal trapped on a roadway by a diversion fence to exit.

Fish passages

- Bridges (preferred over other structures)
- Culverts (bottomless arch culverts, embedded round culverts, concrete box culverts)

Issues to consider for implementation in Metro region

Opportunities:	Constraints:
<ul style="list-style-type: none"> • Use of wildlife crossing and fish passage facilities in the Metro region presents unique opportunity for promoting continuity of habitat and for minimizing loss of wildlife in urban areas. • Language in Regional Transportation Plan and local plans could be positive and proactive to minimize number of stream crossings. • Wildlife crossings can reduce property damage from accidents and reduced accident cleanup and disposal costs. • ODFW has detailed design specifications for stream crossings on fish bearing streams. • There are many existing culverts that need to be retrofitted to ensure safe fish and wildlife passage. • Local codes and transportation plan updates are opportunities to address conflicts with stream crossing objectives to minimize number of stream crossings. 	<ul style="list-style-type: none"> • Bridges tend to be more expensive than culverts. • Lack of experience in Metro region with habitat-friendly structures could pose significant challenge to effective implementation. • Many fish passage culverts or structures need to be custom made, are expensive, and tend to be oversized. • Some jurisdictions' transportation plans have not been reconciled with natural resource concerns, and result in conflicts with stream crossing objectives.

RECOMMENDED BEST MANAGEMENT PRACTICES

Class I and II Riparian:

Metro should:

- a. Maintain list of problem culverts and prioritize for retrofitting to ensure safe fish and wildlife passage.
- b. Review language in Regional Transportation Plan and consider changing language to require stream crossing standards from a positive perspective, such as: “where streams must be crossed, space crossings at intervals of 1,200 feet where practicable.”

Local jurisdictions should be required to incorporate fish and wildlife friendly passages in road design by addressing some of the following:

- a. Minimize the number of stream crossings and place crossing perpendicular to stream channel if possible.
- b. Use bridge crossings rather than culverts wherever possible.
- c. Design stream crossings for fish passage with shelves and other design features to facilitate terrestrial wildlife passage.
- d. Allow narrow street right-of-ways through stream corridors whenever possible to reduce adverse impacts of transportation corridors.
- e. Consider using simple ways to help wildlife such as building rock ledges along one side of culverts for wildlife passage, plugging bridge-deck drains, using “lampshades” on bridge lights and creating small animal habitat from logs and brush.

Other habitats:

Local jurisdictions are encouraged to incorporate wildlife friendly passages in road design addressing some of the following:

- a. Consider regional wildlife migration patterns for locating transportation facilities in upland areas.
- b. Extend vegetative cover through the wildlife crossing in the migratory route, along with sheltering areas.
- c. Carefully integrate fencing into the landscape to guide animals toward the crossings.
- d. Consider using simple ways to help wildlife such as building rock ledges along one side of culverts for wildlife passage, plugging bridge-deck drains, using “lampshades” on bridge lights and creating small animal habitat from logs and brush.

8. Education and awareness

Many landowners would like to manage their land in a way that benefits fish and wildlife habitat. However, frequently people do not know if certain activities are detrimental (using herbicides and pesticides), if there are alternatives (natural gardening), what to do to improve habitat (plant native plants, remove invasive species like ivy), and how to connect to agencies and organizations that provide grants and/or volunteers to help improve habitat. A program could be developed to focus efforts to increase people’s awareness of the connections between their activities and the health of streams and rivers, similar to fish stencil programs. Landowners in regionally significant habitat areas could be targeted to raise awareness of how individual activities impact fish and wildlife habitat. Education activities would be most effective when used in conjunction with a stewardship certification program, grant programs, and regulatory programs.

Metro currently has several education programs that help fish and wildlife habitat in the Parks and Greenspaces Department and the Solid Waste and Recycling Department. Many other organizations in the region also provide classes about the environment.

Issues to consider for implementation in Metro region

Opportunities	Constraints
<ul style="list-style-type: none"> • There are a number of strong education programs operated by Metro and other organizations that focus on fish and wildlife habitat protection and restoration. • Education oriented towards children may be most effective in long-term behavior change (e.g., recycling). 	<ul style="list-style-type: none"> • Focusing efforts on education and awareness is expensive. • Results are long-term and are unlikely to immediately protect or restore habitat.

RECOMMENDED BEST MANAGEMENT PRACTICES

Class I and II Riparian and other habitats:

Metro should consider using existing resources and a variety of additional funding sources to carry out the following activities:

- a. Coordinate fish and wildlife education messages into ongoing Metro program areas, including Parks and Open Spaces planning and outreach, Zoo exhibits such as a display on Metro urban fish and wildlife habitat and enhancement of Solid Waste and Recycling programs to target homeowners and developers of residential properties.
- b. Develop seminars, recognition and speaker programs and other special efforts to increase awareness of green development practices.
- c. Develop a list of all education programs in the region and determine which are most effective.
- d. Coordinate regional messages on fish and wildlife habitat, watershed function, and water quality to encourage people to think on a more broad and time-sensitive scale. Encourage the placement of signs in habitat areas as an important component of an educational program.
- e. Organize and prioritize a regional education campaign and provide a clearinghouse for education materials and referrals.

9. Technical assistance

Technical assistance programs are noted for being responsive to landowner or developer needs, providing practical information, and having knowledgeable resource staff. Such a program would not provide direct protection to resources, but would offer a means of improving stewardship and enhancement by private landowners. Technical assistance could help supplement cost-sharing programs, such as grants, to further protection and restoration efforts. Technical assistance could be focused on landowners, development practices, and/or local partners. Metro has provided technical assistance to local partners throughout the implementation of the Regional Framework Plan and the Regional Urban Growth Management Functional Plan. This has proved especially important in the implementation of Title 3 (stream and floodplain protection) and planning for 2040 centers.

Metro could work with local partners to develop technical assistance, incentives, recognition programs, and awards for development that helps protect fish and wildlife habitat. Metro, in conjunction with local partners, could develop regional low impact development standards and designs to reduce development impacts on fish and wildlife habitat. The Green Streets Handbook serves as a successful model of technical assistance for transportation infrastructure.

Issues to consider for implementation in Metro region

Opportunities:	Constraints:
<ul style="list-style-type: none"> • A technical assistance program can effectively change practices by working with interested parties • There are existing technical assistance programs (e.g., through soil and water conservation services, etc.) that could be supported and enhanced 	<ul style="list-style-type: none"> • Technical assistance can be very labor intensive • Technical assistance can only reach willing participants

RECOMMENDED BEST MANAGEMENT PRACTICES

Class I and II Riparian and other habitats:

Metro should consider using existing resources and a variety of additional funding sources to carry out the following activities:

- a. Provide technical assistance to jurisdictions to implement fish and wildlife habitat program recommendations, such as a Handbook of Green Development Practices. Also consider developing a certification process for city officials to help them integrate natural resource needs and development.
- b. Work with local jurisdictions to identify barriers in codes that limit green development practices, for example, flexible site design and on-site stormwater management practices.
- c. Provide technical assistance to the development community, primarily targeting new residential development to incorporate green development practices. For example, native landscaping, tree planting, and site design.

10. Incentives

Stewardship recognition programs

These programs publicly acknowledge landowners, businesses and other entities for conserving open space, protecting or restoring habitat areas, making financial contributions or carrying out good stewardship practices in general. Public agencies and nonprofit organizations can administer the programs, and the recognition could take the form of media publicity, awards ceremonies, or plaques and certificates. These programs, while not widely applied in the Metro region, have much potential for encouraging conservation behavior when combined with other programs.

A good stewardship agreement between a landowner and an organization interested in protecting or restoring habitat and monitoring success over time can be used to achieve some level of habitat protection. The Wetlands Conservancy uses stewardship agreements to enhance wetlands protected through their efforts. Such a program would recruit landowners to agree to voluntary stewardship agreements that allow residents to make a commitment to care for the land in a manner that promotes habitat value. A stewardship agreement program would be most effective when combined with other incentives such as education, technical assistance, and grants.

Landowner recognition programs on their own generally provide no permanent protection of resources because participation is voluntary. However, administrative costs may be relatively low compared to funding for programs such as acquisition that provide definitive permanent protection. This tool is most likely to be effective when integrated with other tools (e.g., grants and education) as part of an overall conservation strategy. Perhaps the greatest benefit is to provide publicity to developers and landowners, and thus encourage others to take similar actions.

Grants

Grants for restoration can provide the incentive for supportive landowners and other organizations to restore habitat on private and public lands. A small grant program, targeted to watershed councils, non-profit organizations, or local governments, could be created similar to Metro's recent grants for Regional and Town Center planning efforts. Small grants given in strategic places could build on existing work and encourage more efforts in targeted areas.

Funding can leverage additional benefits such as education and volunteerism. Private landowners may be interested in the concept of improving the habitat value on a portion of their land, and the availability of dollars can provide the impetus to conduct restoration activities. Many grants are provided with a required match of either dollars or in-kind materials or labor. These incentives provide landowners who contribute a portion of the proposed cost for conservation or restoration activities with additional funding opportunities. There are several programs in place for rural land in agriculture or forestry use, and some for urban lands. A grant program could target specific activities along stream reaches or within watersheds in coordination with Watershed Action Plans to accomplish the most effective restoration. A monitoring component of a restoration plan would be essential to assess effectiveness over time at restoring habitat function.

As part of a regional habitat friendly development program, Metro could develop a *Habitat-oriented Development Program* similar to Metro's Transit-oriented Development (TOD) Program to encourage construction of new developments or redevelopment that protects and restores fish and wildlife habitat. This would require funds to provide the incentives for developers to practice habitat friendly development.

Incentives for green streets

The Metro Council could establish a priority for funding transportation projects based on their impacts to regionally significant fish and wildlife habitat. A criterion could be added to the MTIP funding priorities that focuses on habitat issues, such as culvert replacement or removal, wildlife crossing improvements, or implementation of Green Streets design standards. Alternatively, a separate category or bonus points could be assigned to projects that meet habitat criteria to allow for the funding of projects that improve transportation and habitat in the region.

Property tax reduction

There are two state programs that could be applicable within the urban area: the *Riparian Lands Tax Incentive Program* and the *Wildlife Habitat Conservation and Management Program*. Both programs would require county or city action to be implemented. The riparian tax incentive

program allows for a tax exemption for property within 100 feet of a stream provided the land is protected and managed for habitat value. The program is limited to 200 stream miles per county. The wildlife habitat program allows designated habitat land to be taxed at a special, reduced rate as long as it is protected and managed for habitat value. This program is not limited by acres and can be applied to riparian or upland habitat.

Habitat protection and restoration may be most effective ecologically if applied strategically, for example, in a specific stream reach or headwater area. This tool could serve as an important incentive to encourage landowners to work in a coordinated fashion to leverage ecological improvements in a specific area. If used on a “first-come, first-served” basis there may be a scattered approach and less ecological benefit overall. A downside to using property tax relief as a tool for habitat protection is that a landowner can leave the program at any time, the only penalty being payment of back taxes, similar to opting out of a farm or forest tax deferral program.

Issues to consider for implementation in Metro region

Opportunities	Constraints
<ul style="list-style-type: none"> • Incentives can provide the necessary encouragement for people who already want to protect and restore fish and wildlife habitat. • An incentive allows for more people to be reached, providing more opportunities for technical assistance and education. • Willing participants. • Incentives can be incorporated with regulations to achieve better results. • Can achieve restoration of degraded habitat. 	<ul style="list-style-type: none"> • Incentives require an investment of both money and staff time. • Habitat is protected on a haphazard basis. • Voluntary protection can result in impermanent protection over time

RECOMMENDED BEST MANAGEMENT PRACTICES

Class I and II Riparian and other habitats:

Metro should consider using existing resources and a variety of additional funding sources to carry out the following activities:

- a. Coordinate with Centers Program to offer financial incentives for specific building projects that incorporate green development practices, especially those improving habitat conditions.
- b. Provide resources to watershed councils and friends organizations to increase their stability and productivity.
- c. Seek interagency and non-profit support for increased federal and state grant funding directed at watershed-based restoration activities (such as National Fish and Wildlife Foundation, USFWS Conservation and Restoration funds, EPA Smart Growth funds, etc).
- d. Develop an award program to foster and recognize green development practices, similar to the now defunct Stormwater Management Design Awards Program. Sponsor a yearly award ceremony, provide certificates, and encourage media coverage.
- e. Develop a Regional Fish and Wildlife Habitat Stewardship program that recognizes landowners for restoring and protecting habitat on their land. Sponsor a yearly award ceremony, provide certificates, and encourage media coverage.

- f. Develop signed voluntary stewardship agreements between a property owner and Metro or another sponsor for habitat protection. Most likely to be effective when used in conjunction with small grants and long-term monitoring.
- g. Provide financial incentives for green development practices in habitat areas.
- h. Encourage cities and counties to implement existing property tax incentive programs within the Metro region (WHCMP and RLTP).

Local jurisdictions should get extra points if they incorporate incentive programs for protection and restoration of regionally significant habitat.

11. Mitigation

Mitigation is the attempt to offset potential adverse effects of human activity on the environment⁶. Mitigation can be divided into two general categories: resources for which the state and federal governments control mitigation (wetlands, waters of the state), and habitats where there is no existing state or federal requirement for mitigation.

Title 3 serves as a building block for mitigation for habitat loss in areas not covered by state or federal regulations. Title 3 defines mitigation requirements for development within Title 3 Water Quality Resource Areas (WQRA) and requires “balanced cut and fill” for floodplain areas. Title 3 WQRA extend 50 feet from many of the region’s year-round streams, and can extend up to 200 feet in steep slope areas.

The Title 3 Model Ordinance contains a detailed description of mitigation requirements for development in WQRA depending on the existing condition of the vegetated corridor. These requirements could be extended to currently unprotected, high-value riparian habitat in Metro’s inventory. Essentially, this would mean an enhanced Title 3 program.

Local government plans also contain mitigation requirements for areas covered in their local Goal 5 programs (City of Portland's E-zones, Wilsonville's Significant Resources Overlay Zone, Hillsboro's Sensitive Lands Overlay District, etc.). Mitigation requirements under Metro's program would be most relevant for Class I and Class II riparian habitat not covered in local programs or where local programs lack mitigation requirements. However, local jurisdictions are encouraged to work closely with same-watershed jurisdictions to plan enhancement activities, and with Metro and other stakeholders to address upland habitat through voluntary measures.

⁶ See appendix for local examples of habitat degradation and loss from urban development.

Issues to consider for implementation in the Metro region

Opportunities	Constraints
<ul style="list-style-type: none"> • Mitigation can help offset the impacts of development on water quality, fish and wildlife by requiring compensatory enhancement of riparian habitat. • Mitigation can help maintain ecosystem services. • Title 3 provides a baseline of regulatory mitigation, has already been implemented by local jurisdictions, and contains specific mitigation instructions. • In the urban area, where habitats may be altered or degraded, out-of-kind mitigation (replacing one resource type with a different type) provides an opportunity to replace low-value riparian habitat with higher-value habitat. 	<ul style="list-style-type: none"> • Existing constraints limit the extent of new regulations (takings issues). • The urban growth boundary is space-limited. Setting high mitigation ratios would limit development opportunities in the UGB, and would create the need for mitigation lands when onsite mitigation is not an option. • The success of mitigation over time and space is uncertain. • Monitoring and enforcement are keys to success, but are often overlooked in mitigation programs. • Mitigation requirements would add to development costs.

RECOMMENDED BEST MANAGEMENT PRACTICES

Class I and II Riparian habitat:

Metro should:

- a. Use mitigation efforts to support watershed plans, regional restoration program and performance measures, and create a regional tracking system.
- b. Develop a regional restoration program that can support mitigation efforts locally.
- c. Continue to explore potential role for regional parklands as mitigation recipients.

Local jurisdictions should be required to preserve and enhance habitat by requiring developers or others disturbing the habitat to:

- a. Use strong avoid-minimize-mitigate principle, as in Title 3.
- b. When mitigation is necessary, mitigate for all habitat loss/damage where Allow-Limit-Prohibit (ALP) decision is other than Allow.
- c. Establish higher mitigation ratios for higher degrees of limit. Set realistic mitigation ratios (e.g., 0.5:1 for lightly limit, 1.5:1 for strictly limit) designed to offset damage from new activities.
- d. Discount stormwater fees or offer other incentives to encourage onsite retention of existing riparian habitat.
- e. Direct mitigation actions to strategize efforts that enhance ecological functions in habitat areas, create new habitat in strategic locations (connective habitat), restore habitat in redevelopment areas, and to preserve/restore Habitats of Concern or rare biological communities located on the site. Rare habitats may, in some cases, be offered for permanent conservation in lieu of enhancing existing habitat.
- f. Permanently protect mitigated lands.
- g. Include code language that facilitates restoration and removal of non-native or invasive vegetation.
- h. Typically, onsite mitigation is preferred when possible. However, off-site mitigation may be encouraged when appropriate – for example, when offsite mitigation would clearly provide a stronger benefit for fish or wildlife than onsite. Except in special cases, mitigate in the same watershed where the impacts occur.

- i. Allow out-of-kind enhancement/replacement when appropriate, but focus on healthy riparian systems and near-stream shade provided by Class I and Class II habitat.
- j. Ensure mitigation program includes long-term monitoring (≥ 5 years) and an adaptive management strategy that provides remedies if monitoring reveals mitigation efforts fail.
- k. Coordinate with Metro to document restoration sites, activities and success.
- l. To mitigate for riparian impacts, mitigation activities will need to stay primarily within existing or newly created Class I and Class II riparian.

12. Restoration

The Society for Ecological Restoration (SER) defines ecological restoration as the process of assisting the recovery and management of ecological integrity. In the urban region, where restoration of true native conditions may not be possible, the term “enhancement” is often used and is used interchangeably here with restoration.

Restoration of degraded habitat is an important component of a fish and wildlife habitat protection program. Restoration generally involves habitat improvement beyond that required through regulations to offset development impacts (mitigation). Restoration can assist the recovery of functions necessary for watershed health; in turn, healthy watersheds can support people, fish and wildlife. Efforts to protect and restore habitat can, in many instances, also benefit humans by reducing flood damage and protecting water quality⁷.

Metro is a logical choice for coordinating regional watershed planning. The impacts of urbanization cannot be realistically addressed through site-specific or small-scale restoration approaches; virtually all recent restoration literature suggests that watersheds are the *minimum* spatial unit for which restoration master planning should occur. Impacts in one watershed may influence adjacent or downstream watersheds, thus all watersheds within the urban area, plus all adjacent watersheds, should be considered in a master restoration plan. NOAA Fisheries (formerly the National Marine Fisheries Service) commented on the importance of considering restoration projects in a large-scale context (2000):

Projects planned and carried out based on at least a watershed-scale analysis and conservation plan and, where practicable, a sub-basin or basin-scale analysis and plan, are likely to be the most beneficial. NMFS strongly encourages those involved in watershed restoration to conduct assessments that identify the factors impairing watershed function, and to plan watershed restoration and conservation activities based on those assessments. Without the overview a watershed-level approach provides, habitat efforts are likely to focus on "fixes" that may prove short-lived (or even detrimental) because the underlying processes causing a particular problem may not be addressed.

Successful restoration depends on addressing the causes of environmental degradation, rather than the symptoms. Goodwin et al. (1997) suggest asking several questions related to the causes of degradation: Is the disturbance local to the riparian area or does it originate outside in the adjacent upland or watershed? Is the disturbance ongoing, and if so, can it be eliminated? And finally, will recovery occur naturally if the disturbance is removed? The answers to these questions can help guide a restoration plan.

⁷ See Appendix for examples of Port of Portland restoration projects.

Issues to consider for implementation in the Metro region

Opportunities	Constraints
<ul style="list-style-type: none"> • Restoration master planning is more effective than piecemeal efforts. • Restoration can help offset the impacts of development on water quality, fish and wildlife by improving degraded habitat, recovering ecological function(s), and building new habitat where none currently exists. • Regional and watershed-based master planning increases the spatial scale and therefore improves potential effectiveness of restoration planning. • Large-scale master planning builds partnerships, increasing knowledge and funding opportunities. • Potential for shared database of the region's watershed conditions and restoration activities could benefit many partners and increase effectiveness. 	<ul style="list-style-type: none"> • Complete recovery of urban ecosystems is not likely possible. • The success of in- and near-stream restoration activities can be impacted by watershed conditions – for example, imperviousness, forest cover and altered hydrologic conditions. Restoration planning will need to take such factors into account. • Restoration is expensive and funding sources need to be identified. • Monitoring restoration success is critical and will require funding.

RECOMMENDED BEST MANAGEMENT PRACTICES

Class I and II Riparian and other habitats:

Metro should:

- a. Convene the experts:
 - form a multi-disciplinary group to support watershed-based restoration activities and identify technical, financial, and institutional barriers to restoration efforts
 - coordinate with Soil and Water Conservation Districts, watershed councils, local, state and federal agencies
- b. Develop a regional restoration plan:
 - based on past, current, and projected future conditions
 - consider effects to and from adjacent watersheds (e.g., hydrologic alterations)
 - define regional restoration targets by watershed
 - create a regional geographic information system database drawing on watershed action plans, existing mitigation and restoration sites, Metro's regional habitat inventory and other sources of information to help identify watershed restoration priorities and track implementation and success of restoration and mitigation projects over time
 - work with partners to develop regional plan for strategic, ongoing invasive species removal
- c. Increase partnerships for funding and effectiveness:
 - provide resources to watershed councils and friends organizations to increase their stability and productivity
 - consider contributing funds directly to SOLV for specific restoration projects
 - increase funds available in the NFWF restoration bank and solicit corporate donations
 - support leveraged restoration projects with partnerships similar to Americorp Japanese Knotweed and Tualatin River Keepers Gotter's Bottom projects

- seek interagency and non-profit support for increased federal and state grant funding directed at watershed-based restoration activities (such as National Fish and Wildlife Foundation, EPA Smart Growth funds, etc).
- d. Prepare for initiating and managing a bond measure program:
 - coordinate with non-profit groups, local governments, citizens and others to identify regional target areas
 - identify local share funds as part of the bond measure proposal
 - create a challenge grant program to local governments and non-profit organizations to leverage the use of public bond measure funds in acquisition and restoration efforts
 - create a short-term revolving fund to purchase land in targeted areas, implement conservation easements and use surplus funds (resale revenue) to create a funding source for land management purposes

Local jurisdictions should promote effective fish and wildlife habitat restoration by:

- a. Removing barriers to common and effective restoration practices (e.g., no onerous permitting process for non-native blackberry removal).
- b. Participating in watershed planning activities across jurisdictional boundaries.

13. On-going monitoring

Long-term monitoring is important to determine whether various tools are achieving the overall goals for habitat protection. If monitoring shows that goals are not being met, adaptive management strategies may be employed to correct the problem(s).

Monitoring should be based on sound science, and be structured to allow comparisons with other data and over time to determine whether biological goals are being achieved. Some common monitoring targets include vegetative growth, presence of invasive species, biological indicators such as macroinvertebrates, water quality, and ESA-listed species presence. Some monitoring, such as water quality and invasive species, must be conducted in the field. Other monitoring efforts can be conducted using Geographic Information Systems (GIS) – for example, mapping existing near-stream vegetation and monitoring changes over time.

There are many monitoring efforts going on around the region. Agencies such as DEQ, certain local jurisdictions, Oregon Department of Agriculture, ODFW, USGS, and others have collected a variety of data through a variety of methods. There is no comprehensive survey of regional data pertaining to watershed health.

Issues to consider for implementation in the Metro region

Opportunities	Constraints
<ul style="list-style-type: none"> • Long-term monitoring can help determine whether regional habitat goals are being met. • Helps identify key water quality issues as well as preservation, restoration and enhancement opportunities. • Substantial baseline data exists in the region and only needs to be gathered and mapped. • GIS can be used as a relatively inexpensive, but effective, monitoring tool. 	<ul style="list-style-type: none"> • Funds will need to be located for field-based monitoring efforts. • Existing data may not be compatible/consistent with Metro's data needs. • Methods will need to comply with other agencies' standards (e.g., DEQ). • Monitoring certain aspects of fish and wildlife habitat – for example, connectivity – may not be possible without best

<ul style="list-style-type: none"> • A regional monitoring program provides an excellent partnership opportunity. • Mitigation and restoration efforts can be mapped, adding important new information to the fish and wildlife habitat inventory and enabling broad effectiveness monitoring. • Regional monitoring framework can produce a consistent and rich dataset, and considers an ecologically appropriately spatial scale. • Helps lay scientific foundation for future natural resources work. • Provides key data to other agencies and organizations, at no cost to them. • Volunteers may be recruited for certain monitoring efforts, lowering costs and increasing public interest in natural resources. 	<p>professional judgment, and will need to be repeatable.</p> <ul style="list-style-type: none"> • Certain GIS constraints must be considered; for example, when streams not previously mapped are added to the streams data layer, care must be taken not to confuse new information with improved ecological conditions. • Distinguishing cumulative effects (e.g., non-point source pollution) with site-specific effects may be difficult in the urban area. • As certain watersheds increase urban land cover, cumulative effects may obscure improvements from activities such as near-stream enhancement.
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RECOMMENDED BEST MANAGEMENT PRACTICES

Class I and II Riparian and other habitats:

To establish an effective regional monitoring framework, Metro should:

- a. Establish a watershed-based, ongoing monitoring program for habitat quality, including restoration and mitigation accomplishments.
- b. Improve baseline data on existing habitat conditions to enable monitoring of the region’s progress in achieving fish and wildlife habitat targets.
- c. Use existing data when available and appropriate.
- d. Coordinate with other departments and agencies collecting data to improve exchange of information and consistency.
- e. Participate on state and local task forces to share information on restoration and monitoring methods and results.
- f. Seek partnerships to monitor long-term health of mitigation and restoration projects.
- g. Work with partners to gain additional grant funding to support monitoring programs.
- h. Work with stakeholders to set watershed-based targets and a series of straightforward, ecologically relevant, repeatable measurements/indicators of success.
- i. Use GIS tools to map and measure changes in habitat location, quality and quantity (e.g., changes in each habitat class; changes in near-stream or overall canopy cover). Include some field-based monitoring components, such as macroinvertebrate communities, basic water quality, and temperature. Base monitoring components on Metro’s fish and wildlife habitat objectives, targets and indicators.
- j. Include an adaptive management component that responds to regional monitoring findings. Adaptive management incorporates research into conservation action. Specifically, it is the integration of design, management, and monitoring to systematically test assumptions in order to adapt and learn.
- k. Incorporate a citizen or student volunteer monitoring effort element (for example, temperature monitoring).
- l. Require jurisdictions to update data layers (e.g., streams, wetlands) and provide the data to Metro’s Data Resources Center in a standardized form.
- m. Publish monitoring results reports and make data freely available to others.

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