

**Open Space Taxation Act  
Current Use Assessment Program:**

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**Applying the Public Benefit Rating System  
As a Watershed Action Tool**

Jane Rubey (editing and writing)  
Washington State Department of Ecology  
Shorelands and Environmental Assistance Program  
Watershed Assistance Section

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**Open Space Taxation Act  
Current Use Assessment Program:**

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**Abstract:** This technical guidance document is for voluntary application by local governments who are implementing watershed protection goals and objectives and wish to improve landowner stewardship of natural resources. The natural lands or ‘open space’ component of Current Use Assessment Programs under the Open Space Taxation Act, RCW 84.34, provides a powerful incentive to private landowners to preserve important natural resources, by offering direct property tax relief for retaining natural features in their undeveloped condition. Although a generic approach for enrollment in the natural resource category of open space is available in all counties, by applying the “public benefit rating system” option local governments can clearly define program enrollment criteria to target property selection to only those attributes most desirable for their community’s needs.

In recent years land development and use have lead to increased watershed problems such as flooding, declining water quality and water supply, and fish and wildlife habitat loss. These problems are in the forefront of local community issues now demanding immediate attention. Expanding the use of “public benefit rating system” criteria to select properties with attributes that address watershed related issues is a common-sense strategy to conserve dwindling natural resource functions on the landscape. The cumulative resource protection contributions of enrolled landowners thus can help to relieve the community’s infrastructure and liability costs, while providing for smarter growth that incorporates natural features and their functions.

The guidance in this report provides technically based property selection criteria designed to augment existing open space efforts with protection of key natural resource features which directly benefit the watershed. Communities can choose to use any portion, or all, of these criteria when tailoring a PBRs to address the specific watershed issues they are facing.

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Washington Department of Ecology  
Publications Office  
P.O. Box 47600  
Olympia, WA 98504-7600  
Telephone: (360) 407-7472

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Millard Deusen, Washington Department of Fish and Wildlife  
Steve Gibbs, Washington Department of Natural Resources  
Nora Jewett, Washington Department of Ecology  
Brian Lynn, Washington Department of Ecology  
Christi Norman, Washington Wetlands Network of National Audubon Society  
Brid Nowlan, Washington Wetlands Network of National Audubon Society  
Bonnie Shorin, Washington Department of Ecology  
Kirk Sinclair, Washington Department of Ecology  
Ted Sullivan, King County Department of Natural Resources, Open Space Program

Technical advice and/or document review were provided by the following individuals:

Jim Avery, Kitsap County Assessor  
Ginny Broadhurst, Puget Sound Action Team  
Andrew Craig, Washington Department of Ecology  
Paul Dossett, San Juan County Assessor  
Richard Gersib, Washington Department of Ecology (wetlands restoration)  
Mark Goldsmith, Washington Department of Fish and Wildlife  
Tracy Greenwood, Washington Department of Community, Trade & Economic Development  
Terra Hegy, Washington Department of Ecology  
Steve Hood, Washington Department of Ecology  
Tom Hruby, Washington Department of Ecology (wetlands science)  
Jackie Kettman, Thurston County Development Services (Open Space Program)  
Perry Lund, Washington Department of Ecology (wetland specialist)  
Bonnie Mager, Washington Environmental Council  
Chris Parsons, Washington Department of Community, Trade & Economic Development (GMA)  
Kim Qually, Washington Department of Revenue (Current Use Specialist)  
Kevin Robinette, Washington Department of Fish and Wildlife  
Katherine Rose, Pierce County Planning and Land Services  
Fred Saeger, Washington Association of County Officials  
Joanne Schuett-Haines, Washington Department of Ecology (water quality)  
Al Wald, Washington Department of Ecology (floodplains/wetlands hydrology)

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# **Part I: The Application of “Open Space” Current Use Programs**

Washington State’s Open Space Taxation Act (RCW 84.34), providing for Current Use Assessment Programs to protect natural resources and open space, is unique in the nation. Few other states offer as strong a landowner incentive program to local governments; one that provides the option of tailoring implementation of tax relief benefits to local needs. No other state combines the strong incentive arm of “open space” property tax valuation with the powerful fund raising option of the “conservation futures” levy.

The ‘open space’ Current Use Assessment Program, when used in conjunction with other protection methods such as regulations, can decrease the pressure on landowners to develop their property to more intensive levels of use. Landowners receive a tax break that results in retaining desirable open space land for the general public good at a lower cost to the public than outright purchase. For some properties that are best preserved through public ownership, the conservation futures levy provides a local mechanism to raise funds for property purchase. These funds can be used directly or matched with other state or federal dollars to stretch the value added by acquisition.

It is surprising that the components of ‘open space’ current use assessment programs are still sparsely used assets in many local communities in Washington. One of these, the “public benefit rating system” (PBRS) offers local governments much latitude in selecting desirable properties for enrollment. The intention of this paper is to offer guidance for application of the PBRS to broaden protection of natural resource function within watersheds. Integrating specific selection criteria to features on the landscape that protect and restore watershed functions can help local communities directly address the specific watershed issues they are facing - such as increased flooding, loss of salmon habitat, declining water supply, water quality issues, etc.

Part I of this document provides the background and rationale for using the PBRS as a watershed protection tool. Then, Part II provides the recommended selection criteria to achieve the increased protection desired.



# Chapter 1 – Introduction

Article VII, section 1 of the Washington Constitution declares “all taxes shall be uniform upon the same class of property with the territorial limits of the authority levying the tax”. However, in 1968 the people of the state approved a constitutional amendment (amendment 53) that allowed an exception to this uniformity requirement. Section 11 of Article VII provides the assessed value and taxation of farms, agricultural lands, standing timber, timberlands, and other open space lands shall be based on the use to which the property is currently applied, not its fair market value.

## **Current Use Taxation Authorization**

In 1970, the legislature created the Open Space Taxation Act (Chapter RCW 84.34) to implement current use assessment programs that protect ‘open-space’. This law will hereafter be referred to in this document as Current Use Taxation or CUT. The ‘open space’ CUT offers a reduction in property taxes on private lands when the current open space amenities on these lands, such as wetlands and riparian corridors, are deemed of community benefit and thus, are worth the tax incentive to retain them in their natural undeveloped state. Under RCW 84.34, the Washington State legislature authorized the category of “open space” lands along with “agricultural” and “timber.” The latter, “agricultural” and “timber”, are production oriented, requiring that lands be harvested in order to qualify for classification, whereas, the “open space” category is primarily for preservation of natural features without a market production requirement.

Rules for implementing CUT are provided in WAC chapter 458-30.

## **Open Space Definition**

As defined in the RCW 84.34.020, the “open space” category of CUT eligible lands can include: “a) any land area so designated by an official comprehensive land use plan; or b) any land which preserved in its present state would (i) conserve or enhance natural or scenic resources, (ii) protect streams or water supply, (iii) promote conservation of soils, wetlands, beaches, or tidal marshes, (iv) enhance the value to the public of abutting or neighboring parks, forests, wildlife preserves, nature reservations or sanctuaries or other open space, (v) enhance recreation opportunities, (vi) preserve historic sites, (vii) preserve visual quality along highway, road, and street corridors or scenic vistas, or (viii) retain in its natural state tracts of land not less than one acre situated in urban areas and open to public use; or c) any land meeting the definition of farm and agricultural conservation land.”

## **CUT Availability & Eligibility**

The CUT program is implemented at the county level of government. Under RCW 84.34.037, a landowner may apply to the county legislative authority for classification under the “open space” CUT program. The identity of the governmental entity that will approve or deny the application is determined by the location of the property for which classification is sought. If the land is located in an unincorporated area of the county, the

county legislative authority is the granting authority. Conversely, if the land is located in an incorporated area of the county, the granting authority is composed of three members of the county legislative authority and three members of the city legislative authority.

The program is currently available in ALL Washington counties. However, some counties have not received an application from an interested landowner, and thus, have never needed to make an enrollment determination. According to recent information obtained by the Washington Dept. of Revenue, only Asotin, Columbia, Franklin, Garfield, Pend Oreille, and Whitman counties do not have any land classified in the open space category of current use taxation.

For a number of other counties a few enrollment applications are received each year, requiring that determinations be made as to whether the applicants' property meets the definition in the RCW (above). Decisions on how well one property fairs against another, and what subsequent tax break the enrolling landowner should receive, are hard to make without further defining what exactly are the 'features' of highest benefit to the community. Here is where the Public Benefit Rating System (PBRS) becomes an asset.

### **Public Benefit Rating System**

In general, the Open Space Taxation Act provides substantial flexibility when determining what factors are used to assess eligibility for "open space" classification by applying a provision of the Act called the Public Benefit Rating System (PBRS). Use of the PBRS defines both the criteria for evaluating the land for open space enrollment and the reduction rate such classification will have on the landowner's property taxes. For making determinations on whether to approve or reject an application for classification, the granting authority (the county and/or city legislative body), may "take cognizance of the benefits to the general welfare of preserving the current use of the property...." Applying a PBRS is a tool for evaluating the 'benefits to the general welfare' of the community.... the "public benefit", as well as the 'value' of those benefits as determined through application of a "rating system.

### **Statutory Provisions of the PBRS**

Under RCW 84.34.55, a Public Benefit Rating System can be adopted as part of an Open Space Plan under a jurisdiction's comprehensive planning process to further specify the natural resources that are deemed of value to the general welfare of the community. The county legislative authority may direct the county planning commission to set open space priorities and adopt, after a public hearing, an open space plan and PBRS. The Plan must contain criteria for determining eligibility of lands, the process for establishing a public benefit rating system, and an assessed valuation schedule by which the assessor shall determine the reduction in market value a property will receive when determined to be eligible for classification.

## **Enrollment**

Enrollment in the open-space CUT program begins when a landowner submits an application to the county legislative authority. The processing of the application generally requires an evaluation of the merits of the proposed classification, and the establishment of any conditions of management necessary to retain resource attributes. If the land is not in part of the county subject to a comprehensive plan, a public hearing must be held on the application; a notice of this public hearing must be published in a newspaper of general circulation in the area at least ten days before the hearing. [Note: typically only the portion of the property which is undeveloped is eligible, thus applications automatically exclude the home site and its outbuildings.]

The granting or denial of the application is a legislative determination that is revisable only for arbitrary and capricious actions by the Superior Court. Once approved for classification, the granting authority files notice with the Assessor regarding the determination, and seeks the signature of the landowner on an Open Space Taxation Agreement. The agreement is recorded with the Auditor and spells out the terms and conditions of current use assessment eligibility and enrollment on the property.

## **Incentive Only**

Landowner application and enrollment in CUT programs is always voluntary. The Current Use Taxation program offers tax relief to landowners that is not permanent, unconditional, or absolutely forgives taxes. CUT is a tax deferral and/or partial tax reduction program, depending on the length of time the property continues to be classified as eligible. An owner seeking and receiving classification may remain in the program indefinitely until they seek to voluntarily withdraw or they violate the terms of enrollment thus damaging the open space attributes for which the property is classified.

Any time a landowner withdraws or violates the terms of enrollment, they owe: up to 7 years of tax savings [the difference between the taxes owed on the land at market value as opposed to current use value], plus interest on that amount, and a penalty unless the land was classified for the minimum 10 year period and met the terms for withdrawal.

## **Revenue Shift**

One of the most common misconceptions about the open space program is that it causes local government to lose tax revenue. The truth is that CUT most often results in a tax shift with no loss of revenue to the local government. However, this does not negate the fact that shifting of the tax burden does have an impact on other taxpayers that must be carefully weighed by the legislative authority. The impact of CUT falls on the property owners in taxing districts in which a classified property is located and depends on the levy rate and the relationship between the levy rate and any statutory or constitutional limits on such rate. As a general rule, the taxes levied against all properties in the district will rise such that the total tax collected in the district is the same. Owners of current use land (on the built portion not eligible for enrollment), as well as other landowners in a taxing district with classified land, pay property taxes at a higher levy rate.

This tax shift will always be the case unless the taxing district is at its statutory or constitutional levy limit. For unlimited special levies, such as levies for debt service on voter-approved debt, the taxing district will experience no loss of revenue. For voter approved levies where the approval was for an actual levy rate, the district could experience a loss of revenue equal to the difference between the actual assessed value and the CUT assessed value times the levy rate. For regular levies, the district will experience a levy reduction only if it cannot adjust the levy rate upward to compensate for the loss of assessed value (King County, 1992).

The shift in property tax revenue for the “open space” or natural lands category by comparison to the agricultural or timber current use assessment categories is quite small overall. For example, 1998 figures from King County’s CUT programs indicate that resource production categories of agriculture and timber far exceed the “open space” in both total acreage enrolled and amount of tax deferred. Their open space category has a total of 4400 acres enrolled at a market value reduction of \$32,832,956 in tax revenues shifted. The farm and agriculture category has 31,882 acres at a market value reduction of \$236,232,657. The forest land category enrolls 299,003 acres with no recorded figures on the actual amount of shifted market value. Simply comparing the number of acres enrolled, open space lands make up only 0.013% of the total CUT enrollment for King County, while timber and agriculture make up almost 99%. A high percent of timber and agriculture for an urban county and a small impact from “open space” by comparison.

### **Conservation Futures Levy Option**

Another provision of RCW 84.34 is the “conservation futures” levy that allows for acquisition of open space land. Using this fund raising tool, the governing body is authorized to “specifically purchase or otherwise acquire, except by eminent domain, rights in perpetuity to future development of any open space land, farm and agricultural land, and timber land which are so designated under the provision of chapter 84.34 RCW.” The county may levy an amount not to exceed six and one quarter cents per \$1,000 assessed valuation of all taxable property within the county.

### **Smarter Growth**

Across the nation communities are recognizing that the costs of sprawl are outpacing the tax revenues received by new development. Tax-supported infrastructure such as roads, sewer lines, police and fire service, and schools cost taxpayers and communities far more than the revenues received from new development projects, thus resulting in growth as a tax liability. Denser growth is the more economical way for communities to grow. But denser growth requires attractive community design that incorporates parks, greenways, and open spaces. Denser growth also saves natural resource features on the surrounding landscape and minimizes overall impacts to the watershed. Instead of costing money, conserving open space is a smart growth strategy that can save communities money and increase resident’s overall quality of life. In Washington, the use of the Open Space Current Use Taxation Program can help protect natural features on the landscape and thus contribute to smarter growth strategies that enhance the livability of a community for the benefit of its’ citizens and its’ economy.



## Chapter 2 - Designing a PBRs

Open Space CUT program is a valuable incentive-based tool that offers a voluntary opportunity to landowners. It is a tool that, when used in conjunction with regulatory programs, helps to balance the range of options employed for protecting natural resources important to a community.

### **What's in a Public Benefit Rating System (PBRs)?**

The components of a PBRs consist of 'selection criteria' used in determining property eligibility for classification as "open space", and a 'scoring approach' for deciding the subsequent tax relief that will be afforded the classified land. To implement the PBRs there are a number of other administrative elements which must be attended to, such as: general policies related to the PBRs approach, staff support for the program, and marketing of the program to assure its use and effectiveness.

### **PBRs Philosophy or Goals of the Program**

Before creating a PBRs, or when updating an old one, the first step to take is to visualize desired outcomes. During the visioning phase the question must be asked, "What will be achieved by using the PBRs?" This question will define the foundational philosophy of the PBRs. Answering this question often reflects an assessment of the perceived receptivity of the community to the use of a PBRs; which is a function of the types of resource issues the community is facing, what groups are most vocal on resource issues, what political support exists for a proactive program, what other programs and tools are already in place, etc.

Sometimes the goals behind a PBRs may be just to get the community to see - over time - that a tax relief program is good resource management business. Therefore, a simple PBRs with no extra frills is employed to help the community 'get-their-feet-wet'.

At the other end of the spectrum, a local community may already accept the important role the CUT program can play as an incentive-base for landowners and also recognize the need to protect resources that address watershed-wide issues. In which case, they might adopt a more comprehensive PBRs that prioritizes contributions to watershed functions.

It is from the overall decision about what the PBRs can hope to achieve that the follow-up questions of what the PBRs will then look like, what resource features and land attributes or other elements the selection criteria address, are determined.

<p>It is the philosophy (or goals) behind the construction of the PBRs that dictate its true contribution as a natural resource protection and watershed recovery tool.</p>
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## **PBRS Policies**

It's in the visioning phase that questions about policies also arise, such as the role of the PBRS in relation to regulatory programs. One opinion is that only extra feature protection, beyond what is covered under regulatory Critical Areas Ordinances, should qualify for tax reductions. (Note: this would not preclude enrollment of some properties that are regulated under critical or sensitive areas ordinances, provided they meet selection criteria, however, it would not automatically qualify any land containing a regulated natural feature.) Therefore, as a matter of policy it might be decided that the PBRS be applied only to properties which have development potential or can otherwise be more intensively used under existing land use regulations, such that added public benefit is achieved by removing that potential through open space classification.

Under RCW 84.40.030, Assessors are required, during re-evaluations cycles, to value properties consistent with comprehensive land use plans and existing regulation such as growth management critical areas ordinances. Therefore, when land use regulations limit or prohibit development of land and the landowner feels the assessed value of their land does not accurately reflect these restrictions, the landowner may appeal the assessed value to the county Board of Equalization. This approach relies on the property tax appeals process as the most appropriate mechanism to address the question of whether the value of land has been affected by the exercise of a county's powers to regulate land use.

The converse opinion and policy would be that all sensitive areas would qualify under the PBRS criteria and therefore should receive tax relief beyond the tax reduction triggered by a regulatory restriction. This may be deemed necessary in jurisdictions where property tax adjustment, triggered by regulatory restrictions, is not occurring in a timely manner or where an additional safety net for resource protection is considered desirable and worth the price of additional tax relief to all critical areas landowners. It also recognizes that sometimes a landowners property value will go up due to the regulatory restrictions, because of the aesthetic amenities of assured open space that the market in that community desires.

Policy Note: A PBRS can be designed in an easy to administer manner – it does not require property survey work or elaborate assessments of resources to make determinations regarding resource value and extent. The easier it is to administer the more resources can be protected and the more community benefits received.

## **Selection Criteria Flexibility**

Within the open space definition there is a considerable amount of flexibility for defining in the PBRS selection criteria which resource features are of highest benefit to the community when conducting an eligibility assessment. Once again, open space eligible lands can include: “a) any land area so designated by an official comprehensive land use plan; or b) any land which preserved in its present state would (i) conserve or enhance natural or scenic resources, (ii) protect streams or water supply, (iii) promote conservation of soils, wetlands, beaches, or tidal marshes, (iv) enhance the value to the public of

abutting or neighboring parks, forests, wildlife preserves, nature reservations or sanctuaries or other open space, (v) enhance recreation opportunities, (vi) preserve historic sites, (vii) preserve visual quality along highway, road, and street corridors or scenic vistas, or (viii) retain in its natural state tracts of land not less than one acre situated in urban areas and open to public use; or c) any land meeting the definition of farm and agricultural conservation land.”

Items (i), (ii), and (iii) are underlined to draw attention to the broad allowance within the definition for resource features to be targeted that can improve watershed function by addressing problem issues. For example, in deciding what “conserves natural resources” under (i), a property of standing forest would have great benefit from a watershed perspective for preventing runoff that causes flooding and scours salmon habitat - to a community facing these problems. Of course uncut forests have other benefits such as providing woodland habitat, aesthetic and recreational uses, erosion prevention, and contributions to aquifer recharge, as well as preventing future problems by maintaining all these functions.

Items (ii) and (iii) are also readily adaptable to a watershed-based model of resource benefit. “Protecting streams” certainly includes protecting water quality and salmon habitat. A feature of this category, from a watershed perspective, would be riparian buffers. Directly protecting existing riparian vegetation buffering streams and rivers or restoring vegetated areas could be qualifying criteria.

“Promoting conservation of wetlands” would include restoring wetlands that have been degraded or converted, thus recovering wetland functions and their contribution to the watershed. Diked and drained wetlands in the lower watershed provide critical overwintering habitat for salmon, once access and hydrology are restored. Tidal marshes and estuarine areas are key transition environments for salmon as well. Generally, along with their habitat values, wetlands can provide a multitude of functions that benefit the health of the watershed such as: flood attenuation, water quality filtration, aquifer recharge, sediment reduction, and more.

The flexibility to define, within these broad categories, what criteria will be applied to select classified open space properties, allows communities to figuratively ‘vote’ - with the property tax base under the PBRs program - on what really “benefits” them. In communities faced with severely declining watershed functions, use of the PBRs can be a strong incentive to landowners to improve stewardship of important areas.

### **Rating the Public Benefit**

The WAC 458-30-260 (6) clearly states that “except for a parcel(s) of land classified under a rating system, a parcel of land classified as open space shall have an assessed value not less than what it would have if classified as farm and agricultural land.”

However, under the rating portion of the PBRs, the local community can freely define what will be the property tax relief offered for desired natural resource features identified

in the selection criteria. Thus going beyond the limits of the generic RCW enrollment approach and affording a more powerful tool to address watershed needs.

**Deferred Public Costs:** When considering the tax relief to place on the respective resource features identified in the PBRs, an important factor to consider is the deferred expenses from infrastructure costs a community saves when choosing to retain natural resources rather than develop them. For example, developed floodplains contribute to the expenses of maintaining expensive dikes, levees, and flood abutments structures for flood control and protection of downstream areas from loss. The cumulative loss of wetlands adds to the cost of water quality filtration systems, flood attenuation, and water supply issues. Also, many of these systems are irreplaceable. Saving natural resources equates to direct savings to communities that should be balanced into the equation of the “public benefit rating” for landowner property tax relief. Also, as development in watershed basins expands, the savings incurred by retaining natural features with their resource function likewise will increase.

PBRs Modification Note: A local government with an existing Public Benefit Rating System in place can append or change the PBRs at any time. However, to do so requires a re-assessment of properties already classified in the program, and a subsequent adjustment in property tax valuation based on the new PBRs guidelines.

### **A Time for Stewardship**

Stewardship is critical in these times of watershed decline. Loss of fish and wildlife habitat, increasing flood frequency and damage, declining water supplies, and related problems desperately need improved landowner stewardship practices. Bit-by-bit individual landowner actions have cumulatively contributed to broad-based watershed decline. Turning the tide on this picture will require that landowners, one-by-one, begin to shift their property management actions toward conservation. The incentive of tax relief offered under open space classification programs is one of the strongest voluntary tools Washington communities currently have to encourage this shift in behavior. Using it in a strategic manner to improve on known watershed problems is a progressive step in the direction of recovering watersheds from decline.

New ways of viewing what benefits the watershed may also be in order as one adopts the use of the PBRs to watershed recovery - in a way that values the contribution which resource features make to correcting known watershed problems. It has been demonstrated that there is likely to be a continuous and relatively rapid decline in various measures of ecosystem “quality” as forests begin to decrease in favor of impervious surfaces. Water quality of a watershed rapidly declines when 10% or more of its basin is denuded or paved (Horner, Cooke, et.al.1997). While a 5% or less threshold is important for maintaining high quality ecosystems based on research conducted in Puget Sound lowland streams. (May, Welsh, Horner, et.al. 1997).

Since many Washington watersheds are at this limit or beyond, it seems more emphasis for tax relief should go to forests and other natural features that are left natural and intact. With the increase in severe watershed impacts and the cost of those problems to the public, a new way of thinking about what truly “benefits the watershed”, and thus the community, seems in order. Again the PBRs allows for the flexibility to particularize the community’s needs within the context of its broad definitions which call for conservation and protection of natural resources.



## **Chapter 3 – A Look at Existing PBRs**

Application of the Public Benefit Rating System (PBRs) began in 1979. Spokane County took the lead when, out of frustration with trying to determine property eligibility by applying the broad definitions in the open space RCW, they sketched out a more specific set of selection criteria based on the legislative concepts. They called it the Public Benefit Rating System and convinced the legislature to amend the original chapter RCW 84.34 [Open Space Taxation Act] to allow counties to apply it. Each county was then authorized to develop their own specific property selection criteria under the program.

Following Spokane's lead, Thurston & Kitsap County and later San Juan County established PBRs of their own in 1987 and '88. In 1990, King County stepped in and was followed by several other jurisdictions during the early 1990s. Table 1 (in this chapter) shows the distribution of counties in Washington who are currently applying a PBR, as well as the Conservation Futures Levy option.

Each county's approach to the PBRs has reflected their own specific needs, while overall they have followed some similar styles. This chapter offers a general overview of PBRs content and structure, thus far, while also highlighting some interesting and desirable characteristics currently being applied. As mentioned before, the PBRs features both specific "selection criteria" and a "scoring" approach to determine property eligibility and the subsequent amount of property tax relief received. The following looks at each of these components more closely.

### **Local Selection Criteria**

Approximately 1/3 of the counties in Washington have implemented a public benefit rating system to administer their "open space" Current Use Assessment program. There is much variability in the selection criteria applied for these programs; both in terms of content and interpretation of desired features. Some jurisdictions have chosen to interpret the official definitions in the RCW quite literally, while others have applied somewhat broader expressions of resource benefit – still within the context of the definition- but exploring it's application for today's issues.

### **Eligibility Criteria**

The selection criteria for the PBRs is usually divided into eligibility criteria and bonus criteria. The eligibility criteria covers the basic resource categories for which a property can be eligible to enroll if the features are present. The bonus criteria represent the additional attributes, usually not direct resource features but desirable management conditions the landowner may agree to, to receive greater tax relief.

## Eligibility Categories

Generally, the broad categories for determining basic eligibility which are most frequently included within public benefit rating systems are any of the following:

- 1) Historic and Archaeological Sites
- 2) Farm and Agricultural Conservation Land
- 3) Recreational Areas
- 4) Urban Open Space & Scenic Vistas
- 5) Significant Plant and Animal Habitats and/or Species
- 6) Geologic and Shoreline Features
- 7) Water Features (wetlands, aquatic ecosystems, aquifers)
- 8) Riparian Habitats (ponds, streams, buffers, surface water quality)
- 9) Forest Lands, Floodplains, & Restoration (all newly appearing)

Not all of these categories appear in every PBRS. Nor are the definitions of the categories similar. Jurisdictions select among these and apply those of greatest interest to them. Some of these criteria are fairly new on the scene, like forest lands, floodplains, and restoration. Also, riparian corridors and buffers are getting more attention as important features for fish habitat and water quality.

## Criteria Variability

The definitions in use for the selection of wetlands provides a good example of the broad range of variability among programs. Wetlands are sometimes called out directly, and in other cases are identified as ‘significant aquatic ecosystems’, or in some jurisdictions are not recognized at all. There may be specific criteria for wetlands themselves, or one or another function of a wetland, usually habitat, that might be inferred as the selection criterion. Here are examples to demonstrate what has been included:

- ‘Tier 1’ wetlands identified by the Washington State Department of Natural Resources, Natural Heritage Program. (Significant Wildlife Habitat Area) *Chelan, Thurston*
- Class 1 wetlands regulated under the County Ordinance. (Significant Wildlife Habitat Area) *Chelan, Thurston*
- Regulated wetlands as defined by County Ordinance (Wetlands) *Clallam*
- Provides a unique opportunity for wetlands management (Retaining natural areas - RCW definition) *Cowlitz, Lewis*
- Opportunities to observe, study and preserve specific natural or manmade wetland management area. (Promotes conservation of wetlands – RCW definition) *Cowlitz, Lewis*
- Provides a buffer (intervening space) for a regulated wetland with an open water component, and provides plant and wildlife habitat. (Promotes conservation of wildlife – RCW definition) *Cowlitz, Lewis*
- Meets the Category I or II criteria under Washington’s Four-tier Wetlands Rating System & retains a 25 ft. buffer (Wetlands) *Jefferson*



- Associated wetlands within the shoreline ‘conservancy’ or ‘natural’ designations of the Shoreline Management Plan (Shoreline environment) *Jefferson, King, Okanogan, Thurston, Yakima*
- Area described in the Natural Heritage Plan for wetland and aquatic ecosystems. (Significant aquatic ecosystem) *King, Yakima*
- Wetlands as defined by the County Critical Area designation as well as ponds and streams which are not used in the life cycles of fish. (Wetlands, ponds and streams) *Kitsap*
- Lands which provide for preservation of bogs and swamps (Protect streams, ...wetland.... – RCW definition) *Whatcom*
- Lands including and adjacent to wetlands and tidal areas (Protect streams, ...wetland.... – RCW definition) *Whatcom*

As one can see, there are quite a number of approaches to selecting wetland sites for eligibility in the open space CUT programs. Each criterion focuses on a different type of wetland system or characteristic. Many of these definitions are directly associated with regulatory ordinances (county regulation, Shoreline Master Plans, or Growth Management critical areas).

Variability within other resource areas may, or may not, be as obvious as the wetlands feature. But certainly across public benefit rating systems the resource areas that are included are quite variable. Generally, the application of the PBRs has been a patchwork of discovery over time. In the beginning, jurisdictions often rely on existing PBRs ‘examples’ from other jurisdictions, patterning their program after them, rather than re-inventing the wheel. Sometimes this works well, but it also can fall short of the true resource protection needs within the jurisdiction. Also, as the PBRs program has received more use, jurisdictions are finding that modifying a program can help them achieve a better fit between what they are using as selection criteria and their truly achieving protection of the resource attributes deficient in their community.

Rather than attempting to list all the approaches to resource selection used in existing PBRs, please refer to the appendix containing contact names and phone numbers of county representatives where you can receive copies of the documents.

### **Bonus Criteria**

Aside from the various approaches for selecting a particular resource, and the range of resources one can select, there are a number of bonus point categories that can be applied to the property assessment. Once it has been determined that a property qualifies for enrollment, based on the presence of desired resource(s), bonus categories are applied to determine additional eligibility. Bonus categories supplement the baseline score and potentially increase the property tax reduction received by the landowner. In the bonus category the jurisdiction can take into consideration other factors besides the presence of a desired resource to evaluate the relative ‘public benefit’ of the property.

The categories that are most often used as bonus areas in existing programs include:

- Public Access
- Contiguous Parcels under Separate Ownership
- Conservation/Historic Easement
- Buffers

Most of these categories will be discussed in the bonus category area of Chapter 10. However, some of the lesser known, or used ones listed below, are well worth mentioning here as good options for consideration as well.

### **Development Pressure Rating**

Clallam County’s PBRs takes into consideration the pressures from encroaching development and/or zoning influences on an undeveloped property containing beneficial natural resource(s). Properties “zoned with urban designations and generally located within the designated urban growth area, or any property, regardless of zoning, which is located within a designated open space overlay zoning district or designated greenway, and at least one acre in size” receives the maximum point score of 15. The medium category, worth 12 points, applies to more rural zoning designations and requires a 2 acre minimum. The low category at 6 points must have acreage 2 times the maximum density provided by the applicable zoning.

The value of a bonus category such as this is that it offers an advantage to natural resource areas that happen to fall within the designated development zones. Therefore, rather than losing these resources to encroachment, it offers them the protective advantage of the PBRs incentive. This does not go against the zoning, but rather acknowledges the value of retaining natural features as open space serving the public within developed settings.

### **Resource Condition Rating**

San Juan County applies a resource condition qualifier across the board to all resource categories that are eligible on a property. The condition rating affords a means of evaluating the state of the resource. The relative level of disturbance on a site can be taken into consideration, such that properties that are in the best condition (maybe have no exotic species present or past disruption of the land)- can be recognized appropriately for that wholeness; relative to another property that also qualifies but is disturbed in some manner. Condition of the resource(s) seems a good qualifier to include. Unfortunately, San Juan is the only county including it, and because of the extra dimension it adds, their ‘rating system’ is more complex and less user friendly. (Note: Yakima and King counties include a request for information from the landowner regarding resource viability. However, viability is not included as a scoring component of the application, but rather seems to support resource eligibility in general.)

### **Discretionary Value**

Whatcom County has a discretionary value provision that could be used to address resource condition, more indirectly. Discretionary value may be added or subtracted where land provides or detracts from public benefits. Almost 30% of their total potential bonus points can be added or subtracted under this category. Spokane also includes a

discretionary category in which buffering noise is a desirable element – a progressive feature.

### **Restoration**

In very recent years, a few counties have begun to include provisions for restoration. Currently, these are Chelan, King, Okanogan, and Thurston counties. Okanogan and Thurston offer restoration as a low priority (1 point) eligibility criteria rather than a bonus criteria. Restoration applies to any resource eligible elsewhere in the program. Okanogan focuses restoration value on wildlife habitat only, while Thurston emphasizes restoration of anadromous fish rearing habitat. King and Chelan counties apply restoration as a bonus (5 points), also applying to any eligible resource identified within the program. However, King in particular spells out a broader-based restoration eligibility focus that includes anadromous fish rearing habitat, wildlife and plant habitat areas, and upland, stream and wetland habitats.

Although restoration is just beginning to receive recognition within PBRs, it holds high potential for a more rigorous application throughout local communities. The value of restoration and suggestions for its further application are discussed more in Chapter 10.

## **Local Scoring Techniques**

Once a property has been evaluated for its' resource attributes, including qualifying features and bonus potential, the sum of its "public benefit" is then equated using a scored "rating": to determine the amount of property tax relief received. Just as there are many options for selecting property attributes, there are several approaches to rating the value of these attributes to the community.

### **Scoring Approaches**

There are predominately three approaches applied to the scoring of resource features under existing public benefit rating systems. For purposes of explanation they can be referred to as the: 1) evaluative, 2) single point-tally, and 3) prioritization categories approaches.

The evaluative approach is the scoring option originally pioneered by Spokane County when the PBRs was enacted. It provides the most flexibility, at the discretion of the evaluator, for determining the number of points a property will receive for the presence of a feature. A large range of points are available for each resource, such as 10 or more, from which any number can be assigned as the value of a desired criterion. This manner of scoring is applied to both the eligibility and the bonus criteria. The total points a property receives is then applied to a formula for calculating the percentage of market value reduction.

This approach is highly flexible for the administrator, affording them a broader range of points for rating the property features and more personal discretion. It is limited, however, by its uncertainty and complexity to the landowner. It is less easy for the

landowner, using this approach, to make a preliminary determination about how well their property might score, and therefore, may discourage applications. (Spokane and Whatcom Counties use this approach.)

The single point-tally approach is just as it sounds; a system of adding one point for each ‘yes’ response to a series of selection criteria questions. Points are tallies for each resource category, with a minimum number required to become eligible. (Cowlitz & Lewis Counties use this approach.)

The prioritization categories approach is by far the most popular approach used to score resources. This approach creates priority category levels of high, medium, and low. Selection criteria for resources considered of greatest benefit to the community are placed in the high priority level and are usually assigned a point score of 3. Medium level resources are assigned 2, and low level priority is 1. Additional points can be assigned under the bonus category. Usually, eligibility for enrollment requires the presence of one high priority feature, and a point threshold of 3 to 5 points depending on how it is set up.

### **Tax Reduction – “Assessed Valuation Schedule”**

The current use “assessed valuation schedule” is the formula for determining the tax reduction from market value the eligible property will receive.

When applying the ‘evaluative’ approach to an enrollment application, the gradations in percent of property tax reduction is calculated with a formula such as:

$PBR = [(EV \times BV)/100] + EV$  [where EV refers to the basic resource eligibility points & BV is the bonus value points]. An example would be  $[(50 \times 30)/100] + 50 = 65$  points for PBR value.

This is a bit complex, and therefore, San Juan County uses a PBR point tally system that converts directly to percent of tax reduction (i.e., 50 points = 50% tax savings).

However, most jurisdictions have opted to use a ‘prioritized’ point scoring and a graded scale of valuation assessment with minimum and maximum levels at stepwise intervals that directly equate to a certain number of points. So, for example, King County requires 5-10 points for a 50% market value reduction, 11-15 for 60%, 16-20 for 70%, 21-34 for 80%, and 35-52 for 90% (unless the super bonus applies).

**Example - King County Super Bonus:** “a property with at least one high priority resource, AND allowing unlimited public access or limited public access if a sensitive area, AND conveying a conservation, historic preservation, or trail easement in perpetuity, in a form and with such conditions as are acceptable to the county”, receives an automatic 90% property tax reduction.

There are a number of ways that each local jurisdiction applies the minimum and maximum levels of reduction, and step intervals between the two. Most jurisdictions apply a maximum of 90% reduction, however, a few go up to 100% - or a couple down to 80% or 70% (quite low). Minimum tax breaks are equally variable, a few starting at 10%, 20%, or 30%; and several making 50% their baseline. The range of increments from minimum to maximum levels for percent of tax reduction is usually 10% (e.g. 90, 80, 70, 60, etc.). In some cases, only three percentage categories are applied: 70, 40, 20 (Clallam) & 90, 70, 50 (Kitsap, Thurston, Yakima).

**There is good reason to apply a 50% baseline reduction to any landowner whose property is eligible for enrollment.** A 50% minimum assures the landowner that making the application will be worthwhile.

From a practical perspective, the PBRs reduction will not cover all of the landowner's property; buildings and other structures are excluded (usually 0.5 to 1 acre of land, with 1 acre preferable). The structures usually make up half to 2/3 of the assessed value of the parcel. Typically 1/3 to half of the property value is what remains as undeveloped land eligible for the PBRs tax break. In that case a 50% PBRs reduction is likely to represent only one-quarter or less of the total property assessment. Less typically, on land that has a large acreage with no primary dwelling (or a modest one), the PBRs reduction may be from 50 –100% of the assessment.

**Table 1: Counties using Open Space Program Options**

<b>County</b>	<b>CUT with PBRs</b>	<b>Conservation Futures Levy</b>	<b>Year PBRs Established</b>
Adams			
Asotin			
Benton			
Chelan	Yes		1997
Clallam	Yes		1991
Clark		Yes	
Columbia			
Cowlitz	Yes		1994
Douglas			
Ferry		Yes	
Franklin			
Garfield			
Grant			
Grays Harbor			
Island	Yes	Yes	1998
Jefferson	Yes		1991
King	Yes	Yes	1990, revised '95, '97
Kitsap	Yes	Yes	1987, revised '92
Kittitas	Developing		
Klickitat			
Lewis	Yes		1996
Lincoln			
Mason			
Okanogan	Yes		1991-92
Pacific			
Pend Oreille			
Pierce	Developing	Yes	
San Juan	Yes	Yes	1988
Skagit			
Skamania			
Snohomish		Yes	
Spokane	Yes	Yes	1983
Stevens			
Thurston	Yes	Yes	1987, revised '89 & '96
Wahkiakum			
Walla Walla			
Whatcom	Yes	Yes	1995
Whitman			
Yakima	Yes		1989, amended '93

## **Chapter 4 – Applying the PBRs as a Watershed Problem Solving Tool**

Most communities in Washington, whether located along the Puget Sound or east of the Cascades are recognizing that watershed related resource problems have escalated in recent years. Flooding has become much more frequent, water quality problems are showing up everywhere, water rights are becoming more contentious, and Endangered Species Act (ESA) salmon listings are here. Regulations, although an effective tool, aren't enough to change the trends we are seeing toward overall watershed decline. More tools are needed, especially incentives, to encourage resource preservation and recovery. Owner stewardship of the land is crucial for watershed protection and recovery to occur.

When the Open Space Taxation Current Use Assessment (CUT) was established in the early 1970's, the concept of managing resources in the context of an entire watershed was unrecognized. Although there were certainly resource management problems back then, the scale and pervasiveness of the issues were less. Today, as we enter the 21<sup>st</sup> century, Washington's population is at 5.6 million, and expected to double to 11 million people in the next 45 years [WA Office of Financial Management]. With watershed issues in the forefront already, a future with double the human population does not look promising for maintaining our natural resources or watershed health in general. Population growth of this scale will create even more severe challenges to resource sustainability and quality of life in Washington than is already before us.

### **Incentive for Today's Needs**

The Public Benefit Rating System (PBRs), as mentioned earlier, provides the flexibility to define landowner enrollment in a new and progressive way. One that is best suited to the current times and the issues communities are facing. Under the PBRs, selection criteria can be tailored and applied to focus land selection on the types of features and landscape attributes that help address the watershed problems most prevalent within the community. For example, if flooding intensity and frequency has increased due to a rise in the percentage of impervious surfaces within the watershed or basin, the PBRs can be used to prioritize selection of lands that most contribute to flood attenuation functions. Of course, it is obvious that other programs such as regulations and zoning must likewise discourage the activities that are accentuating the problem to make recovery effective. However, the point is the PBRs incentive can be used to help address watershed issues too.

Two facts are worth noting to stress the importance and timeliness of this application. First, open space CUT, with the PBRs, is a strong readily available incentive-based tool. This is a program that has long been available to ALL local communities in Washington. It affords both a voluntary landowner property tax relief component, as well as a tax generating option for direct purchase of crucial resource lands by the local community. It is worth noting that local communities in most other states do not have these types of

natural area open space incentive opportunities nor, if they do, can they be tailored directly to the specific needs of the local jurisdiction.

Second, science has been moving toward defining the function of landscape features within the context of the watershed unit. This has begun in recent years since recognition that the health of natural resources is an integrally balanced web within the landscape geography of the watershed or basin. What this means is that we are now better able to make selection decisions based on the role that a natural feature plays in addressing a functional need within the watershed.

Although much more work is still needed, and should be forthcoming, there is a solid scientific foundation at present to begin the process of shifting the property selection focus toward achieving protection and recovery of resource functions within watersheds.

## **Function-Based Selection Criteria**

What follows, in Part II, are suggested selection criteria designed specifically to achieve the objective of identifying lands that best serve to correct watershed-related problems by maintaining healthy functioning systems on the landscape. Four main functions are covered: 1) fish and wildlife habitat, 2) flood attenuation & river dynamics, 3) water quality, and 4) water supply.

### **Technical Guidance of the Criteria Development Process**

The selection criteria was developed by a team of technical professionals from state government, with the assistance of local community representatives, over the course of a one year process in which the PBRS was closely examined and the criteria extensively discussed. Once draft criteria were developed, they were distributed to technical peers, open space planners and assessors in other local jurisdictions (the end user), and other interested parties (the community) for review and comment. Revisions were made to the criteria and draft document, and this final document was produced.

Paramount in the development of the selection criteria were the following concerns:

- 1) That the resulting criteria be technically sound – based on best available science
- 2) That the criteria effectively link landscape characteristics to functions
- 3) That the criteria be easily understood by local community staff & citizens
- 4) That the criteria be easily applied by local government staff
- 5) That the criteria be easily adapted to specific & diverse local watershed needs
- 6) That in achieving all these objectives, we did not severely compromise technical accuracy due to the simplified & streamlined administrative needs of the PBRS.

Out of necessity, given the needs of our time, it was the intention of the technical team developing the criteria to stretch the PBRS envelope a bit by making the clear link



between landscape features and functions. In this, it is acknowledged that the current watershed complexities - the magnitude of the watershed issues being faced - require a more sophisticated incentive approach than in the past.

If incentive programs are to be used as an effective tool, on par with regulations and other programs to affect significant positive change on the landscape, these programs need to be more aggressive and pragmatic players. They must take strategic advantage of their voluntary incentive nature as a non-regulatory option. The challenge is to make the function linkage as manageable as possible to get the job done in a way that most benefits local community needs.

Admittedly, the watershed context for the PBRs is not that far away given that some local jurisdictions are already applying function-related criteria in their PBRs programs. Riparian buffers, for example, are more common, and restoration is beginning to be recognized. However, improvements to existing criteria can also be made. For example, shoreline features have been identified as a desirable attribute in various jurisdictions. The definition of shoreline areas of interest to the programs generally refers to protecting areas designated as ‘natural’ or ‘conservancy’ under Shoreline Management Plans. Property selection, if using these designations alone, does not pick up the physical attribute most important to shoreline functional performance, an un-armored shoreline – equally desirable in a rural or suburban setting.

### **Definition of Watershed Function**

The first question for criteria development by the technical team was what constitutes watershed function? The following definition is presented as the team’s collective vision of healthy “function” from the perspective of the overall watershed.

The term “watershed function” constitutes those processes on the landscape which are important to supporting and maintaining long-term ecosystem health & economic viability. These processes include:

- 1) Maintaining the natural connections between parts of the watershed system;
- 2) Assuring the long term viability of that system by retaining the characteristics of the natural environment, including ecological diversity and resiliency; and
- 3) Supporting sustainable natural resource and human communities.

In this definition resiliency means the innate ability to recover from a human caused or natural disturbance that severely impacts the landscape. Such perturbations can include nutrient overloads, increased flood waters, fires, droughts, etc.

## **How to Use the Function-Based Selection Criteria**

### **Focus on Functions**

First it is important to be aware that this selection criteria only covers functions. By intention, the following matrices relate to the relationship between landscape features and the functions they provide on the ground. Other open space values desirable for inclusion in a PBRs, such as preservation of historic sites, aesthetic open space amenities, recreational use, etc. have not been included here. Note: The matrices are not designed to include all desirable PBRs criteria, but only those most directed related to watershed function. It is assumed that as a local jurisdiction establishes or updates their PBRs, these matrices could help address the watershed related problems by offering the function-based selection criteria needed - which would augment the usual open space aesthetic, recreational, and historic amenities and options for public access.

Also, note that the selection criteria are not able to provide all existing system-function linkages. These criteria only capture the most obvious and/or relatively easy attributes to identify under a PBRs program, where ease of administration is an overriding consideration. For example, many wetlands can perform a multitude of functions. However, a full functional assessment is not practical under a PBRs, therefore, we have intentionally highlighted those wetland types/characteristics best known to perform a particular function. This applies to other features as well as wetlands. Therefore, for each combination of selection criteria presented you can be assured of a relatively high likelihood that the function indicated is present without having to do detailed assessments.

### **Landscape Features**

Transitional areas between upland and aquatic systems are key sensitive areas for a number of functions related to overall watershed health. The features associated with these transitional areas include: marine and freshwater shorelines, floodplains, riparian corridors, wetlands, etc. Because certain “features” on the landscape are significant players in maintaining watershed function, the selection criteria matrices are presented with a breakdown by features in mind. This allows one to examine, across functions, the relative importance a particular feature plays within the watershed system.

### **Tailor to Local Needs**

An important quality of the functional matrices is the opportunity to tailor implementation to specific local circumstances and needs. Intrinsic in the watershed issues that local communities are facing is the reality that circumstances vary in different places. Different watersheds, and particularly sub-basins, may be experiencing somewhat more or less of a respective watershed problem. For example a salmon stock might be listed in one sub-basin and not another, or one watershed and not another. Flooding and water quality problems may be experienced heavily in some areas of the watershed but not others. What this indicates is that local jurisdictions will undoubtedly need to tailor

their PBRs selection criteria to the problems most relevant to them in the context of what is occurring in their watershed.

It is also important to accept that watershed problem-solving can not be addressed by just some jurisdictions but not others within the watershed boundary. Because watershed needs and their solutions are complex all authorities within the basin need to coordinate a response such that upstream impacts are not inflicted on downstream areas.

Secondly, a PBRs will also need to take into consideration other protection programs in place at the local level. What zoning and regulations are in use, and what exactly do they protect? Knowing where the gaps are, or where the regulations leave off, is crucial to designing a PBRs. The PBRs does not necessarily need to duplicate what is protected under existing regulatory provisions, but it can provide incentive for more comprehensive preservation. The foundation for applying a PBRs incentive is to preserve and possibly even restore natural resource features that augment watershed health.

**When applying the selection criteria in the matrices, the steps to follow are:**

- 1) Characterize watershed problems and needs
- 2) Determine what levels of coordination are needed with other jurisdictions within the watershed to assure a cooperative approach is achieved. Jurisdictions in a watershed should apply compatible PBRs that share common problem-solving goals. (Note: this of course applies to regulations and zoning as well, not just the incentive approaches.)
- 3) The matrices are a menu of options to choose from. Review the selection criteria and determine which ones best address the known problems in the watershed, while not forgetting the potential future needs of the watershed. (Note: be sure to include other open space criteria – historic, aesthetic, and recreational that are desirable for the PBRs as well.)
- 4) Among the criteria selected, determine what attributes might be of highest importance and which of lower importance in the context of the watershed needs. This will help in setting up the scoring portion of the PBRs.

**A Note on Watershed Characterization**

Efforts are currently underway to develop a comprehensive watershed characterization method that will provide the structure for evaluating the water quality, water quantity, fish habitat, and flooding deficiencies within the watershed. Housed within the Department of Ecology, are an inter-agency and inter-disciplinary team of technical experts representing the areas of hydrogeology, fluvial geomorphology, water quality, fisheries biology, ecology, and wetlands ecology. Together they are developing a draft mapping approach, using Geographic Information System technology, to comprehensively assess a watershed for identification of deficient areas needing immediate preservation and/or recovery.

Their work integrates the layers of natural resource information in these disciplines to provide information products that assist communities in identifying the cause and

location of their watershed issues. Applying the watershed characterization approach, focus areas within the watershed that are “hot spots” (causing problems) can be targeted for action. Knowing where to focus efforts and which areas are more critical or likely to address the problems over other areas, can help communities work faster, more efficiently, and more cost effectively, and should result in improved success at watershed protection and recovery.

This watershed characterization method is a foundational piece for making decisions about what actions a local community should take and how. With this information, regulations, zoning, and the PBRs can be tailored both to specific problems and even to specific areas. It is an essential asset in the decision making process. Information about the Watershed Characterization Approach can be obtained by contacting Richard Gersib, Department of Ecology, at (360) 407-7259.

### **Preservation & Restoration**

The best general rule about whether to focus on preservation or restoration is always seek to preserve it first. Preserving land before it is developed is often the best course of action for saving taxpayer money, and the natural resource. Natural resource features are not always replaceable, and in fact most are not – especially in the form in which they originally appeared. Attempting restoration and enhancement takes much patience to implement, monitor, manage, and work with the land over time to assure it recovers to a natural functioning state. All of this costs more than the outright preservation of land before its impacted. Also, restoration is not always successful.

Securing the land or rights to development of the land are more direct and less expensive than trying to fix the problems later. A limitation of CUT is its temporary nature. Because it is voluntary, and only a property tax break, there is no guarantee the desired features will be protected for the long term.

This is why the Conservation Futures (CF) levy provision is a highly valuable added tool. The CF levy, when enacted, affords the local community an option of using the raised funds to buy land outright or purchase conservation easements. With this tool, some of the very best features on the landscape can be assured permanent protection through acquisition. (see Chapter 5 for more details on CF levies)

Restoration, however, is also an important tool. Use of this tool should be applied as an addition to protection, not a lead. Restoration is a necessity to correct the existing large-scale watershed problems. Communities applying the PBRs should consider making broader use of the restoration application provided within the existing open space legislation. In the matrices that follow in Part II, restoration has been purposefully included to spur recognition of the opportunities to restore attributes and the need to do so. Suggestions for applying restoration, as bonus criteria, are provided in the bonus criteria chapter.

## **Matrix Relative Scores**

An important thing to know about the relative scores on the matrices is that they only reflect the relationship of one criterion to another within the same feature box. They are not intended to reflect any weight of criteria across features or functions! This weighing of selection criteria must be achieved at the local community level when an implementing jurisdiction, after reviewing their functional deficiencies within the watershed, decides what issues rise to the top of their list of concerns, and thus form the basis for “highest” public benefit scoring. The scoring does, however, allow one to understand that, for example, a 150 foot vegetated riparian buffer along a riparian corridor is a feature more likely to contribute to fish habitat function because it is indicated as a level three and not a level one. (Level one is less protective and therefore scores lower.)

Local consideration must be applied to the relative scores of the suggested criteria. For example, an element that has been applied a relative score of 1 may none-the-less be of extremely high importance in a particular watershed basin or sub-basin and therefore warrant a local PBRS score that is higher relative to other criteria within their program. There is certainly room for local adaptation of the criteria scoring based on the relative need of the geographic area.

## **Considerations when Determining Eligibility**

According to the legislative authorization for the ‘open space’ category, the portion to be enrolled for resource function must be in its natural condition to be eligible.

Qualifying eligibility is indicated next to the score for some criteria if presence of that attribute is necessary to achieve the desired function. For example, absence of shoreline armoring is a necessary criterion on a property in order to qualify for the marine shoreline feature category - prior to receiving any additional points for near-shore habitat elements.

Management conditions are also associated with some criteria. In these instances a footnote has been added to indicate the terms of enrollment. For example, riparian corridors on properties with livestock present MUST have fencing along the buffer to prevent trampling of vegetation, erosion, water quality impacts, etc. The property is not eligible for enrollment in the category without this. Water quality impacts such as runoff and erosion should be controlled on site, for a property to be eligible. Sites infested with noxious weed should not be eligible for enrollment unless the property is fully restored to native vegetation and a monitoring plan is in place to assure quality.

Management plans are also a requirement in some instances, such as maintaining healthy forest areas using a Forest Stewardship Plan, protecting important habitat features with Habitat Conservation Plans, or recovering a deficient area using restoration practices.

Management requirements should be spelled out in the local PBRS ordinances to assure that baseline resource protections are met prior to eligibility for enrollment. (See Chapter 10 for more details on management needs.)

Lastly, eligibility may vary to some degree on a case by case basis. In certain circumstances a particular type of property may be on the borderline of meeting a criterion, and an assessment using best professional judgement will need to be made to determine whether the land is of high enough overall public benefit to quality. For example, conditions of a riparian buffer area may be marginal, with varying widths that don't quite meet the minimum overall, and/or vegetation that is too sparse. Care must also be taken when reviewing enrollment applications, to not provide additional tax benefits to property owners who have overused their land to begin with. For example, a landowner seeking restoration credit for re-vegetation, should not receive credit on a property where they inappropriately impacted the land in the first place. Restoration of forested lands, for example, should not be eligible for restoration credits unless the land is being returned to natural condition and the impact did not originate from the applicant.

Official documentation of resources present on a site or in a particular area will vary widely. Documented data such as the Priority Habitats and Species locations, National Wetlands Inventory, Floodplains maps etc. are only as good as the amount of investment made in identifying features on the ground. Interpretations from second hand information such as aerial photographs, word-of-mouth, etc. limits the comprehensiveness of these data sources. When reviewing a property for a particular feature or element, refer to these references first but not exclusively. Visit the site and call on professionals, if needed, to make interpretations of features present and the quality of those features.

Get technical assistance when needed by calling on resource staff in the state Department of Natural Resources, Department of Fish and Wildlife, and Department of Ecology. They can be contacted by phone, e-mail, or in-person (upon-request) to assist in determining the relative value of resource features on the landscape. Use their expertise to help determine the relative attributes on a tricky site. In particular, local planning offices that do not have resource professionals on staff themselves, should not hesitate to consult with state agencies or environmental organizations or consultants when assessing features (See Appendix C for list of contacts.) Also, forming a technical advisory council may be desirable to get convenient local assistance with making resource quality assessments on proposed properties (see Chapter 5.)

Consider criteria that goes beyond regulatory requirements. CUT, as an incentive based program, can offer additional protection of resources than is otherwise provided in regulations. Regulations offer a baseline of protection that is sensitized to the rights of maintaining property "use". Incentives that offer property tax relief for stewarding land in its natural condition, can move beyond the limits of regulatory programs to offer additional protection of natural resources. Therefore, it is wise to apply selection criteria that goes beyond regulatory program requirements.

For example, if the local regulations protect riparian corridors for fish at up to 100', PBRS criteria of 150' affords more protection and a bonus addition of 50 to 100' more offers even better value. If the local regulations offer a 150' protection of riparian corridors, then push the baseline for the PBRS criteria out to 200' for added benefit to

fish. (King County, as an example, requires a riparian or wetland buffer width 50% greater than that required by their Critical Areas Ordinance or Shoreline Master Program for surface water quality buffer areas.)





# Chapter 5 - Marketing the Program & Using Conservation Futures

Once a PBRs has been designed and adopted, the primary task is marketing, marketing, and more marketing. Whatever the philosophical emphasis behind the new PBRs, whether it's a Cadillac or a Volkswagen, the main purpose is to use it! That means marketing! Here is where regular advertisement, a reasonable application process, local government customer service, and direct landowner assistance are crucial.

## Advertisement

There are a number of ways to advertise the availability of the program.

- Develop and distribute brochures: Introductory brochures are easy to develop and can be made available at local county offices or web sites, libraries, and other public places.
- Mail notice with annual property tax statements: Include a brochure with property tax statements to introduce the program to all landowners in the community.
- Establish a website
- Word-of-mouth: Be sure county planners and assessor's staff are educated about the program and actively inform landowners who visit their offices about it.
- Educate interest groups and advocates: provide education forums for real estate agents, community groups, environmental groups, conservation districts and others in the community who regularly work with landowners.
- Involve GMA planning staff: Get staff that landowners contact educated about CUT and advocating its use.
- Hold enrollment workshops: Get the word out in detail, by conducting periodic enrollment workshops with the landowners themselves.
- Target a test area: Focus on an area of the watershed where landowner enrollment is most needed and provide extra information and assistance to spur sign-up.

Education of the public is needed to both improve awareness about the program and minimize any unrealistic expectation about it. Often, open space programs are seen as the panacea for property tax disputes related to regulatory restrictions rather than an opportunity that offers tax incentives to preserve valued open space resource features. The PBRs recognizes benefits property owners bestow on the community by retaining areas in open space rather than developing them and thus reduces the taxed valuation of these lands to reflect this benefit.

## **Application Process**

### **Fees**

Establishing appropriate and reasonable application fees are an important component in encouraging landowners to submit applications for classification within the CUT program. Application fees that are too high act as a disincentive and discourage potential applicants from taking the risk of paying a high fee and maybe getting rejected. While application fees which are too low prevent a local jurisdiction from recouping some administrative expenses associated with application processing.

Local governments must understand up front that administering a PBRs is an investment in natural resource protection that the community benefits from, and for which administration costs will not be fully compensated through application fees. An example is King County's experience where in 1990 the county established an application fee of \$1,125, which reflected the true cost of application processing within their jurisdiction. A potential applicant could recoup this amount within a few years of enrollment in the program. However, no applications - at all - were received in 1991, after many previous years of successful participation. Responding quickly, in 1992 King County reduced the application fee to \$200 and applications began rolling in again in substantial numbers.

### **Application Form & Resource Checklist**

Washington Department of Revenue has created a general enrollment application form that seeks to simplify the application process for the landowner. This form is readily available from the Department of Revenue or most county assessor's offices.

In addition to the general application, a program-specific 'Resource Checklist' will be needed to determine exactly what features are present on the applicant's property. The purpose of a resource checklist is to provide a comprehensive and expeditious approach to determining resource attributes on a property. The checklist can be initiated by the landowner and finalized by the planner or used exclusively by the planner in determining eligibility categories that apply. The open space current use taxation program can be complex because of the number and nature of the resources it seeks to protect. Therefore, it is important that the 'resource checklist' be designed to minimize confusion and offer some quick steps to making an eligibility determination. Essentially, the resource checklist takes the selection criteria a bit further by breaking it down to easily-to-identify elements.

An example for determining the selection criterion of riparian corridors on the checklist would ask for the following (referencing items in Part II habitat function):

- a) Is a vegetated riparian area present next to a river, stream, lake, wetland, shoreline or other water body? (yes or no)
- b) Is the area adjacent to fish bearing waters (yes or no),
- c) Is native vegetation present which contains multiple canopy layers of grasses/forbs, shrubs, & trees (yes or no),

- d) What is the average width in feet of the vegetated area (150, 200, 250, 300, or fill in the blank).
- e) What are the qualities of the riparian corridor, such as (circle all that apply): side channel or off-channel areas, connection to other riparian areas, etc.

Landowners need to easily understand whether their property might qualify for classification but they are unlikely to have any in-depth technical knowledge about the resources on their land, so making the preliminary assessment easy and swift will encourage landowners to apply. If questions are left unanswered, or site review is needed to confirm information, these can be done by the planner during the review phase. (Refer to Appendix D for a full resource checklist worksheet based on the selection criteria in Part II).

Remember the resource checklist should be accompanied by explanations of the resources of community interest, and should offer plenty of examples. Make sure that information which is mapped by the local jurisdiction; such as wetlands locations, critical areas, floodplains, etc.; is available and accessible to landowners. Make the process as easy as possible.

### **Adequate Staff & Program Support**

Dedicated Staff: Administration of the PBRs largely falls to the County legislative body such as the County Commissioners Office, which is then delegated to local planning offices since they hold the staff expertise to make recommendations about resource value of the land to the Commissioners. Dedicating a staff person to administer this program is a must. Ideally, in larger jurisdictions, a full time staff person is needed. However, if a full-time staff person can not be dedicated, it is important to designate a part-time staff person as the point of contact for the program; who can answer questions and process incoming applications. For those jurisdictions that can not afford a full staff person, it's possible two or three jurisdictions could share one staff person by each contributing part of the salary needed.

Citizens Technical Advisory Council: A good source of assistance for implementing the public benefit rating system is to establish a voluntary citizens advisory council. This council can be made up of community participants who are appointed by the legislative body for a set period of time. They should be individuals with expertise in the resource areas of interest to the community's program, such as wildlife biology, hydro-geology, botany, ecosystem ecology, etc. The role of these individuals is to assist staff in making the evaluation calls about a particular property's attributes and benefits for enrollment. They would bring to the decision making process a plethora of resource expertise that may not be readily available by "in-house" planning staff. This may be particularly valuable in a smaller jurisdiction where planning staff numbers are small and their time and skills are spread thin.

Lastly, a good working relationship between the Assessor's office and planning office is critical in making the program a success as well. To assure this the Assessors should be involved in program development early on and throughout the administrative process.

### **Customer Service**

When a landowner makes their first contact with either the Assessor's office (as they sometimes do) or the Planning office it is important that they receive a clear explanation of the program. Staff from both offices should be fully informed about the PBRS program and its community value. They should be educated about the facts of both the resource value to the community in preserving natural features and the true costs of shifting a small portion of the tax revenues to preserve these lands. This undoubtedly will require commitment on the part of the county commissioners, or governing body, to endorse community resource protection needs and to support education of staff through in-house workshops and information sharing.

Customer service plays an important role in efficient application processing and reduced administrative costs. One valuable component of improved service is an emphasis on pre-application conferences with the landowner, either in person or over the phone. These aid the property owner early in the application process with determining what category(s) the property qualifies for and what documentation is required. Owners should be required to submit a complete application package. Time spent in the pre-application stage results in more expeditious review, less requests for additional information, and more realistic expectations on the part of the landowner.

### **Direct Landowner Assistance (Enrollment Workshops)**

Often landowners are not aware of open space program opportunities. Increased outreach, such as notices sent with tax statements, will alert landowners about the program. However, more targeted outreach and education programs are often necessary if the program is to be successful at protecting natural resources. While most jurisdictions do not have the budget for outreach, many can exercise the option of partnering with a local non-profit community group. In such partnerships, the jurisdiction can provide the needed data to the non-profit, while the non-profit has the people to conduct the outreach.

Workshops, targeted at landowners that may be eligible for the program, can increase enrollment. In 1997 landowners who attended one of a series of workshops in the Snoqualmie Valley, run by Washington Wetlands Network (Wetnet) of Washington Audubon accounted for a considerable increase in applications to King County's program that year. The target group for the workshops were landowners in the sub-basins of the Snoqualmie watershed.

The following describes the Wetnet workshop process:

Using the King County GIS database, addresses for those landowners with parcels larger than 2 acres were selected. Flyers advertising the Saturday morning

workshop and outlining the PBRs program were mailed to each of these landowners - two to three weeks before the workshop. Those landowners were then called the week of the workshop to invite them to attend. Press releases were distributed to all the local papers, and were often included. Flyers were also posted throughout the locale to advertise the workshop.

At the workshop Wetnet staff showed an educational slide show, relating to the watershed, and explained the importance of wetlands and water resources. King County staff then gave an overview of the program and answered general questions. This was followed by an opportunity for individuals to meet with county staff and discuss their particular property – something similar to a pre-application permit meeting. While other landowners waited for this meeting, Wetnet staff helped them to sketch maps of their properties and identify options for further discussion with King County staff.

Working in cooperation with King County, Wetnet followed up the workshops by providing direct landowner application assistance as follows:

- Conducting a site visit. Wetnet staff conducted a site visit with the applicant. They discussed with the landowner his/her long term objectives for their property and options with regard to the PBRs. Staff and the landowner flagged those parts of the property intended for inclusion in the PBRs program and drew a site map.
- Gathering Information. Wetnet staff interviewed the landowner to collect information on the history of the property, its resources, and the plants and animals the landowner had seen there.
- Completing the Application Form. After the site visit, Wetnet staff filled out the application form. They ordered the tax assessor's map; wrote the legal description of the property; researched, with county staff, other possibilities; made the needed copies; and returned the application to the landowner ready to be notarized and sent in to the county.

This partnership assistance by a supporting organization, although not an essential component of implementing a PBRs program, is very helpful to the landowner and the county to get all the information needed and expedite the process. This approach has shown itself to be cost effective. For a relatively small investment the county receives a large return in terms of completed landowner applications and protected natural resources.

Any willing organization can partner with the local jurisdiction to assist landowners with enrollment. An environmental group such as local Audubon chapters are good candidates, as are other environmental groups, Ducks Unlimited, etc. Civic groups like the League of Women Voters might be interested. Also, non-profit land protection organizations such as Land Trusts could be approached. Local jurisdictions with the need and/or interest in this kind of assistance should contact their community groups and scope out who might be available to give them a hand. Directing this appeal to the real benefits

derived from protecting community resource assets that contribute to healthy watershed systems should help in garnering support.

## **Program Performance Evaluations**

No Program is complete without a regular performance assessment of program effectiveness. This entails reviewing enrollment figures, determining the amount of resource protection received, addressing administrative difficulties, assessing marketing effectiveness, and targeting unmet needs. It is important to do this assessment on a regular basis as possible, since addressing problems early can save money and resources in the long run. King County conducts a program review every one to two years. However, for smaller jurisdictions, every 2 to 5 years might be adequate.

## **Applying a Conservation Futures Levy**

The Conservation Futures Levy, previously mentioned, is a valuable tool for furthering resource preservation within a local community. Direct acquisition of land is authorized in RCW 84.34.200's section, with section .220 - .240 spelling out the conservation futures levy. Under the authorization a county may levy an amount not to exceed \$0.0625 per \$1000 of assessed property valuation. This levy can be enacted by a vote of the legislative body. Levy dollars raised are placed in a "conservation futures fund" for the sole purpose of acquiring rights and interests in real property pursuant to the terms of the RCW. The governing body is authorized to "specifically purchase or otherwise acquire, except by eminent domain, rights in perpetuity to future development...."

The two most common ways of acquiring these rights are through: 1) full-fee ownership of land, or 2) the purchase of a property's "development rights" under a conservation easement held in perpetuity. In full-fee ownership all rights to the land are purchased with the land and the new owner becomes the protector of the resource attributes present. Conservation easements are legally binding documents, between the owner and another authorized party, that are attached to the deed of the land restricting certain uses, usually development, from occurring at any time into the future. The authorized party and enforcer of the terms of the easement is the "holder"; usually a government body or a non-profit land trust. Easements 'run with the land' and all subsequent owners must abide by the restrictions or be held legally liable for damages.

When counties begin using their conservation futures funds for land preservation, the acquisitions and easements are usually managed by their Parks Departments. Inevitably this requires that the Parks Departments become familiar with natural resource land management and how the needs of these often sensitive areas differ from ball fields and playgrounds. Currently, less than 1/3 of Washington counties are using the conservation futures levy option.

## **Strategic Preservation**

As with the application of the Public Benefit Rating System, the conservation futures levy option and funding pool can be used more strategically by local jurisdictions to help address watershed issues on lands where the need for permanent preservation is paramount. Targeting the use of these funds for lands with natural resource features that either: 1) address a number of watershed issues or 2) that are highly sensitive to loss or disturbance (thus with potential to significantly exacerbate the existing problems) would be the strategic approach to solving problems. To do this requires that knowledge of watershed problem areas is clearly understood and that identification of the most desirable lands for preservation are made under a watershed characterization assessment (see Chapter 4 for description).

## **Supporting Public Restoration**

In addition, conservation futures funds have been used to acquire lands desirable for local government sponsored restoration of key habitats and features. RCW 84.34.210 authorizes the use of the conservation futures levy for the acquisition of lands to "... protect, preserve, maintain, improve, restore, limit the future use of, or otherwise conserve selected open space land..."

Habitats such as intertidal wetland systems in lower watersheds, for example, are key salmonid feeding and resting areas which are crucial to the physiological transitions the salmon must make before they enter the sea. Few of these areas remain in the heavily diked lower estuaries. Restoration of these areas, due to their complexity and scope, often fall outside the preview of individual landowners. Local Public Works or Parks Departments are better candidates to facilitate a recovery of this kind as part of the local jurisdiction's charge to provide for public health and safety. Restoring these areas not only helps salmon but also may provide for flood attenuation and water quality benefits, and can save taxpayers on costly dike repairs.





## Part II: Using Function-based Selection Criteria

Selection criteria for four functions are presented in chapters 6 - 9: Fish and Wildlife Habitat, Flood Attenuation & River Dynamics, Water Quality, and Water Quantity.

Each function begins with goal and objective statements related to the health of the watershed. This is followed by a definition of terms used in the criteria itself or relevant to understanding the function. A selection criteria matrix is presented: organized by features such as riparian corridors, wetlands, forests, etc. The matrix identifies the functional attributes needed for the health of the watershed and offers selection criteria that directly reflect these attributes. A relative score is assigned to each selection criterion. (Review Chapter 4 for an interpretation of the scoring). The matrix also briefly identifies how to obtain the needed information for determining if a criterion is present and whether or not the element can be restored.

Following the matrix is a section explaining, with relevant citations, the rationale for each selection criteria from a technical perspective. This is followed by a more detailed description of how to determine if the criterion is present with resource information and contact names & numbers. Lastly, resource sensitivities relative to particular selection criteria or features are discussed.

Chapter 10 presents bonus criteria which help protect resource features, explaining some additional items which should be considered in conjunction with the selection criteria itself. This section also contains a rationale for why the bonus criteria are being proposed. It discusses the potential restoration opportunities and discusses several management conditions to be considered as terms of enrollment when appropriate. Table 2 offers a summary matrix that sorts the selection criteria by feature. This matrix provides an easy cross-reference for understanding the broad functions of a particular landscape feature.

**Criteria Limits:** Note that criteria presented in the following chapters offer a rough coverage of some of the key elements which contribute to providing the respective function within the watershed. Criteria presented are designed to accommodate the administrative limits of PBRs program applications – i.e; identifying single landowner properties appropriate for enrollment. Therefore, be aware that the criteria are simplified for this application. There are often other components of each function that would be desirable, could they be identified, measured, monitored or otherwise assessed, in a relatively easy manner, by the administering planner and/or landowner. However, what is presented is a sound selection of options that cover the main components of each function in the easiest manner possible. In addition, there are some important considerations that could not be included as direct property selection criteria, but which warrant mention as ‘management conditions’.



## Chapter 6 - Fish and Wildlife Habitat Function

**Goal:** To preserve and restore key habitat areas that provide for healthy populations of fish (especially salmon) and wildlife within the watershed.

**Objectives:** Protect and or restore habitats that support critical life stages of breeding, incubation, rearing, feeding, and resting. This includes the following:

Features: Lakes, Marine Shorelines, Rivers & Streams, Riparian Corridors, Wetlands, Uplands and Forests.

Elements: Structural complexity, Ecosystem connectivity, Adequate Food & Refuge, Priority habitats, and Rare or Irreplaceable Systems

### Definitions:

**Riparian Corridors:** Those areas immediately adjacent to rivers & streams, wetlands, lakes and marine shorelines that begin at the ordinary high water line and extend to that portion of the terrestrial landscape that directly influences the aquatic ecosystem by providing shade, fine or woody material, nutrients, organic and inorganic debris, terrestrial insects, and habitat for riparian associated wildlife.

**Native Vegetation:** Vegetation that is indigenous to the site. This is done by looking either up or down the shoreline to find an undisturbed area and noting its species composition. Consideration should be given to ground cover, understory, and overstory vegetation types and absence of landscape or exotic species. What constitutes a diverse area of native vegetation will vary with community type, microclimate, and region of the state. For example, eastern Washington riparian corridors may have fewer canopy layers than western Washington areas or fewer species present. These factors should be considered when assessing complexity and comparisons should be made within the comparable vicinity.

**Near-shore Shallow Water Habitat:** areas where significant light penetration allows for the growth of benthic organisms and provides rearing and cover habitat for salmonids, or feeding habitat for wildlife, including shorebirds. In estuarine and marine shoreline areas, near-shore shallow water habitat may be intertidal mudflats or non-vegetated areas.

**Ordinary High Water Mark (OHWM):** on all lakes, streams, and tidal water is that mark that will be found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation. The ordinary high water mark

adjoining salt water is the line of mean higher high tide and the ordinary high water mark adjoining fresh water is the line of mean high water. (Shoreline Management Act definition.)

**Wetlands:** are lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. The wetland must have one or more of the following three attributes: 1) at least periodically, the land supports predominately hydrophytic vegetation (hydrophytes), 2) the substrate is predominately undrained hydric soil, and 3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year.

[Note: this Cowardin definition of wetlands differs from current regulatory definitions in that it is more inclusive of certain types of un-vegetated areas such as river bars and estuarine tideflats. A local jurisdiction could certainly use the current regulatory definition recommended by the State, but with the understanding that some systems would not be represented in that definition – at least as wetlands. This criteria does offer other feature categories where these systems are included: Rivers & Streams and Marine Shorelines.]



Marine Shorelines	Supports life cycle spawning, rearing and transport needs	<ul style="list-style-type: none"> <li>- Natively vegetated shoreline with no armoring<sup>3</sup>, docks or piers, dune scalping or lowering.</li> <li>- Known shoreline dependent fish species (baitfish, sockeye, etc.)</li> <li>- Near-shore shallow water habitat: <ul style="list-style-type: none"> <li>a) Adequate spawning substrate on beaches</li> <li>b) Intertidal vegetation such as eelgrass</li> </ul> </li> </ul>	<p>3 (elig)</p> <p>1</p> <p>1</p> <p>1</p>	Site visit	Yes – remove structures, replant vegetation
Lakes <sup>4</sup>	<ul style="list-style-type: none"> <li>- Augmenting low downstream flows &amp; travel access</li> <li>- Support life cycle needs of spawning, rearing, &amp; transport</li> </ul>	<ul style="list-style-type: none"> <li>- Natively vegetated shoreline with no armoring<sup>3</sup>, docks or piers</li> <li>- Near-shore shallow habitat: <ul style="list-style-type: none"> <li>a) in-water woody debris</li> <li>b) lacustrine fringe wetlands</li> </ul> </li> </ul>	<p>3 (elig)</p> <p>1</p> <p>1</p>	Site visit	Yes- remove structures & replant vegetation
Wetlands <sup>5</sup>	- Side channel & off channel refuge	<p>Significant salmon habitat wetlands:</p> <ul style="list-style-type: none"> <li>a) headwater areas just downstream of spawning tributaries</li> <li>b) Within floodplains and accessible to the river/stream</li> <li>c) Part of the lower intertidal river reach or estuary</li> <li>d) Connected oxbows or historic channels</li> </ul>	3 each	Site visit	Yes
Forests <sup>6</sup>	<p>Forest Coverage</p> <p>Ecological Resilience</p>	<ul style="list-style-type: none"> <li>- Naturally vegetated forest with a Forest Stewardship Plan</li> <li>- Forest species composition suitable for long-term health</li> </ul>	<p>3 (elig)</p> <p>2</p>	Site visit & DNR Forest Practices & Forest Health Prog.	Yes

<sup>3</sup> shoreline armoring refers to human-made hardened surfaces such as revetments, bulkheads, cement channels, etc.

<sup>4</sup> Lakes with inlet & outlet streams should have no artificial controls on water levels or blockage of access for optimum fish habitat benefit. However, site-specific evaluation of conditions may warrant enrollment of some areas with artificial controls.

<sup>5</sup> The criteria for all wetland areas assumes the need for a minimum 50' buffer to qualify for enrollment. More buffer is desirable, and additional points are offered under the bonus section to encourage wider buffer allocations. If 150' to 250' are available, the property may also become eligible for riparian corridor scoring for fish or wildlife habitat.

NOTE\*: Riparian corridor eligibility applies to areas immediately adjacent to any water body such as rivers & streams, wetlands, lakes, marine shorelines, etc.



	Habitat for shoreline dependent species	dune scalping or lowering. Known habitat for shoreline dependant wildlife species	1	Priority Habitats and Species Data	No
Forests <sup>2</sup>	Forest Coverage	- Naturally vegetated forest with a Forest Stewardship Plan	3 (elig)	Site visit & Forest Practices Illustrated, DNR Forest Health Prog.	Yes
	Ecological Resilience	- Forest species composition suitable for long-term health	2		
Wetlands <sup>3</sup>	Structural complexity	- Structurally diverse wetland habitat with species richness, interspersion, and height/age complexity	3	Site visit	Yes
		- <i>For Eastern Washington only:</i> All wetlands except roadside or irrigation/drainage ditches	3		
	Rare &/or Irreplaceable wetland systems contributing to landscape biodiversity	- Wetland of ecological significance: a) estuarine wetland b) undiked freshwater tidal wetland c) mature forested wetland d) bog or fen wetland	3 each		
All	Significant, Rare and/or Irreplaceable species and habitat features	- Significant habitat elements: a) heron rookery b) bald eagle nesting/roosting c) documented waterfowl/shorebird concentration area d) Important bird areas (IBAs) e) high quality native plant community	3 each	Site Visit, WDFW Priority Habitats & Species database, WDNR Natural Heritage database	No
		- Presence of a threatened or endangered species (on site)	3		

**Bonus Points** (for both fish and wildlife matrices):

**Buffer areas in excess of minimum qualifying size:**

<sup>2</sup> The forest must be in good shape to be eligible for enrollment: condition must be in compliance with WA Forest Practices Regulations (for adequate reforestation, road stabilization, etc. (refer to Forest Practices Illustrated).

<sup>3</sup> The criteria for all wetland areas assumes the need for a minimum 50' buffer to qualify for enrollment. More buffer is desirable, and additional points are offered under the bonus section to encourage wider buffer allocations. If 150' to 250' are available, the property may also become eligible for riparian corridor scoring.



100' or greater	3
50' to 100'	2
25' to 50'	1

**Restoration Opportunities:**

Restore wetlands	3
Remove shoreline structures	3
Reconnect oxbows or former channels	3
Replant native buffers	2
Open fish access to habitats	2
Restore habitat elements (snags, downed wood, plant diversity, etc.)	2

**Rationale for Criteria**

The general background information in this section, for both fish and wildlife, was excerpted from the document “Management Recommendations from Washington’s Priority Habitats: riparian” produced by the Washington Department of Fish and Wildlife. The rationale specific to features (forests, marine shorelines, wetlands, etc.) relates back to these habitat needs and expands on the choice of each criterion.

**General Fish Habitat Needs**

The native fish species found in Washington have life history strategies that depend on historic stream conditions. These conditions are created and maintained by naturally functioning watersheds with robust riparian areas, low impervious surfaces, unaffected hydrologic regimes, and natural landslide/sediment projection rates. The habitat quality that exists within a fish bearing reach is a synthesis of immediate riparian conditions and the upstream watershed processes that provide for flow moderation, and delivery of sediments, nutrients and wood.

Behaviors related to breeding, feeding, resting, and avoidance of predators evolved in concert with natural stream flow conditions. Salmonid behaviors involving reproduction and migration are adapted to adequate flow timings. When the rate and magnitude of various stream functions change substantially from natural levels, fish habitat quality and quantity declines, fish populations may be reduced, and species composition can change.

Fish have specialized and unique habitat requirements that are met in part by healthy, functioning riparian habitat. For salmon and trout, these requirements include: 1) adequate, but not excessive stream flows, 2) cool, well-oxygenated, unpolluted water, 3) streambed gravels that are relatively free of fine sediments, 4) adequate food supply, and 5) instream structural diversity (pools, riffles, cover). These habitat attributes are inter-dependent. For example, adequate stream flows must be present in order for fish to access and use pools and hiding cover provided by root wads and large organic debris positioned at the periphery of the stream channel. Because of the interconnected nature of stream systems, the habitat quality of most streams, even small headwater streams, is important to fish production.

### Influence on Stream Flow

Stream flow is moderated by riparian vegetation as well as vegetative cover in upland areas. Riparian areas, in particular, assist in regulating stream flow by intercepting rainfall, contributing to water infiltration, and using water via evapotranspiration. Plant roots increase soil porosity, and vegetation helps to trap water flowing on the surface, thereby aiding infiltration. Water stored in the soil is later released to streams through subsurface flows. Through these processes, riparian and upland vegetation help to moderate storm-related flows, and reduce the magnitude of peak flows and the frequency of flooding. When flooding does occur, the floodplain restricts the area affected by flood waters. Additionally, upstream lakes and wetlands provide for water storage that can influence the base flow of streams. Artificially controlled water levels in lakes and wetlands can reduce flows in outlet streams during critical low flow periods, thus should be avoided.

### Influences on Water Temperature and Dissolved Oxygen

Stream temperature is moderated by the shade of adjacent vegetation, especially trees. In order to maintain water temperature control, stream surfaces should have 60-80% shade throughout the day. Water entering fish-bearing streams from small tributaries, rivulets, and seeps is cooled by passing through shaded soils and forest litter. Cool, well-oxygenated water is required by salmon, trout, other cold-water fish, and many aquatic invertebrates, with preferred temperature range of 5.5-14.4 C (40-58 F), and dissolved oxygen levels of greater than 5 parts per million. As stream temperatures rise, their dissolved oxygen content is reduced. Water temperatures of approximately 23-25 C (73-77 F) are lethal to salmon and steelhead. Riparian vegetation also prevents rapid and excessive cooling of the stream during winter, and aids in the formation of narrow, deep channels and pools.

### Control of Stream Sedimentation

Native fish stocks evolved in an environment with very high water quality, and they are acutely sensitive to changes in water purity and clarity. When erosion and subsequent stream sedimentation exceeds natural rates, particularly with fine sediments that are 0.85mm (0.033 in.) and smaller, fish and other aquatic life are impacted. Riparian vegetation inhibits sediment from entering streams by dissipating the energy of water, thereby suppressing the erosion processes that move sediment and stabilizing banks and cut surfaces. Riparian vegetation associated with all sizes of streams is important in regulating the amount of sediment that enters aquatic habitats.

### Control of Stream Pollution

In healthy riparian systems, virtually all incoming nitrogenous waste is intercepted and converted to gas or plant biomass by denitrifying soil bacteria and uptake of riparian vegetation.

### Contributions to the Food Web

Riparian areas are the dominant contributor to the aquatic food web. A mixture of deciduous and coniferous litter, as well as instream coarse woody debris, provide optimal

year-round instream food sources for fish and aquatic invertebrates. Streamside vegetation provides a nearly constant rain of leaves, wood, insects, spores, and other material that fall or are transported into the aquatic ecosystem. These materials are the basis of a complex food chain that involves bacteria, fungi, and aquatic invertebrates. Some fish feed directly on vegetative detritus, other feed primarily on aquatic invertebrates.

### Structural Diversity

Approximately 70% of structural diversity within streams is derived from root wads, trees, and limbs (large woody debris) that fall into the stream as a result of bank undercutting, mass slope movement, normal tree mortality, and windthrow. In seeking its path around the obstruction posed by LWD, water creates complex hydraulic patterns that carve pools and side channels, form falls, enhance channel sinuosity, and impose numerous physical variations within the stream. The structural diversity created by forested banks and the resulting in-stream woody debris is essential to providing adequate fish habitat, particularly for spawning and rearing, in all sizes of streams and rivers.

## **Specific Fish Habitat Features Identified**

### **Riparian Corridors**

Riparian corridors are those areas immediately adjacent to rivers & streams, wetlands, lakes, and marine shorelines. The 150' riparian buffer recommended here is recognized by the WA Wild Salmonid Policy and the Priority Habitats and Species Program as the advised minimum distance for best habitat protection for salmon and other fish species. This distance would apply in all parts of the state regardless of vegetation type along the corridor. Riparian corridors are vitally important for maintaining, in varying levels of contribution, the water quantity, water quality, food supply, shelter, migration, and reproductive needs for wild salmon and other fish species. [Note: The 150' recommended buffer is for fish species only, a 250' buffer is recommended for wildlife species besides fish (see the Wildlife Habitat Selection Criteria Matrix.)]

Fully functional, naturally vegetated riparian areas provide the following attributes (excerpt from WDFW-Tribal Wild Salmonid Policy, Dec. '97):

1. Contribute sizes and species of large woody debris to the aquatic zone that (1) dissipate energy, (2) trap and route sediments, (3) retain detritus and salmonid carcasses, (4) maintain channel complexity, and (5) assist in flood plain formation.
2. Create and maintain spawning, rearing, and migratory habitat for salmonids and their prey.
3. Provide shade, and subsequently reduce summer stream temperature, and ameliorate winter low stream temperature.
4. Maintain vegetative community integrity and diversity that prevents debris flows, controls sediment delivery and transport, provides a source of nutrients to the channel, and stabilizes stream banks.
5. Provide and maintain areas of off-channel habitat.

6. Attenuate flows and moderate impacts from high flow events.
7. Facilitate groundwater recharge and maintain summer low flows.
8. Intercept and break down incoming pollutants.

The appropriate native vegetation cover will reflect the region and climate influencing the riparian zone. Vegetation community and canopy coverage will be different in Eastern Washington than Western, and thus should be taken into consideration when defining the appropriate composition of the riparian corridor.

### **Rivers and Stream**

In-stream habitat areas within rivers and streams are critical to salmon and fish survival. These are the areas that carry and hold the water that fish live in. The water must be cool and oxygenated. Turbidity levels must typically be low to allow fish to spawn and find food prey. Watershed processes provide the water, sediment, and wood and nutrients that are the building blocks for fish habitat. Large wood that enters the stream catches spawning gravel and supports the retention of this gravel while egg incubation occurs during winter and spring high flows. Pools for fish rearing and holding are formed by flow interactions with channel banks and wood obstructions. Connectivity of main channels with floodplain areas is important for providing refuge habitat to fish during high flow events. In addition, old channels of the river (off channel habitat) and wetlands can be peak growth areas for juvenile fish.

Natural shorelines without armoring and with riparian corridors are a foundational component of in-stream health. Natural substrate provides the habitat elements needed by salmon and fish for spawning, feeding, cover, etc. Armoring removes these elements and offers no habitat value to fish species.

Many fish bearing streams are in need of restoration. A focus on restoration of watershed processes including establishment of vigorous riparian zones will be necessary.

### **Marine Shorelines**

The beaches of Puget Sound are highly important for shorebirds, waterfowl, shellfish and finfish. A 1990 review of Puget Sound biological resources (Armstrong and Copping, 1990) concluded that virtually all of the resources that are managed or are of concern spend part or all of their life history on, in, or otherwise associated with beaches. Species include hardshell clams, crabs, shrimp, sea urchins, oysters, geoduck, sea cucumber, rock sole, sand sole, english sole, herring salmon, smelt, sand lance, waterfowl, and marine mammals.

Outer coast beaches also are habitat for many species of fish (e.g. smelt spawning), shellfish (e.g. razor clam), sea birds, and shorebirds.

### Shoreline Armoring

There is ample evidence illustrating the various effects of shoreline armoring on the physical structure of Puget Sound's beaches. Changes include loss of shade, reduction in leaf fall, lowering of beach profiles, coarsening of beach sediment, narrowing of the

beach, and alteration of groundwater flows. Based upon the critical links between physical conditions and habitats, and links between habitats and biological resources, several conclusions can be drawn about the potential effects of armoring on beach ecology (Thom and Shreffler, 1994). These include:

1. Surf smelt, sand lance, herring, and rock sole spawning areas can be lost due to removal of fine sediments and woody debris from the intertidal zone.
2. Hard armoring structures provide poorer habitats for prey resources for many benthic-feeding fish – including juvenile salmon.
3. Cumulative effects of physical changes caused by shoreline armoring can result in major alterations to habitats found in shore-zone systems.

Beaches on the outer coast are also affected by armoring. Although not well documented in Washington State, armoring can have significant adverse effects on high-energy marine shorelines (Pilkey and Dixon, 1996).

#### Native Shoreline Vegetation

While the ecological roles of marine shoreline riparian vegetation haven't been well documented, loss or reduction of shoreline riparian vegetation is likely to result in increased siltation, increased nearshore water temperatures (Beschta et al, 1987), reduced organic inputs, changes in beach substrate, and changes in beach morphology. (Thom and Shreffler, 1994).

#### Shoreline Dependent Species (Baitfish)

Herring – The Pacific herring is of considerable interest to the citizens of the Puget Sound region because of the species' value as forage, its popularity as recreational fishing bait, its significance to local commercial fisheries, and its importance as an indicator of the general "health and productivity" of Puget Sound. Herring deposit transparent, adhesive eggs on intertidal and shallow subtidal eelgrass and marine algae. Eggs may be deposited anywhere between the upper limits of high tide to a depth of -40 feet, but most spawning takes place between 0 and -10 feet in tidal elevation. (WDFW, 1997)

Surf Smelt – Surf smelt are a significant part of the total Puget Sound forage base and are also an important commercial and recreational fish. Surf smelt have specific spawning habitat requirements. Inside Puget Sound, 80 percent of the surf smelt spawn was found in gravel ranging in size from 1-7 mm in diameter, as determined by grain size analysis. This substrate is commonly called "pea gravel" or "coarse sand". (WDFW, 1997)

Sand Lance – Sand lance are an important part of the trophic link between zooplankton and larger predators in the local marine food webs. Like all forage fish, sand lance are a significant component in the diet of many economically important resources in Washington. On average, sand lance comprise 35 percent of juvenile salmon diets. Sand lance are particularly important to juvenile

Chinook, where 60 percent of their diets are sand lance. Other economically important species, such as Pacific cod (*Gadus macrocephalus*), Pacific hake (*Merluccius productus*) and dogfish (*Squalus acanthias*) feed heavily on juvenile and adult sand lance. (WDFW, 1997)

### **Lakes**

Lakes and reservoirs provide rearing, adult residency, spawning habitat, and migratory pathways for many species of salmonids. Access between lakes, and inlet or outlet streams, is critical for reproduction of many lake dwelling species. Outlet stream water quantity and quality is affected by in-lake conditions. Also, in-lake habitat quality is affected by loss of near-shore habitat, installation of overwater and underwater structures (docks, floats, ramps), loss of riparian corridor vegetation, control of aquatic plants, etc.

Often the water level of lakes (and wetlands) is controlled by local citizen groups or by individual landowners. The lowering of the water level may have detrimental impacts on outlet streams through flushing of spawning areas during periods of egg incubation, flushing away of spawning gravel, and/or sedimentation of downstream beds. The maintenance or increase of water level in a lake (or wetland) can cause a lowering of the water level in the outlet stream wherein fish may be stranded and die, or spawning and incubation may be threatened.

### **Wetlands**

Streamside channels, sloughs, and wetlands are off-channel habitats that are usually more productive than the main stream and provide critical overwintering habitat, especially for coho salmon, eastside spring chinook, and cutthroat trout. These feeding and resting areas are essential for supporting the growth of young fish, especially salmonids.

Additionally, freshwater intertidal wetlands and saline estuarine systems support the complex physiological changes salmonids must undergo prior to making their final transition out to sea.

For salmon, key elements are wintering rearing areas (beaver pond wetlands just downstream of spawning tributaries in the upper watershed), wintering habitats (the wall-base channels mid-way down the watershed), and transitional estuarine wetlands (at the mouth of the river) - (1998, Hruby, et al. & conversations with Tom Hruby & Richard Gersib).

Oxbows and historic channels, when open to the floodway, serve as flood flow areas during flood events. Because these areas are off the main high-velocity channel, they become critical refuge sites for out-migrating salmon and other fish species who need shelter from the forces of the flood waters. Juvenile salmonids swept out to sea too early in their life cycle miss the opportunity to make the necessary physiological changes needed to adopt to saline waters, and thus are life threatened.

Generally, wetlands provide a range of support functions which sustain salmon and fish habitat needs. These include attenuating flood flows that sweep salmon out to sea, providing off-channel refuge, augmenting low flows to streams during dry seasons

maintaining access and temperatures for oxygenation, and filtering water to maintain water quality parameters.

### **Forests**

Forests contribute to sustaining watershed conditions that benefit salmon and other fish species. Retaining healthy forests provides for moderation of runoff and water temperatures. Forests hold water and thus support low-stream flows in dry months. They shade spawning areas, provide for slope protection, and help prevent flood water surges. Forests are an integral component of fish habitat support (Beechie & Bolton, 1999).

Critical riparian and wetland buffers may not be adequate in many forests. Re-establishment of forested riparian vegetation is highly desirable along the non-forested reaches of most waterways. In-stream habitat restoration is needed in some forest streams, and forest riparian zones do not have the proper stand structure to provide for natural recruitment of large woody debris into the streams over the long term. Impaired fish passage is a critical issue on some forest roads.

### **All Features**

With the endangered species listings of many salmon stocks in Washington, protection of “critical habitat areas” that directly support listed stocks is necessary. Additionally, all salmon species warrant special notice and protection to prevent further listings of anadromous populations. All areas of known listed salmon stocks are essential protection areas.

### **General Wildlife Habitat Needs**

Approximately 90% of Washington’s terrestrial vertebrate species, although not water dependant animals, use riparian habitat for essential life activities. Riparian areas, those places adjacent to aquatic systems with flowing water (e.g. rivers, perennial or intermittent streams, wetland seeps & springs) contain elements of both aquatic and terrestrial ecosystems and thus provide rich & diverse living environments. Riparian areas are noteworthy for high wildlife densities for birds, mammals, and amphibians.

Four attributes that contribute to diversity and abundance of wildlife are: 1) structural complexity, 2) connectivity with other ecosystems, 3) abundant food and water sources, and 4) moist & moderate microclimate.

#### Structural Complexity

Structural complexity is the co-occurrence of a variety of vegetative and physical features that provide a number of niches for wildlife. This complexity allows a diversity of species to live together in the same place by partitioning the environment. In healthy riparian systems, structural complexity is expressed by: diverse plant species, multiple canopy layers and age classes of trees, snags and downed woody debris, and a high percentage of edge habitat.

### Connectivity with other Ecosystems

By virtue of their protective cover and connectivity throughout watersheds, riparian areas function as wildlife travel corridors. Animals often use riparian areas for daily and seasonal travel. Species that tend to migrate seasonally often follow riparian corridors up and down elevation gradients, or use them as horizontal routes to and from wintering and breeding grounds. Smaller or less mobile animals that use both aquatic and upland areas travel through riparian areas to access them. The importance of riparian areas as travel corridors and routes for dispersion is amplified in developed or fragmented landscapes because alternative overland travel routes are often unavailable, discontinuous, or life endangering. Width is the most important consideration for riparian corridors, as narrow corridors are entirely edge habitats and attract a large number of predatory, parasitic, and opportunistic species.

### Abundant Food Sources and Available Water, Moist and Moderate Microclimate

The moist microclimate, rich depositional soils, and other favorable environmental conditions in riparian areas lead to enhanced growth of plants. Plants, bacteria, fungi, and other lower organisms are at the base of a complex and highly productive food web. The close availability of water is a necessity. The presence of surface and sub-surface water, topographic features, and abundant vegetation in riparian areas results in a microclimate that is generally more moist and mild. These conditions are desirable to many, if not most, species.

## **Specific Wildlife Habitat Features Identified**

### **Riparian Corridors**

Riparian corridor widths for wildlife are related to the need for riparian related species to carry out their life histories (reproduction, food gathering, migration, thermal cover, etc.). Although many species would find the riparian width of 150 feet utilized for aquatic species acceptable, others would be eliminated by this narrower width. The 250' buffer width is derived from a synthesis of wildlife species habitat needs conducted by the Washington Department of Fish and Wildlife (For specifics see Knutson & Naef, 1997.)

The appropriate native vegetation cover will reflect the region and climate influencing the riparian zone. Vegetation community and canopy coverage will be different in Eastern Washington than Western, and thus should be taken into consideration when defining the appropriate composition of the riparian corridor.

### **Uplands**

The area upland from aquatic systems and the riparian buffer provides habitat for terrestrial species life history needs or reproduction, feeding, cover, etc. Interconnectedness of upland habitats with other upland and riparian areas is a key feature in providing travel corridors and continuity of habitat for wildlife species use. Generally, habitat functions are highest in areas with more plant community types and the most structural and species diversity, and thus niches for species use.



Priority habitats are those systems of unique character identified by the Washington Department of Fish and Wildlife in their Priority Species and Habitat Database. These areas, as they become more scarce on the landscape, increase in value for the plant and animal species present in them.

### **Marine Shorelines**

Refer to marine shorelines see the fish habitat section for details on the effects of shoreline armoring & buffers.

There are several shoreline dependent wildlife species that rely on marine shorelines for their life needs. There are several species of birds that nest along marine shorelines, either in trees (e.g. eagles and ospreys), in cavities (e.g. pigeon guillemot and belted kingfisher), or on rock outcrops or ledges (e.g. peregrine falcon) (Thom and Shreffler, 1994). Also river otters, which are found throughout Washington, reach their highest densities in marine areas. They build dens and establish landings along shorelines where they prey primarily on fish and invertebrates. (Albright, et al., 1980)

### **Forests**

Forest's provide unique habitat for a very large number of fish and wildlife species, including some which are threatened and endangered. In many areas, older forest types with adequate snags, green recruitment trees, and downed woody debris, are in insufficient supply. Other forest communities like oak savannas are rapidly declining, causing the loss of these unique habitats to wildlife.

Maintaining the ecological resilience of the forest is important to the long-term health of the forest system. Tree species, and seed sources, which are well adapted to the site increase the forests resistance to biological threats (insects, diseases, animal damage) and environmental perturbations (drought, flood, weather-related injury, and wildfire.)

### **Wetlands**

Hundreds of species use wetlands as habitat for breeding, foraging, or protection during portions or all of their life cycles. These include mammals, fish, birds, amphibians, reptiles, and insects. In addition, shorebirds, waterfowl, and salmon use wetlands during migrations. Structural characteristics such as open water, emergent, shrub/scrub, and forest components are key indicators of habitat performance in a wetland. In addition a high presence of species richness, interspersed, and height and age complexity of vegetation all contribute to general habitat richness for multiple species support.

Along with the numerous functions which wetlands provide within the watershed, there are some wetlands that are of high ecological value for maintaining biodiversity on the landscape. Their ecological value is based on either: 1) the rare and/or irreplaceable nature of the wetland type, or 2) their support of rare and/or sensitive species. The most rare wetland types, within the Puget Sound region, are estuarine wetlands and 'undiked' wetlands with freshwater tidal flow. The most irreplaceable wetlands are bogs and fens, and mature forested types.

In Eastern Washington, where agricultural activity is the dominant land use, wetlands are in scarce supply. All wetlands, with the exception of roadside ditches, and irrigation and drainage ditches, are of high habitat value to wildlife as natural oasis's. These areas provide much needed water supplies, as well as food, cover, and breeding support (Tom Hruby, 1998). [Note: Extensive work on Eastern Washington's wetlands has not been conducted at this time. However, the Washington Wetlands Functional Assessment Project is beginning to conduct studies in the Columbia Plateau region. In subsequent years more information about the functional contributions of Eastern Washington wetland systems should be forthcoming. ]

### **All Features**

High quality (pristine) native plant communities offer a diversity of habitat resources and contribute to the ecological resiliency of ecosystems. These days, pristine native plant communities sites are extremely hard to find. Habitat elements of key importance to particular sensitive species or used by concentrations of species are found throughout the various features of forests, wetlands, uplands, etc. Heron rookeries, bald eagle nesting sites, shorebird concentration areas, and high quality native plant communities are all significant elements for their high habitat value.

Important bird areas (IBAS) are areas of statewide significance to bird conservation identified by the National Audubon Society and the Washington Department of Fish and Wildlife with the assistance of local communities. For any of these systems it is desirable to afford as much protection as possible to retain biodiversity, the ecological resilience of the watershed, and an ecological heritage for current and future generations.

## **Sources/References – How to Determine if Criteria are Met**

### **Riparian Corridors**

Site visits are the best way to determine the width and vegetated condition of riparian corridors.

A minimum buffer width of 150' (for fish) and 250' (for wildlife) is desirable when determining presence of this feature. However, averaging of the width might be considered for some properties, were appropriate. There are considerations to be aware of on both sides of the averaging issue. First, if averaging is not allowed, the program could loose enrollments where the 150' is scant in some places, thus minimizing not maximizing riparian corridor protection. However, on the other side, requiring a minimum width without averaging, encourages a landowner to restore buffer width to the desired amount to obtain enrollment, thus improving existing conditions.

### **Rivers and Streams**

Shoreline Armoring - Site visits or a photograph are needed to determine shoreline armoring.

In-stream Habitat – Site visits are needed to determine habitat characteristics.

## **Marine Shorelines**

Shoreline Armoring – Site visits or photos taken from the beach are needed to determine the presence/absence of shoreline armoring or other structures (docks & piers).

Native Vegetation – A site visit is the best way to determine the presence/absence of native riparian vegetation.

Shoreline Dependent Species –

### Baitfish:

Herring – For a map of documented herring spawning areas see the WDFW web site <http://www.wa.gov/wdfw/fish/forage/graphics/hergnd.gif> or contact the WDFW Fish Management Program, (360) 902-2700.

Surf Smelt – For a map of documented surf smelt spawning areas see the WDFW web site <http://www.wa.gov/wdfw/fish/forage/graphics/smeltgnd.gif> or contact the WDFW Fish Management Program, (360) 902-2700.

Sand Lance – For a map of documented sand lance spawning areas see the WDFW web site <http://www.wa.gov/wdfw/fish/forage/graphics/lancegnd.gif> or contact the WDFW Fish Management Program, (360) 902-2700.

Adequate spawning substrate on beaches for these species is as follows:

Pacific Herring: intertidal and shallow subtidal eelgrass and marine algae

Surf Smelt: coarse sand and pea gravel

Sand Lance: fine sand to coarse gravel

Birds: The Washington Department of Fish and Wildlife Priority Habitat Species Program has maps that identify many of the seabird and other nesting sites on Washington shorelines. They can be reached at (360) 902-2543. A site visit will likely be necessary to determine the presence/absence of nesting birds.

Otters: A site visit (or photo) is the only way to determine the presence/absence of an otter den.

## **Lakes**

Shoreline Armoring – Site visits or photos taken from the beach are needed to determine the presence/absence of shoreline armoring or other structures (e.g. docks and piers).

Native Vegetation & Near-shore Shallow Habitat– A site visit is needed to determine the presence/absence of native riparian vegetation and near-shore shallow habitat.

## **Forests**

Maintaining forests in their natural uncut status is the most desirable for maximum protection and maintenance of watershed functions in an open space program. Harvest is not precluded if good management practices are met. However, the forest management plan must take into account the needs of all the other natural resources eligible under the ‘open space’ enrollment, and incorporate the best protective measures for them. Special

consideration should be given to protecting unstable slopes and preventing runoff that impacts fish species in riparian environments.

Naturally vegetated forests, at a minimum, must be in compliance with minimum standards of the Forest Practices Rules and county regulations. Generally, these will be:

- 1) Adequate reforestation (or natural regeneration) after harvest
- 2) Roads built and maintained to minimum standards (adequate cross drains, fish passage, no significant sedimentation entering waterways)
- 3) Minimum riparian and wetland “buffers”, if harvest occurs.
- 4) Minimum “leave trees” for wildlife, if harvest occurs.
- 5) Minimum “buffers” re: any fertilizer or pesticide application

[See *Forest Practices Illustrated* for details, or contact DNR Region Forest Practices Program Manager for clarification.]

Species Composition is generally not a significant problem in Western WA. In Eastern WA, however, check local Soil Survey for suitable tree species specific to the site. Soil surveys are available from the SWS soil survey reports, by contacting a regional Natural Resources Conservation Office. On sites well suited to Ponderosa Pine and Western Larch, these species should be favored for their resistance to forest health problems and wildfire over more problem-susceptible Douglas Fir and Grand Fir. In general, harvest of overstory pine and/or larch with “natural regeneration” consisting primarily of Douglas-fir and Grand Fir is an undesirable condition (conversation with Steve Gibbs, DNR Forest Stewardship).

## **Uplands**

Structural Diversity & Habitat Elements - A site visit is needed to determine structurally diverse vegetation and presence of general habitat elements.

Priority Habitats – A site visit is needed and checking with the Washington Department of Fish and Wildlife’s Priority Habitats and Species database to determine presence of known habitats or addition of qualifying habitat areas. Complete descriptions of these priority habitats is found in the “Priority Habitats and Species List” from the habitat program at <http://www.wa.gov/wdfw/hab/phslist.htm> (or see references).

**Oak hardwoods:** Pure or mixed oak or oak savannah greater than 1 acre. (1 acre minimum to support squirrel use – but oaks themselves of less than 1 acre are desirable due to their limited and declining availability, high vulnerability to habitat alteration, and dependent species.)

### **Old growth mature forests:**

Old growth west of Cascade Crest: Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 8 trees per acres greater than 32 inches dbh (diameter at breast height) or greater than 200 years of age; and greater than 4 snags per acre over 20 inches dbh and 15 feet tall; with numerous downed logs, including 4 logs per acre greater than 24 inches diameter and greater than 50 feet long. High elevation stands may have lesser dbh (30 inches), fewer snags

(1.5/acre), and fewer large downed logs (2 logs/acre), greater than 24 inches diameter greater than 50 feet in length.

Old-growth east of Cascade Crest: Stands are highly variable in tree species composition and structural characteristics due to the influence of fire, climate, and soils. In general, stands will be greater than 150 years of age, with 10 trees per acre greater than 21 inches dbh, and 1 to 3 snags per acre greater than 12 to 14 inches diameter. Downed logs may vary from abundant to absent. Canopies may be single or multi-layered. Evidence of human-caused alterations to the stand will be absent or so slight as to not affect the ecosystem's essential structures and functions.

Mature Forests: Stands with average diameters exceeding 21 inches dbh; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old growth: 80 - 200 years old west and 80 - 160 years old east of the Cascade crest.

**Aspen stands:** Pure or mixed stands of aspen greater than 2 acres.

**Juniper savannas:** all juniper woodlands.

**Prairies & steppes:** Relatively undisturbed areas (as indicated by dominance of native plants where grasses and/or forbs form the natural climax plant community).

**Shrub steppes:**

Large blocks: Areas of relatively unfragmented shrub-steppe habitat greater than 640 acres. Blocks should have a substantial amount of interior habitat. They should also contain a variety of habitat features (e.g, variety of topography, riparian areas, canyons, habitat edges, & plant communities). Blocks must be in relatively undisturbed condition, as indicated by a dominance of native vegetation. Portions may, however, contain disturbed habitat.

Small blocks: Areas of shrub-steppe habitat less than 640 acres. Blocks should be relatively undisturbed as indicated by the dominance of native plants.

**Urban natural open space:** A priority species (per WDFW Priority Species list) resided within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other priority habitats, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 10 acres and is surrounded by urban development. Local considerations may be given to open space areas smaller than 10 acres. (Note: this is the WDFW Priority Habitats and

Species definition for wildlife, not the general “urban open space” one in RCW 84.34.020.)

### **Wetlands**

Site visits are necessary to determine structural diversity, presence of salmon habitat wetlands, and other rare and/or irreplaceable wetland types.

Structurally diverse wetland habitats with species richness, interspersed, and height and age complexity can be identified by applying the “significant habitat value” section (Q.4) of Ecology’s Washington State Wetlands Rating System (see Appendix A.) Local governments will need to make a decision as to the breadth of wetlands enrollment desirable under this selection criteria. There is strong justification for enrolling all quality wetland systems, those rated as Category I and Category II and receiving a point score of 22 or above, under the rating system for the significance of their contribution to habitat health (and other functions) within the watershed. However, some jurisdictions may wish to focus only on the highest quality systems, in which case a scoring threshold of 30 points will identify all Category I and the top end highest quality Category II sites. At a minimum, a 30 point threshold is recommended to avoid exclusion of the outstanding Category II systems and eliminate the unnecessary task of trying to make a Category I versus Category II determination.

Eastern Washington wetlands that are drainage (*or irrigation*) ditches are “that portion of a designed and constructed conveyance system that serves the purpose of transporting surplus water (*or irrigation water from its supply source to its place of use*); this may include natural water courses or channels incorporated in the system design, but does not include the area adjacent to the water course or channel” (Chapter 173-201A WAC for Water Quality Standards for Surface Waters of the State of Washington). All wetlands that are not roadside ditches or drainage ditches are desirable for habitat function in Eastern Washington.

Rare and/or irreplaceable wetland types are identified as:

**Estuarine wetlands:** wetlands having a surface water connection with tidal saltwater.

**Undiked freshwater tidal:** wetlands having a surface water connection with tidal freshwater.

**Mature forested wetlands:** A forested wetland is where woody vegetation comprises at least 30% of the areal cover. Mature forested wetland has at least 50% of the forest canopy contains evergreen trees that are more than 80 years old, or deciduous trees that are older than 50 years. Or a mature forested wetland can contain 50% cover of evergreen trees that are older than 50 years and have high structural diversity as characterized by an additional layer of trees 20’-49’, shrubs 6’-20’ tall, and a herbaceous groundcover.

**Bogs & fens:** Bogs and fens are found on organic soils, usually peat, and both have a variety of specialized plants adapted these special environments. Bogs are hydrologically closed systems without flowing water, where the major source of water is rainfall. They are nutrient poor, with a low pH (acidic). True bogs are formed by the accumulation of organic matter produced by Sphagnum mosses, and are often characterized by the highly specialized plant species adapted to grow there. Fens normally support a greater diversity of plant species and have greater amounts of available nutrients with a higher pH than bogs. Bogs and fens are identified by sphagnum mosses(>30%) or herbaceous plants and deep organic soils, or a combination of these. Areas of ¼ acre or larger are desirable. Note: refer to guidance in the Washington State Wetlands Rating System for general information on bogs and fens identification.

### **All Other**

Documentation of salmon stock listed areas and species presence can be obtained from the 1992 Washington State Salmon and Steelhead Stock Inventory (SASSI) available from the WA Dept. of Fish and Wildlife. This data is at a scale of 1: 10,000 feet and covers spawning areas only. However, the NW Indian Fisheries Commission's (NWIFC) Salmon Steelhead Habitat Inventory and Assessment Program (SSHIAP) offers a 1: 2,400 foot scale and links stocks to stream reaches in a visual GIS format. The inventory is in the process of development, covering some watersheds better than others, but continued work is expected. SSHIAP information can be accessed on the NWIFC interactive web page at <http://www.nwifc.wa.gov>

Documented presence of high quality native plant communities and threatened or endangered plant species can be determined by contacting the Washington Natural Heritage Program for access to their Natural Heritage database by calling (360) 902-1340. Their web site is <http://www.wa.gov/dnr>.

Documented presence of significant habitat elements, shorebird & waterfowl concentration areas, and threatened or endangered species can be obtained by contacting the Washington Department of Fish and Wildlife (WDFW) for access to their Priority Habitats and Species database by calling (360) 902-2543. The web site for the Department of Fish and Wildlife is <http://www.wa.gov/wdfw>. Locations of Important Bird Areas (IBAs) will also be available from the WDFW.

### **Resource Sensitivities**

Human interference may cause conflicts with fish spawning activities, with bird nesting activities, etc. Additionally threatened and endangered species are particularly sensitive during critical times in their breeding and rearing cycles. Depending on the particular species, public access may need to be restricted during certain times of the year, or may not be compatible with maintaining the habitat attributes at all. Contacting the Washington Department of Fish & Wildlife's Priority Species and Habitats staff to discuss sensitivities of the species or habitat attributes is advisable.

Public access on shorelines can be an issue, depending on sensitivity of plant and animal species. Closures may be necessary during certain times of the year or access avoided altogether.

Public access in wetlands can be also be an issue for the same reason or if the type of wetland system (i.e. bogs and fens) is highly sensitive to disturbance. Restriction of access may be desired in these cases. Additionally, the wetland systems themselves are vulnerable to impacts from surrounding human activities which may cause degradation of their functions and values. For this reason it is desirable to retain an adequate buffer around the wetland to protect the resource attributes for which the property is enrolled. (Note: buffers are discussed further in Chapter 10.)



# Chapter 7 - Flood Attenuation & River Dynamics

## Function

**Goal:** To preserve, and/or restore – where possible, river system migration and flood corridors that provide core watershed functions such as reduction of flood flows and land erosion, and provide important habitat attributes.

**Objectives:** Maintain natural floodplain functions and characteristics, including:

- Storage of flood waters
- Reduction of flood velocity & peak flows
- Refuge for fish during flood events
- Channel migration zones (CMZ)

### Definitions:

**Base Flood** – The flood having a one percent chance of being equaled or exceeded in any given year.

**Channel Migration Zone (CMZ)** – The CMZ encompasses the area of a valley the river or stream channel has occupied in recent geologic time. The channel migration zone consists of the vegetated riparian corridor, the floodplain area, and overflow channels (including oxbows, historic channels, fringe wetlands and wall-based channels). Depending on the topography of the river valley, the CMZ can range from around 100 feet to 700 feet from the edge of the river channel.

**Floodplain** – Low lands adjoining the channel of a river, stream, or water course, lake or other water body, subject to inundation by floodwaters. (For flood insurance purposes, under the Federal Emergency Management Act (FEMA), the accepted standard is the base flood elevation or BFE.)

**Forest Stewardship Plan** – An integrated resource plan which addresses the protection, restoration, and /or enhancement of all forest resources.

## Flood Attenuation & River Dynamics Criteria Matrix

Feature	Needed Attributes	Selection Criteria	Score	Information Source	Can Restore
Floodplains	Unobstructed floodplain – reduced flood velocities	Undeveloped floodplain property with NO flood control structures	3 (elig)	Site visit, local gov't. flood plans, FEMA maps	Yes- remove structures
		Native riparian corridor vegetation that is: 1) un-manicured/landscaped 2) multiple canopy layers (over & under story & groundcover)	1 1	Site visit	Yes- replant
		Undeveloped and naturally vegetated CMZ, potentially including oxbows, former historic channels, wall-based channels, wetlands, etc.	3 (elig)	Site visit or aerials	Yes – remove obstruction
Forests <sup>1</sup>	Moderation & retention of water	Naturally vegetated forest with a Forest Stewardship Plan  Adequately stocked forest stand: a) >40 years b) 10-40 years c) <10 years	3 (elig)  3 2 1	Site visit & reference Forest Practices Illus.	No No Yes-plant
Wetlands <sup>2</sup>	Water storage and moderation for reduction of peak flows	Wetlands located within 100 ft of the river channel or within CMZ	3	Local information	Yes- breach dikes
		Wetlands located in smallest stream class – headwaters areas	3	Stream class data	
		Freshwater wetland with no surface water outflow	3	Site visit	

<sup>1</sup> The forest must be in good shape to be eligible for enrollment; condition must be in compliance with WA Forest Practices Regulations (for adequate reforestation, road stabilization, etc.) – Refer to Forest Practices Illustrated.

<sup>2</sup> The criteria for all wetland areas assumes the need for a minimum 50' buffer to qualify for enrollment. More buffer is desirable, and additional points are offered under the bonus section to encourage wider buffer allocations. If 150' to 250' are available, the property may also become eligible for riparian corridor scoring.

**Bonus: Restoration Opportunity:**

Remove structures in the CMZ	3
Breach dikes	3
Reconnect oxbows or former channels	3
Restore wetlands	3
Revegetate riparian corridors, forests, CMZs	3

## **Rationale for Criteria**

The key attributes to address flood hazard reduction are water storage and peak flow reduction. During high flood events the limiting factors for minimizing hazards to life and property are the ability of the watershed to 1) store the excess water and 2) slow and/or minimize peak flows. Equally important is the value of maintaining an unobstructed river channel migration zone to prevent land erosion damage to property.

### **Floodplains**

Floodplains are often overlooked as a functional part of a riverine system, because they are more often dry than wet. Floodplain development precludes the natural dynamic of a river – flooding, meandering, and avulsing all put floodplain development (public and private property and infrastructure) at risk, as well as risking lives. Because this risk is costly in both fiscal and human terms, along with floodplain development come flood “control” structures, such as levees, berms, dredging and dikes to keep water in the main channel, and pointbarbs, riprap, cribwalls, and dredging to prevent bank erosion. Simplification of river systems in this manner results in lost fish habitat, lost riparian habitat, and increased flood damage potential. Alternatively, preserving functional floodplains preserves fish and riparian habitat, and reduces future flood harm.

Flood control structures prevent natural movement of floodwater into the floodplain area. Floodplains, as functional areas of the riverine systems, are critical components of flood attenuation for downstream areas. In areas where flood control structures can safely be removed and setback or redesigned, restoration of natural floodplain function will benefit fish, wildlife, water quality and safety concerns.

The role of riparian corridor vegetation is to create “roughness” which slows flood velocities, reduces the rate of erosion, and reduces the likelihood of river avulsion during floods (Knutson & Naef, 1997). Woody vegetation provides the best resistance to water flows. Multiple canopy layers are desirable for their ability to be self-sustaining over time, thus maintaining the woody vegetation component most needed for slowing flows.

Channel Migration Zones (CMZ): Current knowledge about the dynamics of rivers indicates that protection of channel migration zones is crucial to minimizing the hazards of riverine erosion and flooding, and protecting the ecological health of a functioning riparian system. Protecting the channel migration zone addresses riverine erosion hazards as-well-as flood hazards. Erosion hazards account for an equal volume of property damage as flooding itself (conversation Al Wald, floodplain hydrologist, 1998).

Maintaining unobstructed and naturally vegetated CMZ areas is the best defense against property lost from river migration activities. River migration can, and does, occur on short time horizons of a few decades. River migration is also likely to become more prevalent as watersheds become more heavily impacted, thus increasing runoff and changing water dynamics.

Oxbows & historic channels are remaining expressions of the river migration corridor, which also serve as flood flow areas during flood events. These areas can act as reservoirs, receiving excess water and keeping it from developed areas. They can also be used during floods by fish to escape high velocity flows in the main channel and floodway – returning to the main channel as floodwaters recede.

### **Forests**

Well stocked forest stands are efficient in regulating the timing of water movement through the watershed: mitigating extremes of water flow. Trees provide for both the physical interception of water and evapo-transpiration. This directly contributes to the reduction of water runoff from the land during storm events. Retention of closed canopy stands, prompt regeneration of harvested trees, and tree planting on non-forest or understocked lands can benefit flood attenuation values by retaining more tree cover on the landscape.

### **Wetlands**

Both of the attributes of storing excess water and slowing and/or minimizing peak flows can be served by wetland systems. Wetlands associated with the floodplain act as storage basins and sponges, helping to hold flood waters during the flood, while slowly releasing these waters as the flooding subsides.

Wetlands located within 100 feet of the river channel have the greatest possibility for holding flood waters during a flood event (conversation with Al Wald, 1998) Both a spatial and temporal component comes into play in determining flood hazard reduction benefit. Proximity to the river is a key factor for gauging the frequency of flooding. Wetlands closest to the river are most likely to flood more frequently, being the first to be impacted by even the smaller flood events.

Other wetlands within the watershed of high value for flood attenuation are freshwater depressional systems with no surface water outflows and headwater wetland systems located in the small stream classes of the upper watershed. Depressional systems are the palustrine wetlands randomly scattered throughout the watershed. Their value is their capacity to simply hold water during storm events, preventing the rapid run-off into rivers and streams, and thus reducing peak flows. Proximity to the river is not a factor here as in the previous criterion.

Lastly, headwater wetland systems trap a large percentage of the total flow from small catchment basins. Because of their pervasive extent in all the tentacles of the upper watershed, they cumulatively retard flow to the system in significant quantity to flatten the peak flow curve downstream. (Tom T. Hruby, T. Granger, et. al. 1998, Page 66).

## Sources/References – How to Determine if Criteria are Met

### **Floodplains**

Areas within the floodplain are determined by reviewing local government flood maps or Federal Emergency Management Agency (FEMA) flood maps. The latter can be obtained from FEMA, Region 10 Office, 130-228 St. SW, Bothell, WA 98021-9798, (425) 487-4679.

A site visit is usually needed to determine the presence or absence of flood control structures such as levees, berms, dikes and armoring. These may also be discernable from aerial photos or direct site photos.

Riparian vegetation – The presence of native riparian vegetation can best be determined by conducting a site visit. Alternatively, review of current photographs can provide information.

Channel Migration Zones (CMZ) – Determining the CMZ begins with measuring the amplitude of the meanders about the axis of the river (through 3 meanders at least). That amplitude is a width. Next you impose the channel controls from human structures within the floodplain (levees, revetments, flood control dams) that are still functional and effective by the Army Corps of Engineers building standards. These controls will effect the amplitude of future channel migrations.

All undeveloped and naturally vegetated areas within the CMZ and/or floodplain are desirable for enrollment. These include forested areas, oxbows, historic channels, wetlands, etc. A site visit or aerial photo review are needed to identify their presence.

### **Forests**

Maintaining forests in their natural uncut status is the most desirable for maximum protection and maintenance of watershed functions in an open space program. (Harvest is not precluded if good management practices are met.) However, the forest management plan must take into account the needs of all the other natural resources eligible under the ‘open space’ enrollment, and incorporate the best protective measures for them.

Naturally vegetated forests must be in compliance with minimum standards of the Forest Practices Rules and county regulations. Generally, these will be:

- 1) Adequate reforestation (or natural regeneration) after harvest
  - 2) Roads built and maintained to minimum standards (adequate cross drains, fish passage, no significant sedimentation entering waterways)
  - 3) Minimum riparian and wetland “buffers”, if harvest occurs.
  - 4) Minimum “leave trees” for wildlife, if harvest occurs.
  - 5) Minimum “buffers” re: any fertilizer or pesticide application
- [See *Forest Practices Illustrated* for details, or contact DNR Region Forest Practices Program Manager for clarification if any questions.]

Forest Stocking – This is the number of trees per acre. Adequate stocking over time is determined using “stand density indices” charts commonly available from most foresters. Suggested Minimum Acceptable levels are as follows:

0-3 years: Forest Practices Act minimums (190 trees/acre -- W WA; 150 trees/acre -- E WA).

3-10 years: Minimum of 150 trees per acre (avg. spacing not more than 17 ft.)

10-40 years: Minimum of 75 trees per acre (avg. spacing not more than 25 ft.)

40 years + : Minimum of 40 trees per acre (avg. spacing not more than 32 ft.)

(Note: These are very “crude” minimums designed for easy administration -- vs -- a high degree of technical accuracy. They are less than “desirable” stocking.)

## **Wetlands**

Wetlands within the floodplain can be identified by referencing the U.S. Flood Emergency Management Agency “flood maps” to determine edge of the floodplain. Examining National Wetlands Inventory (NWI) maps can help determine the presence of wetlands both in the floodplains and other locations in the watershed. NWI is available in paper copy from Washington Department of Natural Resources Map and Information Center at (360) 902-1234. An NWI internet server also is available at <http://www.enterprise.nwi.fws.gov> Local wetlands inventories and flood maps, where available, should also be referenced. (Recognize that NWI maps are not highly accurate for areas with heavy tree cover, often omitting important wetlands.) Visiting the site to confirm location of wetlands is also needed.

Headwater wetland systems can be identified by applying the Forest Practices Stream Classification System, available from Washington Department of Natural Resources.

Depressional wetlands are freshwater wetlands occurring in topographic depressions that exhibit closed contour intervals on three sides and elevations that are lower than the surrounding landscape. The shape of the depressional wetland can vary, but in all cases the movement of surface water and shallow subsurface water from at least three directions in the surrounding landscape is toward the point of lowest elevation in the depression. Depressional wetlands may be isolated with no surface water inflow or outflow in defined channels that connect them to streams, lakes or other wetlands. The absence of surface water outflow indicates a hydrologically closed system that holds back rainwater and surface water flows.

For all wetlands, site visits are recommended to confirm mapped information, and determine characteristics of wetland systems like headwater status or a freshwater depression.

## **Resource Sensitivities**

Assessing risk needs to be a factor in applying floodplain selection criteria. We want to allow flood easements and create open space in floodplains to preserve or restore floodplain function, which should minimize risk (not minimize the risk that the flood and

flood related erosion will happen, but risk of harm from them). We want to preserve and restore areas that allow channel “deformation” and flood water storage, and complex conveyance, but not in areas where it creates a high risk of harm.

Any likelihood of harm should be considered when assessing a floodplain candidate property. For example, a property may be eligible but if there is erosion at the site that appears to be cutting an opening to a historic channel where there is now a daycare center, risk is eminent. Obviously, impacts to adjacent build land needs to be considered in the approval process for the flood function.





## Chapter 8 - Water Quality Function

**Goal:** Support the beneficial uses of waters of the state [WAC 173-201A-060(10) & -070(1)]. The beneficial uses include: domestic, agricultural and industrial water supply; stock watering; fish and shellfish habitat; wildlife habitat; recreation; and commerce and navigation.

**Objectives:** Protect existing water quality and reestablish conditions that contribute to enhanced water quality that is in compliance with the state Water Quality Standards:

- Minimize or eliminate human caused sources of pollution
- Retain natural hydrologic functions, both surface and groundwater
- Retain features that contribute to the complexity and function of shorelines, wetlands and stream habitats.

### Definitions:

**Forest Stewardship Plan** – An integrated resource plan that addresses the protection, restoration, and/or enhancement of all forest resources.

**Ordinary High Water Mark (OHWM):** on all lakes, streams, and tidal water is that mark that will be found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation. The ordinary high water mark adjoining salt water is the line of mean higher high tide and the ordinary high water mark adjoining fresh water is the line of mean high water. (Shoreline Management Act definition.)

**Pollution** – contamination, or other alteration of the physical, chemical or biological properties, of any water of the state. This includes increased temperatures due to loss of shade and channel complexity, increased coarse and fine sediment from bank and upland erosion or land slides and loss of large woody debris to store sediment and create pools.

**State Water Quality Standards** – regulations authorized under Chapter 90.44 RCW, Regulation of Public Groundwater, Chapter 90.48 RCW, Water Pollution Control and 90.54 RCW, Water Resources Act of 1971, & WAC 173-201A.

**Waters of the State** - lakes, rivers, ponds, streams, inland waters, underground waters, wetlands, and watercourses within the jurisdiction of the State of Washington.

**Watershed Plan** – any resource management plan that has been approved by a federal or state agency, sets out Best Management Practices (BMP's) or prescriptions intended to protect or restore water quality and aquatic habitat, and includes an assessment and management rationale based on the existing and desired condition of the resources for the local watershed or basin.

## Water Quality Selection Criteria Matrix

Feature	Needed Attribute	Selection Criteria	Score	Inform. Source	Can Restore
Riparian Buffer <sup>1</sup>	Runoff filtration of pollutants & sediments	Vegetated ground-layer for riparian buffer along water's edge, with a width from OHWM of:		Site visit	Yes
		150 ft.	3		
		100 ft.	2		
	50 ft.	1			
	Moderating water temperature	Multiple canopy layers present (with upper, lower and ground), or Tree canopy present to provide shade	2		Yes
			1		
Forests <sup>2</sup>	Buffering & Sediment reduction	Naturally vegetated forest* with a Forest Stewardship Plan	3 (elig)	Site visit	yes
		Unstable slopes adequately stocked with forest trees	1		
Wetlands <sup>3</sup>	Filtration of pollutants and sediments	Wetland receiving runoff from a developed watershed (agricultural, urban, residential or timber uses), upgradient from it, and it is a:		Site visit & zoning	yes
		a) vegetated freshwater depression with or without surface water outflow	3		
		b) un-vegetated freshwater depression with surface water outflow	2		
		c) riverine flow-through	1		

### Bonus: Restoration Opportunities:

Restore wetland system (hydrology and function)	3
Replant wetland or buffer vegetation	3
Critically eroded areas & unstable slopes planted	1

<sup>1</sup> For eligibility, runoff must be controlled from impervious areas located within 200 feet of water such that it does not discharge directly to surface water.

<sup>2</sup> The forest must be in good shape to be eligible for enrollment. Forest condition must be in compliance with WA Forest Practices Regulations (for adequate reforestation, riparian buffer widths, road stabilization, etc.) to be eligible. (refer to Forest Practices Illustrated.)

<sup>3</sup> The criteria for all wetland areas assumes the need for a minimum 50' buffer to qualify for enrollment. More buffer is desirable, and additional points are offered under the bonus section to encourage wider buffer allocations. If 150' to 250' are available, the property may also become eligible for riparian corridor scoring.

## Rationale for Criteria

### Riparian Buffer

Vegetated buffers and undisturbed soils can absorb water more readily, slow the movement of water across the ground surface, protect the soil from erosive energy of moving water and trap sediment before it can enter the adjacent water body. By trapping sediment, the buffer also ties up chemicals such as oils or nutrients which further protects the water body. Vegetation adjacent to the water body provides habitat for small animals and insects that then interact with and contribute to the aquatic system. Buffers adjacent to wetlands protect the integrity of the systems so that they can more fully function to protect downstream water bodies and ground water recharge.

Shrub and tree canopy adjacent to water bodies intercepts and dissipates the energy of rainfall. Trees provide a buffer from wind and temperature changes as well as providing shade from the solar heat of the sun. The width of tree cover is important in relation to the amount of shading (temperature reduction) that is provided to the stream. The canopy diversity also provides additional habitat for wildlife and contributes to invertebrate input to the aquatic system.

**Impervious surfaces** prevent the infiltration of rainwater into the ground and provide a surface for pollutants to collect. There are three main impacts from impervious surfaces: erosion & pollutants, flooding & low peak flows, and impacts on groundwater supplies.

- 1) With more water running off a site, the water exerts a greater erosive force to carry more sediment and pollutants into the nearest water body or cause scouring within channels. This affect can be controlled by minimizing the amount of impervious surfaces and retaining the runoff to allow for infiltration and slower flows.
- 2) The runoff from hard surfaces generally enters the nearest water body sooner causing higher peak flows and flood potential following a rain and lower low flows with less groundwater infiltration available to maintain minimum flows. Depending on the soils and subsurface flows and the relative position within a basin, some properties have greater potential to provide benefits for detention and infiltration.
- 3) Without infiltration to recharge groundwater resources, available groundwater supplies for municipal or private use will decline. In coastal areas, reduced groundwater flows can lead to saltwater intrusion to wells. Infiltration of clean water benefits ground water supplies through both quality and dilution of some pollutants, natural or otherwise.

### Forests

Forested watersheds generally provide excellent water quality protection, especially compared to other land uses. Their water quality benefits include sediment reduction, lowering water temperatures along stream corridors, and providing buffers along riparian

areas from polluting land use activities. When unstable slopes are adequately stocked with forest trees, landslides and the resulting excess sedimentation are minimized.

### **Wetlands**

Wetlands improve water quality by trapping nutrients, sediments, and pollutants.

Wetlands located down-gradient of developed watersheds where agriculture or urbanization are occurring are most susceptible to receiving pollutant laden waters.

Timber activities are more likely to contribute sediment rather than pollutants.

Excess nutrients are taken up by wetland plants and are subsequently used or converted into less harmful chemical forms. As water is slowed by wetlands, sediment normally carried by faster moving waters settles. Pollutants attached to the sediment overloaded waters, if excessive, can degrade a wetland resulting in its loss of water filtration capability.

For most nutrients, and fecal coliform, the duration of retention time in the wetland is key. A slow water speed – to no visible flow is best for retaining water long enough to filter out pollutants. Also, longer retention time allows for protozoa to feed on fecal coliform. The presence of vegetation contributes to both the slowing and the uptake of excess nutrients. The more closed the wetland system, in terms of water outflow, the more effective it will be at retaining nutrients long enough to allow filtration (Hruby, Tom, et.al, 1998).

## **Sources/References – How to Determine if Criteria are Met**

### **Riparian Buffer**

A site visit is necessary to verify buffer width and conditions and interactions between the buffer area and water body. Few natural systems are homogenous in character, which is nature's way of increasing resilience to adverse conditions. So, when reviewing the site, it should compare favorably to any natural areas in the vicinity that are adjacent to the water body.

A vegetated ground-layer, for the purposes of water quality, has sufficient perennial vegetation (including natural grasses) so that the soil is stabilized by root structure underground and either living or decaying plant material provides cover to the soil surface. In dry sites, bare ground may be evident between perennials but the soil should show some crusting on the surface to allow stability. While the plant composition may vary, there should be a combination of perennials as well as annuals and biennials. The vegetation is particularly important close to the water. Evidence of channeling water from upland areas down to the water edge should be assessed for changes from natural conditions and impacts.

Moderating water temperature is best accomplished with a buffer that contains multiple canopy layers including an upper and lower story and ground layer. However, presence of a tree canopy alone can provide some shading as well.

## **Forests**

Maintaining forests in their natural uncut status is the most desirable for maximum protection and maintenance of watershed functions in an open space program. (Harvest is not precluded if good management practices are met.) However, the forest management plan must take into account the needs of all the other natural resources eligible under the 'open space' enrollment, and incorporate the best protective measures for them.

Naturally vegetated forests must be in compliance with minimum standards of the Forest Practices Rules and county regulations. Generally, these will be:

- 1) Adequate reforestation (or natural regeneration) after harvest
  - 2) Roads built and maintained to minimum standards (adequate cross drains, fish passage, no significant sedimentation entering waterways)
  - 3) Minimum riparian and wetland "buffers", if harvest occurs.
  - 4) Minimum "leave trees" for wildlife, if harvest occurs.
  - 5) Minimum "buffers" re: any fertilizer or pesticide application
- [See *Forest Practices Illustrated* for details, or contact DNR Region Forest Practices Program Manager for clarification if any questions.]

Unstable slopes forested – Confirmation for stabilizing slopes requires a site visit to check vegetation, following reference to the local critical areas records on unstable slopes for identification of problem areas.

## **Wetlands**

Depressional wetlands are freshwater wetlands occurring in topographic depressions that exhibit closed contour intervals on three sides and elevations that are lower than the surrounding landscape. The shape of the depressional wetland can vary, but in all cases the movement of surface water and shallow subsurface water from at least three directions in the surrounding landscape is toward the point of lowest elevation in the depression. Depressional wetlands may be isolated with no surface water inflow or outflow in defined channels that connects them to streams, lakes or other wetlands. Streams draining into a wetland may modify the topographic contours of the depression where they enter or exit the wetland. Depressional wetlands with channels or streams differ from riverine wetlands in that their ecosystem is not significantly modified by overbank flooding events from a stream or river. Headwater wetlands would be classified as depressional because overbank flooding is not a major ecological factor.

Riverine Flow-Through wetlands are those wetlands that are frequently flooded by the river or stream and which do not retain surface water significantly longer than the duration of a flood event. Frequent flooding is defined as once every 2 years with flood waters from within-bank flows of the parent river or stream.

Determining if the wetland is down-gradient of a developed watershed can be done by comparing topographic information, zoning of an area, and a review of current aerial photography with a site visit to examine the situation on the ground. The down-gradient distance from a developed watershed is less applicable than the amount of development

within the watershed itself. High development is a watershed with 15% or greater impervious service or clear-cut forest contributing sediment loads. A quick determination of what constitutes the watershed of the wetland will need to be made (see Hruby, et al, Methods for Assessing Wetlands Functions – reference list) for details, and apply best professional judgement about the relative development impact to the basin. To determine the type of wetland system (depressional or flow-through), and presence of vegetation and surface water outflow characteristics will require a site visit (reference Hruby).

## **Resource Sensitivities**

Land clearing and development generally expose riparian buffers to increased winds and potential sun-scald. This stress can cause loss of some or all of the buffer through wind-throw. While snags and down wood provide useful habitat if large enough, tree loss can be at the expense of shade and canopy structure. Consequently wind and sun aspect should be considered in identifying a buffer width that will likely retain its function over time.

Intermittent streams, especially in Eastern Washington, provide valuable water quality benefits even though dry much of the year. Sediment storage, velocity control and nutrient input from vegetation and detritus are important processes to preserve. Any shade available is valuable but maintaining native vegetation communities is also desirable. Streams, particularly dynamic ones, frequently have some high banks with the potential for instability in or above the channel. These areas may be long term sources of sediment and wood into the stream system. It is important to avoid speeding up the frequency of slide events so that trees grow to size and sediment doesn't overwhelm the stream.





# Chapter 9 - Water Supply Function

**Goal:** Preserve a clean, abundant water supply.

**Objectives:** Maintain water recharge/discharge functions and characteristics, by protecting areas of seepage for:

- Capture Zones & Sole-Source Aquifers
- Recharge of groundwater
- Augmenting surface-water low flows

## Definitions:

**“Critical” Aquifer Recharge Area:** areas that are determined to have a recharging effect on aquifers used as a source for potable water, and are vulnerable to contamination from recharge.

**Forest Stewardship Plan:** An integrated resource plan which addresses the protection, restoration, and/or enhancement of all forest resources.

**Sole Source Aquifer:** EPA defines a sole or principal source aquifer as one which supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer. These areas can have no alternative drinking water source(s) which could physically, legally, and economically supply all those who depend upon the aquifer for drinking water. For convenience, all designated sole or principal source aquifers are referred to as "sole source aquifers" (SSA).

**Wellhead Protection Area:** the surface and subsurface area surrounding a well or well field that supplies a public water supply through which contaminants are likely to pass and eventually reach the water well(s). In simpler terms, it is the area managed by the community to protect ground water based public drinking water supplies.



## **Rationale for Criteria**

Ground water is the primary drinking water source for many of Washington's residents. During the summer months, when precipitation is scarce, ground-water discharge sustains Washington's lowland perennial streams - many of which contain or support important aquatic resources. Preserving undeveloped property within well head protection areas, sole source aquifers, or aquifer recharge areas helps maintain the quality and quantity of ground water recharge, protects drinking water quality, and maintains ground water discharge to springs and streams during critical low flow periods.

### **Vegetated Aquifer and Wellhead Areas**

Natural Vegetation - A cover of native vegetation is crucial to slowing the seepage of water into areas of high recharge. Natural systems work best at providing the appropriate composition of native plants species to facilitate water infiltration into the soil layer. Areas that are manicured, landscaped, grazed, or covered with monotypic or exotic species are ineffective at holding water long enough to allow for natural seepage.

### Well Head Protection Areas (Capture Zones)

Wellhead protection assists local communities in protecting their ground water supplies. Ground water is the source of drinking water for an estimated 65% of Washington's citizens. In some counties, dependency on ground water supplies approaches 100%. Most public water supply wells are located in or around the communities using them as a drinking water source. Therefore, preventive measures must be taken to minimize the possibility that land uses will contaminate the ground water utilized by public water systems.

Section 1428 of the 1986 amendments to the federal Safe Drinking Water Act mandates each state develop a wellhead protection program. The Act requires that all federally defined public water systems using ground water as their source implement a wellhead protection program. Under WAC 246-290, pollution prevention is Washington's preferred approach. This is accomplished by designating management zones around public wells or well fields to detect and manage potential sources of ground water contamination. Maintaining these areas in their undeveloped state, by enrollment in current use taxation programs, is an excellent way to assure that contaminants from land uses don't become an issue.

### Sole Source Aquifers:

The Sole Source Aquifer (SSA) Protection Program is authorized by Section 1424(e) of the Safe Drinking Water Act of 1974 (Public Law 93-523, 42 U.S.C. 300 et. seq).

The Environmental Protection Agency (EPA) published the Sole Source Aquifer Designation Petitioner Guidance in 1987 to assist those interested in preparing and submitting petitions to EPA regional offices. The document provides procedures and criteria for proposing aquifer boundaries, determining whether an aquifer is the sole or principal source of drinking water, and for evaluating alternative sources of drinking water.

The designation of a sole source aquifer provides limited federal protection of ground water resources, and by no means constitutes a complete protection strategy. Effective protection of sources of drinking water requires integration of federal, state, and local efforts, as called for under the Comprehensive State Ground Water Protection Program (CSGWPP) approach. For example, local wellhead protection programs designed to protect the recharge areas of public water supply wells should work in concert with contaminant source control and pollution prevention efforts at all levels of government.

Many valuable and sensitive aquifers have not been designated because nobody has petitioned EPA for such status or because they did not qualify for designation due to drinking water consumption patterns. Ground water value as drinking water and vulnerability to contamination can vary considerably both between and within designated aquifers. As a result, EPA does not endorse using SSA status as the sole or determining factor in making land use decisions that may impact ground water quality. Rather, site-specific hydrogeologic assessments should be considered along with other factors such as project design, construction practices, and long-term management of the site.

#### “Critical Area” Aquifer Recharge Areas:

The Growth Management Act combined with Article 11 of the Washington State Constitution mandates that local jurisdictions adopt ordinances that classify, designate, and regulate land use in order to protect “critical areas”. These are defined as wetlands, frequently flooded areas, aquifer recharge areas, geologically hazardous areas, and those areas necessary for fish and wildlife conservation.

To protect ground water quality and preserve its use as a dependable potable water source, it is necessary to minimize impacts to the beneficial use of critical aquifer recharge areas. In particular the “high” recharge areas are recognized as most beneficial in this regard.

#### **Forests**

Healthy forests provide a multitude of public-resource benefits, including water recharge. The presence of aged forest stands provides for capture and retention of water within the watershed, contributing to water recharge potential on the landscape. Living trees provide for the physical interception of water when it is captured and slowed by the roots, allowing for slow seepage into the groundwater.

#### **Wetlands**

Wetland storage of water is an important component in the hydrologic cycle of the watershed and serves to greatly enhance a watershed’s ability to withstand periods of drought. By gradually releasing stored water after floods and wet seasons, wetlands serve to maintain streamflows in summer low-flow periods. This also serves to cool water temperatures at critical stages in the life cycle of fish. The surficial geology and soil strata underneath the wetland provide an effective indicator of groundwater recharge potential. Areas with surficial geology of alluvium or recessional outwash, coupled with

good soil permeability are excellent areas for groundwater recharge (and future discharge) in the watershed (Richard Gersib, personal conversation, 1998).

## Sources/References – How to Determine if Criteria are Met

### **Vegetated Aquifer/Wellhead Areas**

Naturally vegetated – Determining vegetative cover can only be accomplished by viewing photographs or conducting a site visit. (Note: wellheads are those used for public water supply, not single private wellsites)

The distribution of well head protection areas, critical aquifer recharge areas, and sole source aquifers are delineated in GIS (ARCINFO) format as described below. These coverage's may be obtained by contacting Mike Woodall at the Department of Ecology (360-407-6493).

#### Well head protection areas:

This state wide coverage defines the 6 month, 1 yr., 5 yr., and 10 yr. capture zones for public water supply wells regulated by the WA. Dept. of Health.

#### Critical Aquifer Recharge Areas:

This coverage is presently available for 12 Washington county's including: Clallam, Clark, Franklin, Island, King, Kitsap, Lincoln, Pend Orville, Pierce, Spokane, Thurston, and Whatcom. For the represented county's aquifer-recharge potential is ranked according to soil properties.

#### Designated Sole Source Aquifers:

This GIS coverage shows the distribution of EPA designated sole source aquifers within Washington State.

### **Forests**

Maintaining forests in their natural uncut status is the most desirable for maximum protection and maintenance of watershed functions in an open space program. (Harvest is not precluded if good management practices are met.) However, the forest management plan must take into account the needs of all the other natural resources eligible under the 'open space' enrollment, and incorporate the best protective measures for them.

Naturally vegetated forests must be in compliance with minimum standards of the Forest Practices Rules and county forest regulations. Generally, these will be:

- 1) Adequate reforestation (or natural regeneration) after harvest
- 2) Roads built and maintained to minimum standards (adequate cross drains, fish passage, no significant sedimentation entering waterways)
- 3) Minimum riparian and wetland "buffers", if harvest occurs.
- 4) Minimum "leave trees" for wildlife, if harvest occurs.
- 5) Minimum "buffers" re: any fertilizer or pesticide application

[See *Forest Practices Illustrated* for details, or contact DNR Region Forest Practices Program Manager for clarification if any questions.]

Forest Stocking is the number of trees per acre. Adequate stocking over time is determined using “stand density indices” charts commonly available from most foresters.

Suggested Minimum Acceptable levels\* are as follows:

0-3 years: Forest Practices Act minimums (190 trees/acre -- W WA; 150 trees/acre -- E WA).

3-10 years: Minimum of 150 trees per acre (avg. spacing not more than 17 ft.)

10-40 years: Minimum of 75 trees per acre (avg. spacing not more than 25 ft.)

40 years + : Minimum of 40 trees per acre (avg. spacing not more than 32 ft.)

(\*Note: These are very “crude” minimums designed for easy administration -- vs -- a high degree of technical accuracy. They are less than “desirable” stocking.)

### **Wetlands**

Surficial geology maps, compiled by Connie J. Manson, are available from the Department of Natural Resources by calling their geology division at (360) 902-1450. These maps are available by county, and are titled: “Bibliography of the Geology and Mineral Resource of \_\_\_\_\_ County, WA.”

Information on soil permeability is found in the soil survey reports, by county, produced by the U.S. Natural Resource Conservation Service (NRCS)—the old Soil Conservation Service (SCS). They are available by contacting a regional NRCS office.

## Chapter 10 - Bonus Criteria & Management Conditions

Included within this chapter are additional criteria that apply across the board to a number of selection criteria, or to CUT enrollment overall. These bonus criteria include only the items that directly contribute to added natural resource protection, thus addressing the premise of this paper for helping with watershed issues. For this reason the bonus criterion of public access is not discussed, although most jurisdictions will likely want to include it in their overall program (e.g. we are focusing here just on watershed problem-solving items).

Resource-related bonus criteria are such items as joint stewardship agreements between neighboring landowners and conservation easements. Multi-owner agreements would apply to any resource feature where several owners share management responsibility over a wetland, lake, or stream corridor, for example. These bonus criteria suggest offering encouragement for good-faith neighbor commitments, and going further by providing even more buffer width.

An additional matrix is added to cover restoration opportunities associated with recovering watershed function.

The use of restoration within the PBRs is suggested as an extra bonus to encourage recovery work when opportunities exist for returning high quality attributes back to the land. However, there should be nothing precluding a landowner from completing restoration actions on their land and then qualifying for enrollment under a fully functional feature category. In fact, this should be encouraged. The objective is to reward for preserving natural intact features (#1) but also, restoring natural function back to the land (#2). (Note: this does, however, become a difficult judgement call if the party asking for tax relief for restoring a feature, is the same party who also originally degraded it and should be noted for moratorium.)

A final section discusses management of the enrolled land for optimal function performance. It focuses on enrollment conditions that are critical to function-maintenance, such as control of exotic and invasive species, preventing water quality pollution, managing public access, etc.

## Bonus Criteria Matrices

<b>General Bonus Criteria</b>	<b>Score</b>	<b>Related Function</b>
Multi-owner agreement	Med. - High	All
Conservation Easement in perpetuity	High +	All
Buffers: 150' or greater 100' to 150' 50' to 100'	High Medium Low	All

<b>Restoration Bonus Criteria</b>	<b>Score</b>	<b>Related Function</b>
Replanting vegetation (to restore a system and/or its buffer/edge): Forest* Water recharge area Riparian buffer Shoreline buffer Wetland buffer. etc.	High	FA (flood attenuation), FH (fish habitat), WH (wildlife habitat), WQ (water quality), WS (water supply)
Restore wetlands to function (restore hydrology, filtration, recharge, flood attenuation, and/or eliminate monotypic or exotic species)	High	FA, FH, WH, WQ, WS
Remove structures in the floodplain or along shorelines	High	FA, FH, WH
Reconnect oxbows & former channels	High	FA, FH
Restore forest composition (healthy stands and species diversity)*	Medium	WH
Restore habitat elements (snags, downed wood, plant diversity)	Medium	FH, WH
Open access to fish	Medium	FH
Repair roads (correct drainage & erosion problems, close, rehabilitate)*	Low	FH, WQ
Stabilize critically eroded areas and seed or plant*	Low	FH, WQ

\* Restoration bonus points do not apply following a harvest of trees or if required under a Forest Stewardship Plan.



## **Rationale for Bonus Criteria**

### **Multi-Owner Management Agreements**

Many resource features including wetlands, lakes, shorelines, streams, and riparian corridors can cover large areas of land that are likely to be under multiple landownerships. Management practices and/or development activities by one owner, on their part of a wetland, for example, can have grave effects on the entire system. Therefore, to the extent it is possible, a feature such as a wetland is better protected if all owners of the wetland site have mutually agreed to apply stewardship practices that protect the system as a whole. This, of course, also relates to small lakes, shoreline areas, etc. For riparian corridors, multiple owner stewardship provides corridors that are not fragmented and thus offer better habitat.

Bonus points for multi-owner agreements should consider the extent of feature protection provided and compensate the enrolling owners accordingly. For example if a wetland has 5 owners along its perimeter and three owners are committed to a management agreement, that is certainly of bonus value toward the protection of the wetland. But better yet, and higher scoring, should be a management agreement among all 5 owners.

### **Conservation Easements in perpetuity**

A conservation easement is a binding agreement and transfer of certain property rights between the land owner and another party, the “holder”. Conservation easements may restrict the type and amount of development that can take place on the land in perpetuity often extinguishing development rights completely. Easements are recorded on the deed and therefore “run with the land”, applying to both present and future owners. When committed in perpetuity conservation easements constitute a permanent form of land preservation and are desirable attributes for inclusion in every PBRs. When included they should be afforded the highest percentage of tax relief.

In most instances when a landowner has committed to placing a permanent conservation easement on the property, market value assessments are reduced by 90% under CUT.

### **Buffers**

Buffer points are included for the amount of extra buffer being offered by the landowner. For example, if a 150’ buffer has already been committed to under the riparian corridors feature of fish habitat, such that the landowner qualifies for enrollment, the question under this category is can another 50’, 100’, or 150’ more be provided. This category also applies to wetlands where additional buffers beyond the 50’ minimum are considered a highly desired necessity. This category allows a property to receive more tax reduction for further buffer commitment.

A minimum buffer width of 50’ is recommended for all wetlands enrolled in the core selection criteria to assure some measure of longevity for the system. Ideally, more rather than less buffer is desired to adequately protect wetland function. However, if additional

buffer is not available at the time of enrollment, it is possible that restoration of addition buffer might be encouraged to achieve improved protection over time.

**A Note on Wetland Buffers:** Critical to the long-term protection of any wetland is the presence of adequate buffers to protect resource functions. Wetland buffers are areas that surround a wetland and reduce adverse impacts from adjacent development and human activities to wetland functions and values. Buffers reduce wetland impacts by: moderating the effects of storm water runoff including stabilizing soil to prevent erosion; filtering suspended solids, nutrients, and harmful or toxic substances; and moderating water level fluctuations. Buffers also provide essential habitat for wetland-associated species for use in feeding, roosting, breeding, and rearing of young, and cover for safety, mobility, and thermal protection. Finally, buffers reduce the adverse impacts of human disturbance on wetland habitats including blocking noise and glare; reducing sedimentation and nutrient input; reducing direct human disturbance from dumped debris, cut vegetation, and trampling; and providing visual separation. Wetland buffers are essential for wetland protection.

“Appropriate buffer widths are based on several variables, including: existing wetland functions, values, and sensitivity to disturbance; buffer characteristics; land use impacts; and desired buffer functions. Those systems which are extremely sensitive or have important functions will require larger buffers to protect them from disturbances that may be of lesser threat to a different site. Where wetland systems are rare, irreplaceable (e.g., high quality estuarine wetlands, mature swamps, bogs), greater buffer widths will ensure a lower risk of disturbance and loss.” To determine the best scientific buffer width for protecting specific wetland functions refer to Wetlands Buffers: Use and Effectiveness, a WA Dept. of Ecology publication.

### **Restoration**

The inclusion of restoration criteria is intended to alert the reader to key opportunities for recovering the functions discussed in this report, by applying restoration in a PBRS context. Restoration credit provides an incentive to landowners with damaged resources to make the effort of expending funds and management time to restore their lands, for the tangible return of a property tax reduction.

The significance of this property tax incentive can not be overstated. When it comes right down to it, watershed recovery is largely dependent on willing landowners to do what is needed. Because restoration work is far more labor and finance intensive than simply preserving lands outright, some form of reward is desirable to get landowners working on recovery. The PBRS is one of the only tools available that can readily offer this incentive by reducing property tax liability.

How to go about crediting restoration under the PBRS becomes an interesting question to define. Few examples exist for how to do it. A local jurisdiction may decide to apply the

credits for restoration only after the recovery has been completed. But in many instances, full restoration may take a number of years. For example, the removal of dikes to restore intertidal wetlands communities on a formerly grazed wetland will have the hydrology on site immediately, but intertidal plants, benthic, and epibenthic communities may not predominate on site for several years. In that instance when does the local jurisdiction credit for the restoration? If credit is applied earlier, as is desirable and more encouraging for the landowner, a technically solid management and contingency plan should be part of the agreement, spelling out achievable goals of the restoration and action alternatives for addressing problems that may arise in achieving the goals.

In all likelihood, smaller projects than an intertidal restoration will be the focus of a private landowner's restoration action: such activities as revegetating a riparian corridor or opening up fish access to a stream. These activities are equally valuable in their own right, and much more straight-forward to achieve. For all restoration activities, the best available science should be applied, with the assistance of qualified technical professionals from agencies, local conservation districts, and/or consultants. Once restored, best management practices should guide the ongoing management of the land.

In all cases the re-vegetation of any area should use only native plant species: introducing no exotics or invasive varieties.

There are a broad range of potential restoration activities desirable to recover critical natural resource function on the landscape. Detailed guidance on how to conduct them all would require several volumes of information. Please refer to the bibliographic section for available restoration documents and information. Also, refer to the "Exploring Wetlands Stewardship" guide for information about the technical and financial assistance that is currently available for conducting restoration work. Also, a list of agency technical professionals is provided in Appendix C, Table 4.

## Special Management Conditions

Aside from the selection and bonus criteria used for making an enrollment determination, there are other considerations regarding management of the property relative to improving watershed conditions for increased functional performance. These management considerations can be incorporated in the "terms of enrollment"; in instances where the property has some desirable resource features but some lesser contributing problems as well. The areas discussed here are: exotic plant species, water quality improvements, restoration, and public access.

### Exotic and Invasive Plant species

[Note: please refer to the State Weed Board for lists of exotic and invasive plant species.] The best action to take for properties with noxious plant species is to disqualify them from enrollment unless the problem has been addressed by permanently removing the noxious plant population and restoring the site to native vegetation prior to enrollment.

For invasive species removing most or all of the population is advised prior to approving enrollment. Under this situation, completing the invasive plant removal and revegetation with native species would be a “management condition” of enrollment. A restoration plan would be drafted and included with the classification documents. Implementation of the recovery plan would be monitored by the open space enrollment staff. Exotic plants are often quite common, and although less desirable, are also less harmful as long as they are not rapidly reproducing and invasive. There is more latitude in how these are dealt with - provided a site is not predominantly exotics with little to no native vegetation – remembering that especially for habitat purposes, the goal is native vegetation.

### **Water Quality Improvements**

There are some opportunities within the context of farm/rural area enrollments to apply some management enhancements for improved water quality. One opportunity is to provide shading along exposed ditches where fish species may be present or high temperatures may affect downstream areas.

Any management actions that help prevent runoff are desirable, whether the property is a formerly productive farm or a suburban home or hobby farm. The best general advice to offer on these issues is for the open space planner reviewing the site to make note of management actions that could be improved. Discuss these with the owner within the context of the overall watershed protection goals of the program, and if-need-be include some corrective management conditions on the property enrollment. If the property is still actively farmed, a farm management plan would be a desirable condition (Department of Ecology water quality staff can assist with developing these). Always whenever livestock are present near a riparian corridor, the corridor should be fully fenced to prevent plant damage and shoreline erosion as a condition of enrollment.

Also note, forest management plans should be included as conditions of the property enrollment when they apply to an enrolling forest feature. Be aware that forest management plans can condition properties to remain in uncut status or apply alternative forms of harvest such as minor selective cutting, century-long rotations, and even eco-forestry where a forest is managed for its old-growth potential while utilizing understory vegetation in the low-impact alternatives market.

### **Restoration**

Lastly, when restoration is needed or has just been completed on a property receiving classification, either a restoration plan or a long-term management plan are necessary as a condition of enrollment. These are the assurances that the functional benefits agreed to are achieved and retained. Under the restoration option it is always necessary to condition the enrollment with one of these plans.

### **Public Access**

Public access, as it relates to natural resource features, should only be allowed in locations and at times when impact to sensitive species and resources can be avoided or minimized. Both the authorization for public access, when given by the landowner, and any terms or conditions on that access to protect natural features, such as seasons or times

of day for closure, should be a condition on the enrollment approval recorded with property classification records.

**Table 2: Criteria Sorted by Feature**

Selection Criteria (by Feature)	Score	Directly Associated Function <sup>*key</sup>				
		FH	WH	FA	WQ	WS
<b>Shorelines (+ lakes &amp; rivers)</b>						
Naturally vegetated with No shoreline armoring	3	x	x	x		
Known shoreline dependent species	2	x	x			
Near-shore shallow habitat elements	1	x	x			
In-stream habitat elements	1	x				
<b>Riparian Corridors</b>						
Vegetated riparian buffer for fish & filtration 150' (min. for fish)	3	x			x	
100'	2				x	
50'	1				x	
Vegetated riparian corridor for wildlife – 250'	3		x			
Corridor habitat qualities/elements	1	x	x			
Tree canopy for shade	2	x			x	
<b>Floodplains</b>						
Undeveloped floodplain	3			x		
Native riparian vegetation characteristics	1					
CMZs- undeveloped oxbows, channels, etc.	3			x		
<b>Uplands</b>						
Structurally diverse upland with connectivity	3		x			
General habitat elements	1		x			
Priority habitats	3		x			
<b>Wetlands</b>						
Wetlands within 100 feet of river channel	3	x		x		
Headwater wetlands	3			x		
Freshwater wetlands with no outflow	3			x		
Structurally diverse wetlands	3		x			
Rare/irreplaceable wetlands systems	3		x			
Wetlands with surficial geology & moderate permeability	3					x
slow permeability	2					x
Wetlands connected to spawning tribs.	3	x				
Estuarine or lower intertidal wetlands	3	x	x			

\*key  
 FH – fish habitat  
 WH – wildlife habitat  
 FA – Flood attenuation & river dynamic  
 WQ – water quality  
 WS – water supply

Connected oxbows & historic channels	3	x				
Filtration wetlands:						
Vegetated depressional	3				x	
Un-vegetated depressional	2				x	
Riparian flow-through	1				x	
<b>Vegetated Aquifer/Wellheads</b>						
Naturally vegetated Designated Wellhead with:						
6-12 month travel time	3					x
5 year travel time	2					x
10 year travel time	1					x
Naturally vegetated Recharge Area of 'high'	3					x
Naturally vegetated Sole Source Aquifer	2					x
<b>Forests</b>						
Naturally vegetated forest	3		x	x	x	x
Well stocked forest stand:						
>40 years	3			x		x
10-40 years	2			x		x
< 10 years	1			x		x
Species composition healthy	2		x			
Forested unstable slopes	1				x	
<b>Other</b>						
Threatened/endangered species	3	x	x			
Significant habitat elements	3		x			

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### **Water Quality**

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Slope Stabilization and Erosion Control Using Vegetation: A Manual of Practice for Coastal Property Owners. Publication #93-30. WA Department of Ecology, Olympia, WA. 1993

Vegetation Management: A Guide for Puget Sound Bluff Property Owners. Publication #93-31. WA Department of Ecology, Olympia, WA. 1993

### **Water Supply**

Cook, Kirk. 1997. Guidance Document for the Establishment of Critical Aquifer Recharge Area Ordinances, Publication #97-30. WA Dept. of Ecology. Olympia, WA

WA Department of Health:

Gardening in a Wellhead Protection Area (#331-006).

Inventory of Potential Sources of Ground Water Contamination in Washington's Wellhead Protection Areas (12/93).

Wellhead Protection Program Guidance document (#331-018). 1995.

Wellhead Protection Related Excerpts from Chapters 246-290 WAC (7/94).

Note: To receive Department of Health publications, email a request to the Washington State Drinking Water Program, call the Drinking Water Program at 1-800-521-0323 (within Washington State only), or send a written request with your name, address and telephone number to:

Division of Drinking Water  
Building 3, Airdustrial Park, P.O. Box 47822  
Olympia, WA 98504-7822

## Appendix C – PBRs Assistance

**Table 3 – Local Government PBRs Administrators**

County	PBRs Status	Planning Administrator	Phone
Chelan	Yes	Michael Kaputa	(509) 664-5475
Clallam	Yes	Mel Sund	(360) 417-2207
Cowlitz	Yes	Marjorie Pitcher	(360) 577-3052 (ext. 2661)
Island	Yes	Phil Bakke	(360) 321-5111 (ext. 416)
Jefferson	Yes	Jerry Smith	(360) 379-4450
King	Yes	<b>Ted Sullivan*</b>	<b>(206) 205-5170</b>
Kitsap	Yes	Karanne Gonzalez	(360) 337-4993
Kittitas	Developing	David Taylor	(509) 962-7696
Lewis	Yes	Pat Woody Dale Brotherton	(360) 740-1400 (360) 740-1271
Okanogan	Yes	Shawn Hintz	(509) 422-7160
Pierce	Developing	Katherine Rose	(253) 798-3181
San Juan	Yes	Jeff Otis	(360) 378-2354
Spokane	Yes	John Nunnery	(509) 477-3675 (ext. 205)
Thurston	Yes	Jackie Kettman	(360) 754-4001
Whatcom	Yes	Elizabeth Olson	(360) 676-6756 (ext. 50269)
Yakima	Yes	Todd Stowell	(509) 574-2230

\* Ted Sullivan has indicated he is available to assist other jurisdictions with questions regarding development and implementation of Public Benefit Rating Systems.

**Table 4 – Agency Contacts for Help with Determinations**

<b>Agency</b>	<b>Subject Assistance</b>	<b>Contact</b>	<b>Phone</b>
<b>WA Dept. of Revenue</b> 6004 Capitol Blvd. P.O. Box 47471 Olympia, WA 98504-7471	Current Use Property Tax Implementation	Pete Levine	(360) 586-2902
	Current Use Policy Issues	Kim Qually	(360) 664-0086
<b>WA Dept. of Fish &amp; Wildlife</b> 600 Capitol Way No. Olympia, WA 98501-1091	Priority Habitats & Species data		(360) 902-2543
	Fish & Wildlife Habitat Assessment	Kevin Robinette (Region 1- Spokane)	(509) 625-5545
	Katherine March (Region 2- Ephrata)	(509) 754-4624	
	Mark Teske (Region 3- Yakima)	(509) 457-9322	
	Mark Goldsmith (Region 4 – Mill Creek)	(425) 379-2308	
	David Price (Region 5- Vancouver)	(360) 906-6729	
Steve Keller (Region 6 – Montesano)	(360) 249-1223		



<b>Agency</b>	<b>Subject Assistance</b>	<b>Contact</b>	<b>Phone</b>
<b>WA Dept. of Ecology</b> 300 Desmond Dr. P.O. box 47690 Olympia, WA 98504-7690	Floodplains	Tim D'acci	(360) 407-6796
	River Dynamics & Hydrology	Al Wald	(360) 407-6798
	Wetland Restoration	Richard Gersib	(360) 407-7259
	Wetland Functions	Tom Hruby	(360) 407-7274
	Water Quality	Nora Jewett	(360) 407-6479
	Field calls: (Ask for technical person by resource function)	Central Region – Yakima	(509) 575-2490
		Eastern Region – Spokane	(509) 456-2926
Northwest Region – Bellevue		(425) 649-7000	
Southwest Region – Olympia	(360) 407-6300		
<b>WA Dept. of Natural Resources</b> 1111 Washington St SE P.O. Box 47001 Olympia, WA 98504-7001	Forest Stewardship Plans	Steve Gibbs	(360) 902-1706
	Natural Heritage Data	Sandy Moody	(360) 902-1667



# Appendix D – Sample Resource Checklist

## Checklist Purpose

This resource checklist is intended to help landowners and planners determine if a property might qualify under a watershed-focused Public Benefit Rating System (PBRs) for open space enrollment. This is a rough outline of the types of questions that must be answered to determine whether the function-based criteria (outlined in Part II) have been met. Recognize that a jurisdiction applying only some of the criteria would need to select the appropriate items for their checklist, disregarding those they have not included. Some terms used to describe the criteria may require further explanation for better landowner understanding; refer to the resource explanations of how to determine presence for more information. Also, be aware that this checklist does not include questions about other features that will likely be included in most PBRs programs, such as historic sites, scenic vistas, etc. These would also need to be included in any final checksheet used by the jurisdiction to query the applicant.

## The PBRs Property

Usually an entire parcel is not eligible for enrollment in Open Space Current Use. If any development has occurred on the land, such as the placement of a residence, the area including the build structures must be excluded. This is usually a minimum of ½ to 1 acre depending on the jurisdiction’s guidelines. If the property is undeveloped, sometimes a landowner will choose to retain a portion of the land for a future homesite.

For these reasons, most landowners do not enroll all of their property in the program; usually a portion of the land is kept out due to the homesite, or an additional area may be excluded for future additions to the family home. For this reason, these questions refer to the “PBRs property” which is that portion of the property that a landowner would want to (or would be eligible to) enroll in the program. Therefore, the items in the checklist must be found on the PBRs property in order for it to qualify for the program.

## Question Response

To answer this questionnaire, start with question 1 (Riparian Corridors) and answer each question in turn, marking the appropriate line for yes or no or checking of items that are present. Each question to which the landowner can answer “yes” gets a score, as listed in the far right-hand side column. Circle each score collected, and total the score at the end. There are some criteria that are required to be in place if the property is to be given any scores for that resource. For example, in order to get any points for providing a riparian buffer, the buffer must be 150 feet wide (for fish) or 250 feet (for wildlife), as measured from the ordinary high water mark (OHWM). If the answer to that question is “no”, then there is no need to answer question 1a, as even “yes” answers to that series will not receive scores, in the absence of the eligible riparian buffer width.. Those that answer “no” to question 1 are, therefore, instructed to skip to question 2. This is the format throughout the questionnaire.

	<b>PBRS Property Questions</b>	<b>Score*</b>
	<b>Riparian Corridors</b> (note: applies to the edge of any fresh water body)	
1.	<p>Does the PBRS property include a riparian corridor with native vegetation containing multiple canopy layers?  <input type="checkbox"/> No (go to #2)  <input type="checkbox"/> Yes , if yes does it meet one of the following conditions (check all that apply):</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> less than 150 ft. wide (go to #2)</li> <li><input type="checkbox"/> minimum of 150' wide AND is connected to fish bearing waters (answer 1a)</li> <li><input type="checkbox"/> minimum of 250' wide (answer 1b)</li> </ul> <p>1a. Does the 150' corridor contain any of the following properties? (check all that apply):</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> absence of exotic plants</li> <li><input type="checkbox"/> overhanging vegetation</li> <li><input type="checkbox"/> plant species diversity (similar to nearby undisturbed systems)</li> <li><input type="checkbox"/> naturally stable streambank</li> <li><input type="checkbox"/> side channel or off channel habitat</li> <li><input type="checkbox"/> connection to other undeveloped riparian or upland areas</li> </ul> <p>1b. Does the 250' corridor contain any of the following properties? (check all that apply):</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> absence of exotic plants</li> <li><input type="checkbox"/> plant species diversity (similar to nearby undisturbed systems)</li> <li><input type="checkbox"/> snags &amp; downed wood</li> <li><input type="checkbox"/> edge complexity from presence of ecotones</li> <li><input type="checkbox"/> connection to other undeveloped riparian or upland areas</li> </ul>	<p>3 FH</p> <p>3 WH</p> <p>FH</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>WH</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p>
2.	<p>Does the PBRS property contain a vegetated ground-layer along the water's edge as a riparian buffer with a width from the ordinary high water mark of (check only one):</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 150 ft. (answer 2a)</li> <li><input type="checkbox"/> 100 ft. (answer 2a)</li> <li><input type="checkbox"/> 50 ft. (answer 2a)</li> <li><input type="checkbox"/> no vegetation or less than 50ft. (go to #3)</li> </ul> <p>2a. Does this vegetated ground-layer for riparian buffer contain any of the following properties?:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> a tree canopy present to provide shade</li> <li><input type="checkbox"/> multiple vegetated canopy layers (an upper, lower, and ground cover)</li> </ul>	<p>WQ</p> <p>3</p> <p>2</p> <p>1</p> <p>2</p> <p>1</p>

\* Function codes are provided to link questions to the Function Matrices (FA- Flood Attenuation, FH – Fish Habitat, WH – Wildlife Habitat, WQ – Water Quality, & WS – Water Supply)

	<b>Rivers and Streams</b>	
3.	<p>Does the PBRs property include a river or stream edge with no shoreline armoring?  <input type="checkbox"/> No (go to #4)  <input type="checkbox"/> Yes (answer 3a)</p> <p>3a. Does the river or stream edge contain any of the following? (check all that apply):</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> no channel dredging or channelization</li> <li><input type="checkbox"/> large woody debris</li> <li><input type="checkbox"/> undercut banks</li> <li><input type="checkbox"/> pools &amp; riffles (pool 1 m. deep)</li> <li><input type="checkbox"/> side-channel or off-channel refuge</li> <li><input type="checkbox"/> spawning area with well-graded clean gravel</li> </ul>	<p>FH</p> <p>3</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p>
	<b>Marine and Lake Shorelines</b>	
4.	<p>Does the PBRs property include a natively vegetated shoreline with no armoring, docks, piers, or dune scalping/lowing?  <input type="checkbox"/> No (go to #5)  <input type="checkbox"/> Yes (answer 4a for lake shoreline or 4b for marine shoreline)</p> <p>4a. Does the lake edge contain any of the following? (check all that apply):</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> in-water woody debris</li> <li><input type="checkbox"/> lake fringe wetlands</li> </ul> <p>4b. Does the marine edge contain any of the following? (check all that apply):</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> known habitat for shoreline dependent fish species (baitfish, kokanee, sockeye, etc.)</li> <li><input type="checkbox"/> near-shore shallow water with spawning substrate on beaches</li> <li><input type="checkbox"/> near-shore shallow water with intertidal vegetation such as eelgrass</li> <li><input type="checkbox"/> known habitat for shoreline dependent wildlife species (otters, shorebirds)</li> </ul>	<p>F/WH</p> <p>3</p> <p>1 FH</p> <p>1 FH</p> <p>1 FH</p> <p>1 FH</p> <p>1 FH</p> <p>1 WH</p>
	<b>Floodplains</b>	
5.	<p>Does the PBRs property include undeveloped floodplain with no flood control structures?  <input type="checkbox"/> No (go to #6)  <input type="checkbox"/> Yes (answer 5a)</p> <p>5a. Does the PBRs property include native riparian corridor vegetation that: (check all that apply):</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> is not manicured or landscaped</li> </ul>	<p>FA</p> <p>3</p> <p>1</p>

	_____ has multiple canopy layers (over story, under story & groundcover)	1
6.	Does the PBRS property contain an undeveloped and naturally vegetated Channel Migration Zone, potentially including oxbows, former historic channels, wall-based channels, wetlands, etc. ? _____ No _____ Yes	FA  3
	<b>Forests</b>	
7.	Does the PBRS property include a naturally vegetated forest that has a Forest Stewardship Plan? _____ No (go to #8) _____ Yes (answer 7a, 7b, & 7c)	3
	7a. Is the forest species composition suitable for long-term forest health? _____ No (go to 7b) _____ Yes (go to 7b)	F/WH 2
	7b. If the forest is adequately stocked, what is the age of the stand? (check only one answer and go to 7c): _____ >40 years old _____ 10-40 years old _____ < 10 years old _____ not adequately stocked	FA 3 2 1
	7c. If the forest contains unstable slopes, are they adequately stocked with forest trees? _____ No (go to #8) _____ Yes (go to #8) _____ No unstable slopes (go to #8)	WQ/ WS  1
	<b>Wetlands</b>	
8.	Does the PBRS property contain wetlands of any kind? _____ No (go to #9) _____ Yes (answer 8a,b,c,d)	
	8a. Does the wetland quality as any of the following? (check all that apply): _____ a headwaters area just downstream of a spawning tributary _____ within a floodplain and accessible to the river or stream _____ part of a lower intertidal river reach or estuary _____ connected oxbow or historic channel _____ estuarine wetland _____ undiked freshwater tidal wetland	3 FH 3 FH 3 FH 3 FH 3 WH 3 WH

	<p> <input type="checkbox"/> mature forested wetland  <input type="checkbox"/> bog or fen wetland  <input type="checkbox"/> located within 100' of a river channel or within channel migration zone  <input type="checkbox"/> in the smallest stream class or headwaters area  <input type="checkbox"/> is a freshwater wetland with no surface water outflow </p> <p> 8b. (In Western WA): The wetland is a structurally diverse system that scores at 22 points (<i>or alternatively 30 points</i>) or higher under the WA Wetlands Rating? OR (In Eastern WA): The wetland is not a roadside, irrigation or drainage ditch?  <input type="checkbox"/> No  <input type="checkbox"/> Yes </p> <p> 8c. Does the wetland receive runoff from a developed watershed under agricultural, residential, urban, or timber uses that is upgradient from it?  <input type="checkbox"/> No (go to #8d)  <input type="checkbox"/> Yes (answer 8c-1) </p> <p> 8c-1. Which description best describes the wetland receiving the runoff? (check only one then go to 8d):  <input type="checkbox"/> vegetated freshwater depression with or without surface water outflow  <input type="checkbox"/> un-vegetated freshwater depression with surface water outflow  <input type="checkbox"/> riverine flow-through system  <input type="checkbox"/> none-of-the-above </p> <p> 8d. Does the wetland have a surficial geology of alluvium or recessional outwash?  <input type="checkbox"/> No (go to #9)  <input type="checkbox"/> Yes (answer 8d-1) </p> <p> 8d-1 Does the wetland have an upper/lower soil permeability of (check only one and go on to #9):  <input type="checkbox"/> moderate  <input type="checkbox"/> slow  <input type="checkbox"/> other </p>	<p>3 WH 3 WH 3 FA 3 FA 3 FA</p> <p>WH</p> <p>3</p> <p>WQ</p> <p>3 2 1</p> <p>WS</p> <p>3 2</p>
	<p><b>Upland Habitat</b></p>	
<p>9.</p>	<p>Does the PBRs property contain structurally diverse upland habitat containing at least 2 of the following native plant community elements of: forest, shrub/scrub, forbs/grasses, ground lichen/mosses AND retains a connection to other undeveloped riparian or upland areas?  <input type="checkbox"/> No (skip to #10)  <input type="checkbox"/> Yes (answer 9a)</p> <p>9a. Does the PBRs property contain any of the following habitat elements? (check all that apply and go on to #10):</p>	<p>WH</p> <p>3</p>

	<input type="checkbox"/> an absence of exotic plants <input type="checkbox"/> snags &/or downed wood <input type="checkbox"/> presence of different age classes within the plant community elements <input type="checkbox"/> diversity of plant species <input type="checkbox"/> year-round water on the property <input type="checkbox"/> presence of cliffs or terraces	1 1 1 1 1 1
10	Does the PBRs property contain any of the following Priority Habitats? (check all that apply and go on to #11): <input type="checkbox"/> oak hardwood stand <input type="checkbox"/> old growth mature forest (60+ years) <input type="checkbox"/> aspen stands <input type="checkbox"/> juniper savannas <input type="checkbox"/> prairies & steppes <input type="checkbox"/> shrub steppes <input type="checkbox"/> urban natural open space	3 3 3 3 3 3 3
	<b>Significant Habitats</b>	
11	Is there a threatened or endangered species present on the PBRs property or is the PBRs property located within a “critical habitat area” for a threatened or endangered species? <input type="checkbox"/> No <input type="checkbox"/> Yes	F/WH 3
12	Does the PBRs property contain any of the following significant habitat elements? (check all that apply & continue with #13): <input type="checkbox"/> heron rookery <input type="checkbox"/> bald eagle nesting or roosting area <input type="checkbox"/> documented waterfowl or shorebird concentration area <input type="checkbox"/> Important Bird Area (IBA) <input type="checkbox"/> high quality native plant community	WH 3 3 3 3 3
	<b>Aquifer/Wellhead Areas</b>	
13	Is the PBRs property BOTH covered with natural vegetation AND does it fall within a designated wellhead protection area? <input type="checkbox"/> No (go to #14) <input type="checkbox"/> Yes (answer 13a)  13a. What is the travel time zone the property falls within? (check only one & continue with #14): <input type="checkbox"/> 6-12 months <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	WS     3 2 1



14	<p>Is the PBRs property a naturally vegetated area that falls within a county designated critical aquifer recharge area with “high recharge” status?</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes</p>	<p>WS</p> <p>3</p>
15	<p>Is the PBRs property a naturally vegetated area that is designated as a sole source aquifer?</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes</p>	<p>WS</p> <p>2</p>
	<b>General Bonus Criteria</b>	
16	<p>Does the PBRs property have a natural resource conservation easement that has been placed in perpetuity?</p> <p><input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes</p>	<p>3</p>
17	<p>Is the PBRs property part of a multi-owner conservation and management agreement with landowners of adjoining properties for the protection of the natural resource features (wetland, shoreline, lakeshore, etc.) on the land?</p> <p><input type="checkbox"/> No (go to #18)</p> <p><input type="checkbox"/> Yes (answer 17a)</p> <p>17a. Is the landowner agreement for the entire feature or part of the feature?</p> <p><input type="checkbox"/> entire feature</p> <p><input type="checkbox"/> part of the feature</p>	<p>3</p> <p>2</p>
18	<p>Is there additional naturally vegetated buffer that can be offered on the PBRs property (above the 50’ minimum required on enrolling wetlands or the 150’ fish riparian corridor and 250’ wildlife riparian corridor eligibility categories)? (check only one):</p> <p><input type="checkbox"/> 150’ or greater</p> <p><input type="checkbox"/> 100’ – 150’</p> <p><input type="checkbox"/> 50 – 100’</p> <p><input type="checkbox"/> none</p>	<p>3</p> <p>2</p> <p>1</p>
	<b>Restoration Bonus Criteria</b> (must be accompanied by a restoration & management plan)	
19	<p>Is any restoration underway or planned for the PBRs property? (check all that apply):</p> <p><input type="checkbox"/> replant of native vegetation to restore a system and/or its buffer/edge (wetland, riparian corridor, shoreline, forest, water recharge area, etc.)</p> <p><input type="checkbox"/> returning a wetland system to full function (returning hydrology, eliminating monotypic or exotic species, etc.)</p>	<p>3</p> <p>3</p>

	_____ removing structures in the floodplain or along shorelines	3
	_____ reconnecting oxbows or former stream or river channels	3
	_____ restoring forest composition to healthy stands and species diversity	2
	_____ restore habitat elements (snags, downed wood, plant diversity)	2
	_____ open stream access to fish	2
	_____ repair roads (correct drainage & erosion problems, rehabilitate, etc.)	1
	_____ stabilize critically eroded areas and seed or plant	1

# Appendix E – Sample of PBRs Use: King County

*[NOTE: King County’s CUT program does not apply the full function-based watershed criteria discussed in this document. Rather is a good example of a local program that has begun to address watershed related issues within their CUT open space program and has done an excellent job making the program effective.]*

## King County Public Benefit Rating System: Requirements and Resources of the Current Use Assessment Valuation Program

### SECTION I. PROGRAM REQUIREMENTS

#### 1. Open Space Resources.

Each property applying for open space classification shall be evaluated for the presence of each open space resource on the county's listing of high, medium and low open space resource priorities. Those resources and eligibility to receive credit are defined in the next section of this report. For each high priority resource of the property, the property shall be awarded 5 points; for each medium priority resource 3 points; and for each low priority resource 1 point.

A property may receive a maximum of 30 points through the open space resource categories. In addition to these resources, a property may obtain points from four “Bonus Point” categories by complying with requirements beyond those necessary to receive points in a high, medium, or low category. Up to 22 additional points can be awarded through these bonus categories.

#### 2. Open Space Resource Verification.

Pursuant to state law, the presence or occurrence of an eligible open space resource must be verified by referral to a specified source in the open space resource listing or by reference to a mapping the county or other recognized authority has prepared which identify those lands which contain open space resources. Alternatively, the existence of the resource may be verified by an expert in the particular resource being reviewed.

The county has adopted a general policy of using the best available source, supplemented by the ability of the property owner to verify a resource through a recognized expert.

Rule of reason: For each priority resource, the county will determine the appropriate land area that receives credit for a particular priority resource and accompanying tax reduction. For the purpose of tracking assessed value on open space and non-open space portions of the property, the Assessor may create a new tax lot for a portion of the property. This does not require a formal tax lot split.

#### 3. Public Access.

Access to the open space lands by the general public should be encouraged for all lands in the county unless it is determined that such access would damage or endanger the resource. Property owners who allow access to their property should be afforded consideration in the level of tax reduction they receive, depending on the level of access allowed and the conditions under which access is permitted.

Property shall be awarded additional points to the extent that such public access is available to the open space site, to a maximum of 5 points. The applicant shall specify the type of access which will be available in the application. Access points shall be awarded on the following scale:

- a. Unlimited public access (5 points): Year-round access to the general public is allowed without special arrangements with the property owner.
- b. Limited public access - Due to resource sensitivity (5 points): Access may be reasonably limited due to the sensitive nature of the resource, with access provided only to appropriate user groups. The access allowed must generally be for an educational, scientific or research purpose and available through special arrangement with the owner.
- c. Limited public access (3 points): (1) Access to the public is allowed, with or without special arrangements with the property owner, for any period less than the full year. (2)–Access is available to any and all of the general public during any period of the year upon special arrangement with the owner or upon the payment of a use fee which may not exceed twice the cost for members of the organization utilizing the facility.
- d. No public access (0 points): (1) No public access is allowed. (2) Members Only Access: Access is restricted at all times to members of the organization utilizing the facility.
- e. Signage: For property allowing public access and receiving access points under 2a. through 2c. above, the property owner shall be required to furnish and maintain, at his/her own expense, signage according to County specifications which designates the property as part of the Open Space Taxation Program and states the conditions of access.
- f. Accessibility: For property allowing access and being considered for receiving access points under 2a. through 2c. above, no points will be allowed if the property is not reasonably accessible. The property owner may, at their own expense and without any deduction in the number of access points awarded, limit access to the property to a reasonable number of locations through the use of fences, berms or other access barriers. Such physical barriers must be approved by the appropriate agency in advance, so as not to defeat the purpose of a resource

category - for instance restricting wildlife in a wildlife corridor or construction of a visually incompatible fence near an historic resource.

- g. Limitations on access and use: Reasonable limitations on access and use of a property may be imposed without a deduction in the number of access points a property receives. For example, prohibiting access before a reasonable time in the morning and after a reasonable time in the evening, prohibiting the use of any motorized or wheeled vehicles (except those required by disabled persons), prohibiting the use of the property for any kind of social gathering, prohibiting the consumption of any alcoholic beverages on the property, prohibiting the use of the property for picnics, etc. are all examples of reasonable limitations on the use of the property by the public which would likely not result in a reduction of points received by the property in the public access category. All such restrictions must be included in such documents or easements which establish the property as eligible for current use taxation.

#### **4. Conservation and Historic Preservation Easements.**

The granting of a conservation or historic preservation easement permanently protecting the resources of an otherwise eligible property provides the public with additional value in the form of greater permanence of the resource. NOTE: Property with at least one high priority resource, which allows unlimited public access or limited public access (due to resource sensitivity), and which provides a qualifying easement shall be automatically eligible for the maximum tax reduction provided in the PBRs. To be eligible under the proposed PBRs easements must meet minimum standards. Jurisdictions will not be precluded from requiring additional conservation easement provisions that are more restrictive than the provisions required under the PBRs program.

An owner of property seeking open space classification may receive, in addition to points received for resources, an additional 5 points if the owner conveys to the County or to an entity acceptable to the County such as the State of Washington, a municipality in which the property is located, or a qualifying conservation organization; a conservation or historic easement in a form and with such conditions as are acceptable to the county and local jurisdiction.

#### **5. Ineligible Lands.**

The following properties shall not be eligible for open space classification:

- a. Properties which do not contain an open space resource identified as either high, medium, or low.
- b. Open space areas required by zoning or other land use regulation, unless the owner provided additional public benefit, such as additional public access, resource restoration, or a native growth protection easement. Ineligible lands include open space areas dedicated under zoning or subdivision conditions or which are used to achieve maximum development potential under zoning.

- c. Buffer areas required as part of a development, subdivision, zoning, or other regulatory requirement are not eligible as a surface water quality buffer area priority resource, unless other conditions beyond those required by regulation are imposed.

## **6. Participation Period.**

Once a property is accepted as open space by this program, it remains in the program until:

- a. The property is withdrawn or removed from open space classification, which the owner may request at any time (Certain financial obligation must be met as described below).
- b. The use of the property is changed.
- c. The property is sold and a new owner has not reapplied by filing a notice of continuance.

In all cases, the landowner will have to pay the difference between the amount of tax paid as open space and the amount that would have been paid if the land were not in open space, plus interest, for up to a maximum of seven (7) years before removal from the program. In addition, if the land has been in the program less than ten (10) years, or the owner fails to give a two year notice of withdrawal, a penalty of 20% of the above amount is charged.

## **7. Other Conditions.**

Pursuant to state law, the county's acceptance of properties in the open space assessment classification may be based on certain conditions being met, including the granting of easements. As a part of the determination of continuance, the granting authority will specify such additional conditions as may be required. At a minimum, the conditions of acceptance will include limits on the number, types and locations of structures which may be built on the property; the level of access to the property (consistent with any access points received by the property); the allowance of subdivisions; etc.

## **8. Management of the Open Space Resource.**

Management of the open space resource by the property owner shall be a condition for acceptance in the tax reduction program. The property owner must maintain the open space resource(s) for which the tax deferral was allowed in the same or better condition than at the time the deferral was granted. Any practices engaged in by the property owner which reduce the open space value is prohibited, e.g. the cutting of trees, clearing of brush, etc., unless such practices are required for public safety and the county, as a condition of enrollment into the program, requires that the owner restore any property whose open space resources are degraded except as a result of natural causes (flood, storm, etc.). The tax deferral is granted to a property owner who has agreed to maintain the eligible property. The Assessor has the power to remove from current use classification any property in the event it does not meet the criteria under which deferral was originally granted.

## **9. Monitoring For Compliance.**

The county may, on the same notice required for assessment purposes, monitor the property to determine the continuing compliance with the conditions under which open space classification was granted and the current uses of the property. Failure of the owner to meet the conditions of the approval or to maintain the uses of the property which were the basis for the original approval shall be grounds for the county to re-evaluate the property under PBRS. If the re-evaluation shows the property is no longer eligible or that the overall rating would result in a current use assessment at a higher percentage of market value than was originally approved, the county shall take action to remove the current use classification and to determine the amount of deferred taxes, interest, and penalty which the owner owes.

## **10. Contiguous Parcels.**

Contiguous parcels of land with the same open space resources, regardless of whether under the same ownership or not, shall be eligible for treatment as a single application. "Contiguous parcels" are defined as parcels abutting each other without any significant natural or manmade barrier separating them, or parcels abutting a publicly owned open space but not necessarily abutting each other without any significant natural or manmade barriers separating the publicly owned open space and the parcels seeking open space classification or each other in the event that they do abut. Such treatment shall include the requirement to pay only a single application fee, the requirement that the total area of all parcels combined must equal or exceed any required minimum (rather than each parcel being required to meet such minimums). Parcels accepted into open space classification under this contiguous parcels provision must all be accepted under identical terms and conditions of access, easements, and restrictions. Individual parcels may be withdrawn from open space classification consistent with all applicable rules and regulations without affecting the continued eligibility of all other parcels accepted under the same application, provided that the combined area of the parcels remaining in open space classification must equal or exceed any minimum size requirement established in the public benefit rating system and that access to the remaining parcels is not affected.

To provide an incentive for property owners to combine contiguous parcels to form larger areas eligible for open space classification, a bonus of 2 points shall be awarded in the PBRS to any application of contiguous parcels which meets the following conditions:

- a. The application must include two or more parcels under different ownership.
- b. The parcels included in the application must have the same open space resources.
- c. The owners of parcels included in the application must agree to identical terms and conditions for inclusion in the program.

## **11. Summary of Open Space Public Benefit Rating System.**

- |  |   |
|--|---|
| a. Open Space Resource Priorities              | Maximum Points                          |
| High Priority                                  | 5 points each                           |
| Medium Priority                                | 3 points each                           |
| Low Priority                                   | 1 point each                            |
| Resource Priorities                            | 30 points from no more than 6 resources |
| b. Bonus Categories                            | Up to 22 points including:              |
| 1) Public Access                               |   |
| Unlimited Public Access                        | 5 points                                |
| Limited Public Access -                        |   |
| Sensitive Area (due to resource sensitivity)   | 5 points                                |
| Limited Public Access                          | 3 points                                |
| No Public Access                               | 0 points                                |
| Members Only Access                            | 0 points                                |
| 2) Conservation/Historic Preservation Easement | 5 points                                |

**Super Bonus Category:**

Property with at least one high priority resource, which allows unlimited public access or limited public access - sensitive area (due to resource sensitivity) and which provides an easement shall be automatically eligible for the maximum tax reduction provided in the PBRs.

Public Benefit Rating TOTAL: 52 maximum points

**12. Current Use Assessment Valuation Schedule.**

Property enrolled in the current use assessment program for open space has the assessed value of the land set at the "current use" value rather than the market value based on highest and best use of the land. This current use value will be expressed as a percentage of market value based on the public benefit rating of the property.

<u>Public Benefit Rating</u>	<u>Tax Reduction</u>	<u>Current Use Value</u>
0 - 4 points	0 %	100 % of Market Value
5 - 10 points	50 %	50 % of Market Value
11 - 15 points	60 %	40 % of Market Value
16 - 20 points	70 %	30 % of Market Value
21 - 34 points	80 %	20 % of Market Value
35 - 52 points	90 %	10 % of Market Value

Buildings and other improvements to the land shall continue to be assessed at market value.



## **SECTION II. KING COUNTY PUBLIC BENEFIT RATING SYSTEM RESOURCES**

To be deemed eligible for acceptance in the open space classification by the granting authority, property must contain one or more open space resources. These resources are divided into high, medium and low priorities, reflecting the priority of the resources in the open space plan. Property with resources in the "High Priority" category will receive 5 points, "Medium Priority" category 3 points and "Low Priority" category 1 point for each verifiable resource in the county's Public Benefit Rating System. Property may receive points in up to six separate categories. In addition, property may receive points from five "Bonus Categories."

### **List of High, Medium, and Low Priority Resources**

(Note: Listings within each priority resource do not imply rank or importance - all are of equal "credit".)

#### **High Priority Resource - 5 points**

- A. Active or passive recreation area.
- B. Property under option for purchase as park, recreation, open space land or capital improvement project mitigation site.
- C. Aquifer protection area.
- D. Shoreline: "Conservancy" environment
- E. Scenic resource, viewpoint or view corridor.
- F. Surface water quality buffer area.
- G. Open space close to urban or growth area.
- H. Significant plant, wildlife, or salmonid habitat area.
- I. Significant aquatic ecosystem.
- J. Historic landmark/archaeological site: Designated site.
- K. Trail linkage.
- L. Urban or growth area open space.
- M. Farm and agricultural conservation land.
- N. Forest stewardship land.

#### **Medium Priority Resources - 3 points**

- A. Public land or right-of-way buffer.
- B. Special native plants site.
- C. Shoreline: "Natural" environment.
- D. Geological feature.
- E. Historic landmark/archaeological site: Eligible site.
- F. Buffer to designated historic landmark/archaeological site.
- G. Special animal site.

### **Low Priority Resource - 1 point**

- A. Buffer to eligible historic landmark/archaeological site.

### **Bonus Categories**

Property qualifying in the specified High, Medium, or Low priority category above may receive the indicated number of bonus points if additional qualification are met.

- A. Resource restoration. (5 points)
- B. Bonus surface water quality buffer. (3 or 5 points)
- C. Contiguous parcels under separate ownership. (2 points)
- D. Conservation or Historic Preservation Easement in perpetuity.. (5 points)

#### **Public Access**

- Unlimited Access. (5 points)
- Limited Access - Due to resource sensitivity. (5 points)
- Limited Access (seasonal and/or upon special arrangements). (3 points)
- None or members only. (0 points)

Note: Public Access bonus points are granted to categories that require public access.

### **Super Bonus Category**

Property with at least one high priority resource AND which allows unlimited public access or limited public access (due to resource sensitivity) AND which provides a qualifying conservation, historic preservation or trail easement in perpetuity would be automatically eligible for the maximum tax reduction provided in the PBRs.

## **Description of Priority Resources - Definitions, Sources of Data, and Eligibility Criteria**

### **HIGH PRIORITY RESOURCES - 5 Points**

#### **A. Active or passive recreation area.**

Definition: Property which is currently devoted to providing active or passive non-motorized recreation use or which complements or substitutes for government facilities. The facility must be open to the public, charging a use fee no higher than the fee charged by a like public facility, or the facility must provide recreation or other services to youth, senior citizens, the handicapped or similar group.

Possible Sources: Determination by King County Parks Division or by appropriate parks department of incorporated cities or towns.

Eligibility: An eligible site is that identified by an appropriate parks department as meeting the definition of active or passive recreation areas.

Examples: 1) Ballfields on private property that are open to the public.  
2) Equestrian, pedestrian or bicycle trail loop system contained within a property, as opposed to a linkage of a single trail across a property (this is covered under the "trail linkage" high priority resource).  
3) Golf course open to public with fees not comparable to local public golf courses and which adheres to Best Management Practices.  
4) A community garden in Seattle.  
5) An arboretum with public access.

Ineligible: 1) Trail linkage properties: These are covered under a separate category.  
2) "Miniature golf" facilities.  
3) Recreational vehicle park portions of sites and related improvements to the land.  
4) Golf course which does not adhere to Best Management Practices and charges a fee not comparable to public golf courses.

## **B. Property under option for purchase as future park, recreation, open space land or Capital Improvement Project mitigation site.**

Definition: Property which has been identified as land which the state, county, any city or town within the county, school district, other municipal corporation or other qualified not-for-profit land conservation organization may, at a future date, want to purchase as park, recreation, or other open space land, or land to be purchased as a mitigation site for a Capital Improvement Project (CIP). Eligible CIP mitigation sites would include parcels that a government agency has identified for constructing a stream or wetland mitigation project for the unavoidable impacts of construction of capital improvements such as roads or regional retention/detention ponds. Eligibility for this classification shall be subject to the securing and recording of an option between the owner and the local jurisdiction stipulating that the owner will sell to the local jurisdiction for a specified price which shall be no greater than the fair market value at the time the land is classified as open space.

Possible Sources: Recorded options between the owner and the appropriate local jurisdiction.

**Eligibility:** An eligible site includes only that with a recorded option between the local jurisdiction and the landowner and an ordinance by the local jurisdiction approving the option filed with the current use taxation application to the county and where the primary use of the property will be for park, recreation, open space or a CIP mitigation site. Such an option must be recorded with the County Records and Elections Division within four months of the granting of a tax reduction for the property.

The statement of intention to acquire a property from the local jurisdiction must also state that the property under option contains less than 15% non-permeable surfaces, with the exception of trail corridors. Penalties for withdrawing from the program under this resource will be excused when the option is exercised or expires. If a local jurisdiction fails to exercise or extend an option, the property owner will not be subject to a penalty and may reapply to the program to determine if the property is otherwise eligible. If an option is extended, the tax benefit is automatically extended for the period of the option; the PBRS coordinator and the Assessor must be notified of any option extension by the property owner, through provision of a copy of the extended option.

**Examples:**

- 1) Site of future active or passive recreation park.
- 2) Other open space to be purchased by public agency.
- 3) Trail corridor to be purchased in fee (not a partial fee easement) by a public agency.

**Ineligible:**

- 1) Land designated for future use as school playgrounds.
- 2) Site that would be intensively developed, including future physical improvements/structures over greater than 15% of the site.

### **C. Aquifer protection area.**

**Definition:**

- 1) Zones 1 and 2 of a Wellhead Protection Area; and
- 2) Area of high infiltration potential.

**Possible Sources:**

- 1) Zones 1 and 2 of a Wellhead Protection Area as mapped by a public water system purveyor and approved by the Washington Department of Health (DOH) and/or the Seattle-King County Health Department (SKCHD) as part of a Wellhead Protection Program.
- 2) Lands meeting the criteria for areas of high infiltration potential adopted by SKCHD; Lands located within a mapped area of high infiltration potential prepared by SKCHD.

**Eligibility:** An eligible site is that meeting the above definition. Certain uses may be restricted due to the sensitive nature and function of the land. Native

growth must be preserved or a plan for revegetation must be submitted and approved.

**D. Shoreline: "Conservancy" environment.**

**Definition:** Marine, lake and river shoreline and associated wetlands identified as "conservancy environment" in an adopted Shoreline Master Plan. Conservancy shoreline areas are intended to preserve their existing character. Credit for this resource cannot overlap with the "Natural" shoreline environment or surface water quality buffer area priority resource. The area must consist of native vegetation.

**Possible Sources:** Shoreline Master Plan.

**Eligibility:** An eligible site must be identified as "conservancy shoreline environment" in an adopted Shoreline Master Plan and must meet the following additional conditions: The property must not be in another shoreline category of the PBRs. The area to be considered eligible is a maximum of 200 feet upland from the ordinary high water mark, within the 100-year flood plain or the edge of the associated wetland, whichever is greater.

**Examples:** 1) Natural shoreline property on Lake Sammamish near Lake Sammamish State Park.  
2) Forested property on Vashon Island along Puget Sound.  
3) Undeveloped Shoreline Property on Lake Francis near Maple Valley.

**E. Scenic natural resource, viewpoint or view corridor.**

**Definition:** 1) Scenic Natural Resource: An area of 10 or more acres of natural features which is visually significant to the aesthetic character of the county; or,  
2) Viewpoint: Property that provides a view of an area which is visually significant to the aesthetic character of the county and which provides unlimited public access identified by a permanent sign readily visible from a road or other public right-of-way; or,  
3) View Corridor: An area of adjoining parcels which individually may be less than 1 acre but which, when combined, total at least 1 acre and create a view corridor critical to maintaining a view of a scenic resource area or other visually significant area.

Visually significant scenic natural resources include, but are not limited to, Puget Sound, Lake Washington, Lake Sammamish, the Issaquah Alps and the Cascade

Mountains. Viewpoints and view corridors must have views of scenic natural resources that are visually significant in King County or other visually significant areas, including but not limited to Mt. Rainier, the Cascade range or the Olympic Mountains.

Possible Sources: Subject to King County Department of Natural Resource determination on a case-by-case basis.

- Eligibility:
- 1) Scenic Natural Resource: An eligible site must be significant to the identity of the local area and be visible to significant number of the general public from public rights-of-way. Such land must be of sufficient size to substantially preserve the scenic resource value and must be at least 10 acres in size.
  - 2) Viewpoint: An eligible site must provide a view of a scenic natural resource in King County or other visually significant areas and provide for unlimited public access.
  - 3) View Corridor: An eligible site must be at least one acre in size or, in combination, one acre in size, and provide views of areas significant to the local area.

- Examples:
- 1) Viewpoint: A roadside property with a view of Puget Sound and the Olympic mountains.
  - 2) Viewpoint: A property located along a road or trail on Cougar Mountain that provides a view of the Cascade range and Lake Sammamish.
  - 3) View Corridor: A property located at the base of Mount Si that allows a view of the Mountain from Three Forks County Park or an adjacent road.
  - 4) View Corridor: A property in Seattle that allows a view of Lake Washington and the Cascade Mountains from a park or other viewpoint.
  - 5) Scenic Natural Resource: Mature forest lands greater than 10 acres in size within view of Interstate 90 in the Mountains to Sound Greenway.
  - 6) Scenic Natural Resource: Undeveloped, forested land greater than 10 acres in size along the valley of a major river such as the Cedar River.
  - 7) Scenic Natural Resource: Undeveloped, forested bluff greater than 10 acres in size overlooking Puget Sound.

- Ineligible:
- 1) Viewpoint: Residential or other property without a permanent, readily apparent sign indicating public access.
  - 2) View Corridor: Property where natural growth or allowable structures will significantly impede the view from an identified viewpoint to an identified scenic resource

#### **F. Surface water quality buffer area.**

**Definition:** An undisturbed zone of native growth vegetation adjacent to a lake, pond, stream, wetland or marine waters of a sufficient width, but no less than 25 feet, that will benefit a surface water body by protecting water quality and reducing erosion. To be considered a surface water quality buffer area, the property owner must provide livestock restrictions (fencing), if necessary, or be subject to a Conservation Plan approved by King County. **NOTE:** Eligibility requires property use and access restrictions beyond those specified in the Sensitive Areas Ordinance or other surface water protection regulations. The two major ways of meeting this definition are:

- Provide at least 50% additional buffer width beyond that required by regulation, or
- Fence existing livestock out of the buffer required by regulation.

**Possible Sources:** Catalogue of Washington Streams, Shoreline Master Programs, County or local Sensitive Areas Ordinance streams and wetlands maps.

**Eligibility:** Eligible land must meet the definition above. In addition, the area must be preserved from clearing or intrusion by domesticated animals or structures. All such lands in or adjacent to pasture land must be fenced to prevent intrusion by domesticated animals. The buffer width is measured upland from the ordinary high water mark or the outer edge of a regulated wetland. The buffer does not include the body of water waterward of the ordinary high water mark or the wetland itself.

**Examples:** 1) Property adjacent to a section of Bear Creek that contains freshwater clams, which are highly sensitive to water quality conditions.  
2) Property adjacent to Soos Creek where owner provides a naturally vegetated buffer and fences off livestock.

**Ineligible:** Property where the portion under application for current use taxation is equivalent to a required sensitive areas ordinance buffer and no further restrictions are proposed by the owner.

#### **G. Open space close to urban or growth area.**

**Definition:** Area of 10 acres or more meeting one of the following:

- 1) Located outside but within two miles of the boundaries of incorporated cities where the applicable zoning allows for more intensive development than 1 unit per 10 acres.
- 2) Located in urban growth area in unincorporated King County, as identified in the King County Comprehensive Plan or Community

Plans where the applicable zoning allows for more intensive development than 1 unit per 10 acres.

- 3) Located in urban area identified as urban separators in adopted community plans where the owner agrees to restrict future subdivision and building.

Possible Sources: Adopted King County Community Plans; adopted local jurisdiction comprehensive or Growth Management plans.

Eligibility: An eligible site shall meet the above definition and may include former open farmland, woodlots, scrublands or other lands.

- Examples:
- 1) A ten acre property in the Soos Creek community planning area in an area that is zoned rural and is within two miles of a city, or is an identified community separator.
  - 2) A ten acre property in the East Sammamish community planning area that has a minimum zoning of five acres and is located within an urban area Comprehensive Plan designation.

Ineligible: A five acre parcel in an area zoned for five acre residential tracts (If public access is provided this parcel may qualify under the active/passive recreation or trail linkages category). A ten acre parcel that contains a three acre parking lot that is not used to serve public recreational needs (This parcel would exceed the 15% impermeable surface maximum).

## **H. Significant wildlife, plant or salmonid habitat area.**

Definition: An area consisting of one of the following:

- 1) An area which is utilized by naturally occurring plant or animal species listed as being endangered, threatened or sensitive by the State Departments of Wildlife or Natural Resources and where such species are found with sufficient frequency for critical ecological processes such as reproduction, nesting, rearing, wintering, feeding or resting to occur.
- 2) An area meeting the criteria for Native Plant Community under the Natural Heritage Plan of the State Department of Natural Resources.
- 3) A site which meets the criteria for priority habitats and species as defined by the Department of Wildlife and are selected by the King County Water and Land Resources Division and local jurisdiction.
- 4) A site which meets criteria for critical wildlife habitat conservation areas as defined by King County or local jurisdiction.



Possible Sources: Natural Heritage Data Base, Priority Habitats and Species (PHS) database, local sources, King County regional database (to be developed).

Eligibility: An eligible site is that identified by the King County Water and Land Resources Division or where expert verification acceptable to the Water and Land Resources Division is available confirming that the land fulfills the functions described under the definition.

Examples: Elk wintering range, salmon spawning stream, pileated woodpecker nesting and foraging sites, cavity nesting duck habitat, bald eagle nests, heron rookery, undisturbed old growth forest of at least 10 acres in the lowlands, and endangered plant sites.

#### **I. Significant aquatic ecosystem.**

Definition: An area described in the Natural Heritage Plan as Native Wetlands where salt or fresh water is the dominant factor in determining the nature of the plant and animal communities.

Possible Sources: Natural Heritage Data Base of the Washington State Department of Natural Resources.

Eligibility: An eligible site is that on file in the Natural Heritage Data Base. Expert verification acceptable to the administering state agency will substitute for inclusion in the data source.

Example: 1) Moss Lake in eastern King County.

Ineligible: Property not eligible for listing in the Natural Heritage Data Base.

#### **J. Historic landmark/archaeological site: Designated site.**

Definition: Historic and Archeological Resources; Land which constitutes or upon which is situated an historic landmark formally designated by King County or a local jurisdiction, including buildings, structures or sites of significance in the county's historic or prehistoric heritage, such as Native American settlements, trails, pioneer settlements, farmsteads, roads, industrial works, bridges, burial sites, prehistoric and historic archaeological sites, or traditional cultural properties.

Possible Sources: Historic and Archeological Resources; King County or other local lists or registers of historic places or landmarks and the State inventory of Archaeological Sites (State Office of Archaeology and Historic Preservation).

**Eligibility:** Historic and Archaeological Resources; Eligible property must be listed on a County or other local list or register of historic places or landmarks for which there is local regulatory protection. Eligible property includes contributing property within designated historic districts. Improvements to the land are not eligible for this tax reduction, but may be eligible for other federal or state tax credits. The King County Historic Preservation Officer will review and make determination on eligibility.

**Examples:** 1) The Hjertoos Farm, Carnation.  
2) The Pacific Coast Company House #75, Newcastle.

**Ineligible:** Property listed only on or eligible for the State or National Registers of Historic Places but not on the King County or other local list or register. This property may qualify as Medium Priority resources as "Eligible" Historic landmark/archaeological site.

#### **K. Trail linkage.**

**Definition:** Land used as a public urban or rural off-road trail linkage for pedestrian, equestrian, bicycle or other uses which remains in private ownership. The trail linkage shall be no less than 25 feet in width and the owner provides a trail easement to an appropriate public or private entity, acceptable to King County as to form. Such an easement must be recorded with the County Records and Elections Division within four months of the granting of a tax reduction for the property. Use of motorized vehicles is prohibited on trails receiving tax reductions in this category, except in the case of medical or police emergencies.

**Possible Sources:** Copy of recorded or proposed easement for review by lead review agency.

**Eligibility:** Eligible property must be used as a public urban or rural trail linkage which remains in private ownership. The amount of land may be of less than any minimum size prescribed in any other category, provided the trail linkage and buffer shall be no less than 25 feet in width, unless the reviewing agency determines that for linkage purposes, an exception to this provision is allowable and the owner agrees to provide a trail easement, acceptable as to form to King County, to an eligible and appropriate public or private entity. The trail must be primarily off-road and separated from any road by at least 25 feet, unless the reviewing agency determines that for linkage purposes, an exception to this provision is allowable. Sidewalks within a road right-of-way are not intended to qualify under this category. Fencing is not allowed within the right-of-way, unless the fence is along a property line. Gates are only

allowable subject to review and approval of the existing gate, proposed gate or proposed replacement gate by the appropriate local parks division.

- Examples:
- 1) A property with a trail easement granted to an equestrian club over a segment of an equestrian trail along the edge of a single family property.
  - 2) A segment of an appropriately identified off-road trail within a Seattle neighborhood Greenbelt, with appropriate easement.
  - 3) A segment of the county multi-use regional trail system in unincorporated King County with an easement purchased under county 1989 bond program
  - 4) A community trail in unincorporated King County identified as a community trail in the county trail plan, with easement granted to the county.

Ineligible: Trails where no appropriate easement has been granted. Sidewalks and roadside trails similar to sidewalks are not intended to be eligible, except under specific determination and approval of county or local parks department as necessary for linkage purposes.

#### **L. Urban or growth area open space.**

Definition: An area of one acre or more located inside of the boundaries of an incorporated city or in an urban growth area in King County, as identified in the County Comprehensive Plan. The area must be naturally vegetated and the applicable zoning must allow for more intensive development. The owner must agree to restrict future subdivision and building, to limit uses of the property, to provide a native growth protection easement, or agree to allow public access to the property. An area of one-half to one acre may be eligible, if, in addition to the criteria for urban lands one acre or greater, the land meets at least one of the following criteria:

- 1) conserves and enhances natural or scenic resources, or
- 2) protects streams or water supply, or
- 3) promotes conservation of soils, wetlands, beaches or tidal marshes, or
- 4) enhances the value to the public of abutting or neighboring parks, forests, wildlife preserves, nature reservations or sanctuaries or other open space, or
- 5) enhances recreation opportunities to the general public, or
- 6) preserves visual quality along highways, roads, and street corridors or scenic vistas.

Possible Sources: Adopted King County Community Plans; adopted local jurisdiction Comprehensive or Growth Management Plans.

Eligibility: An eligible site is that of one half (1/2) acre or more identified in an urban area in an adopted comprehensive or growth management plan meeting the criteria outlined above. In special circumstances, owners of non-contiguous properties that together meet the one half acre minimum may jointly apply under this category if all of the following conditions are met:

- The non-contiguous properties are within a service area defined in an adopted local comprehensive plan, in conformance with Growth Management Act requirements, in which provision of open space does not meet adopted standards. If no such service area standards have been established, then a specific finding of extraordinary open space need must be determined by the local legislative body and accompany an application.
- Each non-contiguous applicant parcel is at least as large as the minimum zoned lot size.
- No parcel is greater than 75 feet from another applicant parcel in the non-contiguous parcel group.

Examples: 1) Remnant natural area in Seattle  
2) Community Separator/Greenbelt in Seattle.  
3) Heron rookery and buffer lands in City of Renton.  
4) Remnant second growth forest tract in urban King County.  
5) Two 1/3 acre urban properties with scenic vistas that combine in a joint application to provide 2/3 acre of open space.

Ineligible: Proposed land area for open space designation that contains greater than 15% non-permeable surfaces or structures. Credit for this resource cannot overlap with the "Open space close to urban or growth area" resource.

#### **M. Farm and agricultural conservation land.**

Definition: Land previously classified as farm and agricultural land that no longer meets the criteria of farm and agricultural land and is reclassified as "open space land" or traditional farmland that is not classified under chapter 84.33 or 84.34 RCW, has not been irrevocably devoted to a use inconsistent with agricultural uses and has a high potential for returning to commercial agriculture.

Possible Sources: Property in an area identified by the county's Comprehensive Plan or other sources as prime agricultural areas.

Eligibility: An eligible site must be used for farm and agricultural activities or have a high probability of returning to commercial agriculture and the property

owner commits to return the property to farm or agricultural activities. An applicant must have a King County approved and implemented farm management plan prior to receiving credit for this category. Property must contain at least 5 acres and be located in the RA or A zones.

**Ineligible:** Property in an area designated as Urban in the 1994 Comprehensive Plan, properties under 5 acres in size or those where the property owner is not participating in agricultural activities or has not committed to resuming farm or agricultural activities. Property which does not have a King County approved and implemented farm management plan.

#### **N. Forest stewardship land**

**Definition:** Forest land which is not enrolled in the Timber land program under chapter 84.34 or the Forestland program under 84.33 RCW and which has a forest stewardship plan approved by King County. The forest stewardship plans can emphasize retention, harvesting or a combination of both.

**Eligibility:** The site must contain at least 4 acres of contiguous forest land and be in Resource or Rural zone. An applicant must have a forest stewardship plan in place prior to receiving credit for this category.

**Examples:** 1) A four and one-half acre property, with a home site, located in an area zoned rural, which has four acres of forested land and an approved forest stewardship plan. The property owner's forest stewardship plan emphasizes timber harvesting.  
2) A twelve acre property located east of Duvall which has a single family home and both pasture land and forest land. The owner's goal is to manage the five acres of forested land for timber retention and selectively cut according to the approved forest stewardship plan.

**Ineligible:** Property in an area designated as urban in the Comprehensive Plan. Property with under 4 acres in forest or where the property has been converted to a use not compatible with forest stewardship. Property which does not have an approved forest stewardship plan.

### **MEDIUM PRIORITY RESOURCES - 3 Points**

#### **A. Public land or right-of-way buffer.**

**Definition:** Native growth land lying adjacent to parks, forests, wildlife preserves, natural reservations, sanctuaries, parkways, trails, county, state or interstate

highways, or greenways. Buffers may be to a maximum of 100 yards from the boundary of the protected resource. Special exception to the native growth requirement may be granted for property along parkways with historic or other landscaping plans, upon review of the King County Cultural Resources Division. Eligibility for this exception does not extend to properties where plantings are required under local zoning codes, development mitigation requirements, or other local regulations.

**Possible Sources:** Eligibility would be determined based on demonstration of location adjacent to a park, trail corridor, county, state or interstate highway, greenway, wildlife preserve or natural preserve owned in fee or permanently secured by a recorded easement held by a city, county, or state parks, environmental or natural resources department, or recognized 501(c)(3) organization.

**Eligibility:** An eligible site must be dedicated to native growth and must buffer land either in public ownership or land in private ownership which is classified as Open Space under the Open Space Taxation Act and shall be no less than 25 feet in width. Buffer widths are eligible to a maximum of 100 yards.

**Examples:**

- 1) 100 yard buffer adjacent to Tiger Mountain State Forest near Hobart.
- 2) 100 yard buffer adjacent to Tolt-McDonald Park.
- 3) A 100 foot wide native growth buffer adjacent to the Cedar River regional trail in Maple Valley.
- 4) 100 yard buffer adjacent to the Sammamish River county trail near Bothell.
- 5) A 25 foot wide native growth buffer to a Seattle Park.

**Ineligible:** Property within 100 yards of a public park, open space or right-of-way but separated by other land not enrolled in the Open Space Taxation Act.

## **B. Special native plant site.**

**Definition:** An area with naturally occurring concentrations of those plants defined as being monitor species by the State Department of Natural Resources or remnant old growth.

**Possible Sources:** Report of biologist identifying species listed by Natural Heritage Program.

**Eligibility:** An eligible site is that found in the Natural Heritage Data Base or which is verified by experts as containing the same plant species and is acceptable to the King County Water and Land Resources Division.

Examples: 1) A bog and enlarged buffer with special plant species, with restrictions in addition to those required by regulations.  
2) Remnant old growth forest tract.  
3) Site with a plant species that is rare in King County.

Ineligible: Commercial nurseries. Arboretums or other garden sites with non-native plantings and public access may not be credited with points from this category but are instead intended to be eligible under the "active or passive recreation" high priority resource.

### **C. "Natural" shoreline environment.**

Definition: A marine, lake or river shoreline and its "associated wetlands" as identified in an adopted shoreline master plan. Credit for this resource cannot overlap with the "Conservancy" shoreline environment or surface water quality buffer area priority resource.

Possible Sources: An area identified as "Natural Environments" in the Shoreline Master Plan.

Eligibility: An eligible site is that identified as natural shoreline environments and their associated wetlands in the adopted Shoreline Master Plan governing the area in which the shoreline is located. Eligible land must be adjacent to the water. The area to be included is 200 feet upland from the ordinary high water mark, within the 100-year flood plain or the edge of the associated wetland, whichever is greater.

Ineligible: Property that does not meet the above definition.

### **D. Geological feature.**

Definition: Those special features, as defined in the Natural Heritage Plan generally including but not limited to special geologic locations, works of geomorphology, and works of glaciation; or those unique and undeveloped shoreline features of Puget Sound including spits, lagoons and points. In general, steep slopes, as defined under the King County Sensitive Areas Ordinance are not intended for inclusion in this category, unless a unique feature such as a butte, prominent cliff or other unique geological feature is identified.

Possible Sources: Washington State Interagency Committee for Outdoor Recreation for dry accretion beach shoreline features. No data base currently exists for geological features. As with the High Priority Resource category "Scenic natural resource, viewpoint, or view corridor", this

"Geological feature" category is subject to Council determination based on the above definition.

Eligibility: An eligible site includes that acceptable as a Natural Heritage Preserve and which includes at a minimum, in single or multiple ownership, 90% of the feature.

**E. Historic landmark/archaeological site: Eligible site.**

Definition: Historic and Archaeological Resources: Land which constitutes or upon which is situated an historic landmark formally designated by a local jurisdiction, including buildings, structures or sites of significance in the county's historic or prehistoric heritage, such as native American settlements, pioneer settlements, farmsteads, roads, industrial works, bridges, burial sites, prehistoric and historic archaeological sites, or traditional cultural properties.

Possible Sources: King County or other local inventories of historic resources and the State Inventory of Archaeological Sites (State Office of Archaeology and Historic Preservation).

Eligibility: An eligible property must be determined by the King County Historic Preservation Officer to be eligible for designation and listing on the County or other local register of historic places or landmarks for which there is local regulatory protection. Eligible property includes contributing property within designated historic districts. Property listed on the State or National Registers of Historic Places may qualify under this category. Improvements to the land are not eligible for this tax reduction, but may be eligible for other federal, state or local tax credits.

Examples: 1) An eligible but undesignated historic landmark in Bothell.  
2) An archaeological site on the Snoqualmie River.  
3) Tollgate farm in North Bend, listed on the King County Historic Resources Inventory.

Ineligible: Property not eligible for designation and listing on the King County or other local list or register of historic places or landmarks. This property may qualify as Low Priority Resource as "Buffer" to eligible historic landmarks/archaeological site."

**F. Buffer to designated historic landmark/archaeological site.**

Definition: Buffer to land constituting or containing designated county or local historic landmark or archeological site that is enrolled in the High Priority Resource "Historic landmark/archaeological site " category.



Possible Sources: King County or local lists or registers of historic places or landmarks. Eligibility will be determined by the King County Historic Preservation Officer.

Eligibility: Eligible property must be adjacent to or in the immediate vicinity of and provide a significant buffer for a designated landmark or archaeological site listed on the County or local list or register of historic places or landmarks which is enrolled in the Open Space Tax program. Significant buffers provide physical, visual, noise or other barriers and separation from adverse effects or influences on historic resources due to adjacent land use and development. Improvements to the land on buffer lands are not eligible.

Examples: 1) Five acre tract adjacent to the Elliot farm near Renton, which provides a visual and physical buffer from an adjoining subdivision.  
2) Land surrounding a designated historic residence in an urban area.

#### **G. Special animal site.**

Definition: A site that includes either 1) identified wildlife habitat network, 2) urban natural area as identified by the State Department of Wildlife's (WDW) Priority Habitats and Species Project (PHSP) or 3) other locally significant fish and wildlife habitat area.

Possible Sources: Wildlife habitat networks and other locally significant fish and wildlife areas will be identified by King County and each jurisdiction in the county under plans developed through the Growth Management Act. Urban natural areas are identified by the State Department of Wildlife.

Eligibility: An eligible site is that identified by the King County Water and Land Resources Division or local jurisdiction or that where expert verification acceptable to the Water and Land Resources Division or local jurisdiction is available.

Examples: 1) Property within a wildlife habitat network identified in the East Sammamish Community Plan.  
2) Property identified within the WDW Priority Habitat Species project.

Ineligible: A highly disturbed remnant natural area that is determined to have minimal wildlife habitat significance.

#### **LOW PRIORITY RESOURCE - 1 Point**

### **Buffer to eligible historic landmark/archaeological site.**

**Definition:** A buffer to land constituting or containing eligible county or local historic landmarks or archeological sites that are enrolled in the High Priority Resource “Historic landmark/archaeological site” category.

**Possible Sources:** Historic and Archaeological Resources: King County or other local inventories of historic resources and the State Inventory of Archaeological Sites (State Office of Archaeology and Historic Preservation). Eligibility of entire or partial parcels will be determined by the King County Historic Preservation Officer.

**Eligibility:** An eligible property must be adjacent to or in the immediate vicinity of and provide a significant buffer for a designated landmark or archaeological site listed on the County or local list or register of historic places or landmarks which is enrolled in the Open Space Tax program. Significant buffers provide physical, visual, noise or other barriers and separation from adverse effects or influences on historic resources due to adjacent land use and development. Improvements to the land on buffer lands are not eligible.

**Examples:** 1) Five acre tract, adjacent to an inventoried prehistoric village site that provides a visual and physical buffer from an adjoining industrial park.  
2) Land surrounding an inventoried historic residence in an urban area.

### **BONUS CATEGORIES - points indicated**

#### **A. Resource restoration. (5 Points)**

**Definition:** Restoration of any high, medium or low open space resource defined above. Emphasis shall be placed on restoration of anadromous fish rearing habitat, wildlife and plant habitat areas, and upland, stream and wetland habitats.

**Possible Sources:** No inventory available.

**Eligibility:** An eligible site is that which qualifies for any high, medium or low open space resource classification above without this category. A site is eligible to receive 5 bonus points for the resource being restored. The owner must have an implemented restoration plan developed in cooperation with the Soil Conservation Service, the State Departments of Fisheries or Wildlife, the King County Water and Land Resources Division or other cognizant local or county agency.

NOTE: If a property owner implements an approved restoration plan after having been accepted into the open space CUA program and did not receive credit for such program in the initial evaluation of the property, the owner may apply to amend the application and receive the bonus points credit without paying an additional application fee.

**B. Bonus surface water quality buffer area. (3 or 5 Points)**

Definition: A stream side or wetland buffer width of at least twice that required by the applicable local Sensitive Areas Ordinance.

Possible Sources: Catalogue of Washington Streams, Shoreline Master Programs, County or local Sensitive Areas Ordinance streams and wetlands maps as basis for determination.

Eligibility: A site qualifying under the "Surface Water Quality Buffer Area" or Shorelines classifications would receive additional points through the provision of additional buffer which is preserved from clearing and from livestock intrusion. Three (3) additional points awarded for buffers no less than two times the buffer required by the Sensitive Areas Ordinance. Five (5) additional points awarded for buffers no less than three times the buffer width required by the Sensitive Areas Ordinance.

Examples: 1) A 200 foot wide buffer along a class 1 stream that is twice the width of a required 100 foot buffer.  
2) A 300 foot wide buffer adjacent to a Class 1 wetland where a 100 foot buffer is required

**C. Contiguous parcels under separate ownership. (2 Points)**

Definition: Contiguous parcels of land with the same open space resources, regardless of whether under the same ownership or not, are eligible for treatment as a single parcel if open space classification is sought under the same application. "Contiguous parcels" are defined as parcels abutting each other without any significant natural or manmade barrier separating them or parcels abutting a publicly owned open space but not necessarily abutting each other without any significant natural or manmade barriers separating the publicly owned open space and the parcels seeking open space classification or each other in the event that they do abut.

Possible Sources: Not applicable.

Eligibility: Treatment as contiguous parcels shall include the requirement to pay only a single application fee, the requirement that the total area of all parcels combined must equal or exceed any required minimum (rather than each

parcel being required to meet such minimums). Parcels given this contiguous parcels bonus must all be accepted under identical terms and conditions of access, easements, and restrictions. Individual parcels may be withdrawn from open space classification consistent with all applicable rules and regulations without affecting the continued eligibility of all other parcels accepted under the same application, provided that the combined area of the parcels remaining in open space classification must equal or exceed any minimum size requirement established in the PBRS and that access to the remaining parcels is not affected.

Contiguous parcels must meet the following conditions:

- a) The application must include two or more parcels under different ownership.
- b) The parcels included in the application must have the same open space resources.
- c) The owners of parcels included in the application must agree to identical terms and conditions for inclusion in the program.

- Examples:
- 1) Three contiguous properties where 10,000 square feet of each property will combine to form a joint application of 30,000 (greater than 1/2 acre) within a Seattle ravine greenbelt
  - 2) Two adjacent ten acre parcels in a rural area.

Ineligible: Property receiving credit under the Trail linkage high priority resource is not eligible for this bonus category.

#### **D. Conservation or Historic Preservation Easement in perpetuity. (5 Points)**

Definition: An easement that restricts, in perpetuity, further potential development, or other uses of a property, and which may include a requirement for native growth protection. The granting of this Conservation or Historic Preservation Easement provides additional value through permanent protection of a resource. These easements are typically donated or sold to a non-profit organization such as a land trust, conservancy, etc. The property owner continues to own the land.

Possible Sources: Land trusts, conservancy, public agencies or non-profit groups, and professionals such as attorneys, tax accountants, appraisers, and land-use planners with appropriate experience.

Eligibility: To be eligible, the Conservation or Historic Preservation Easement must be approved by the King County Department of Natural Resources (DNR) and be recorded with the County Records and Elections Division. The

conservation or historic easement must be conveyed to the county or to a legitimate organization acceptable to the county.

**Ineligible:** An easement that is required by zoning, subdivision conditions, or other land use regulation which could be used to achieve maximum development potential, unless additional easement area is provided voluntarily. An easement not approved by the King County DNR and not recorded with the County Records and Elections Division.

### **PUBLIC ACCESS - points indicated**

**Definition:** Access by the general public to the open space lands participating in the PBRS program should be encouraged for all land unless it is determined that such access would damage or endanger the resource. Property owners who allow access to the property should be afforded consideration in the level of tax reduction they receive, depending on the level of access allowed and the conditions under which access is permitted.

- 1) **Unlimited Public Access - 5 Points:** Year-round access to the general public is allowed without special arrangements with the property owner.
- 2) **Limited Public Access - Sensitive Area - 5 Points:** Access may be reasonably limited due to the sensitive nature of the resource, with access provided only to appropriate user groups. The access allowed must generally be for an educational, scientific or research purpose and available through special arrangements with the owner.
- 3) **Limited Public Access - 3 Points:** Access to the public is allowed, with or without special arrangements with the property owner, for any period of less than the full year (seasonal access).
- 4) **No Public Access - 0 Points:** No public access is allowed or Members Only Access which is restricted at all times to members of the organization utilizing the land.

**Note:** Public Access bonus points are granted to categories that require public access.

### **SUPER BONUS CATEGORY** (Current use value of 10% of market value)

**Definition:** Property with at least one high priority resource AND allows unlimited public access or limited public access - sensitive area (due to resource sensitivity) AND conveys a conservation, historic preservation, or trail easement in perpetuity in a form and with such conditions as are acceptable to the county.

## **KING COUNTY'S RESOURCE INVENTORY QUESTIONS**

**Priority Resources:** Which of the following priority resources as defined in the *King County Public Benefit Rating System Resource Information* document are contained on your property? (Check all that apply) Properties may receive points in up to a combined total of six resource categories from the high, medium and low priority resources listed below (Not including Bonus and Public Access Resources):

### **High Priority Resources** (5 points each)

- A. Active or passive recreation area
- B. Property under option for purchase as park, recreation, open space land or capital improvement project mitigation site
- C. Aquifer protection area
- D. Shoreline: "Conservancy" environment
- E. Scenic resource, viewpoint, or view corridor
- F. Surface water quality buffer area
- G. Rural or low density open space close to urban or growth area
- H. Urban or growth area open space
- I. Significant plant, wildlife, or salmonid habitat area
- J. Significant Aquatic Ecosystem
- K. Historic landmark/Archaeological site (Designated site)
- L. Trail linkage
- M. Farm and Agricultural conservation land
- N. Forest stewardship land

### **Medium Priority Resources** (3 points each)

- A. Public lands and right-of-way buffer
- B. Special native plants site
- C. Shoreline: "Natural" environment
- D. Geological feature
- E. Historic landmark/Archaeological site (Eligible site)
- F. Buffer to designated Historic landmark/Archaeological site
- G. Special animal site

### **Low Priority Resource** (1 point each)

- A. Buffer to Eligible Historic landmark/Archaeological site

### **Subtotal Resource Points**

Count points from no more than 6 resources

**Bonus Categories:** Properties qualifying in the High, Medium or Low priority categories above may receive additional tax reduction if they meet bonus category requirements.

- 1. Resource restoration (5 points)
- 2. Bonus surface water quality buffer (3 or 5 points)
- 3. Contiguous parcels under separate ownership (2 points)
- 4. Conservation/historic easement (5 points)

Subtotal Bonus Points \_\_\_\_\_

**Public Access:** Public access is not required. Public access is encouraged for all enrolled lands unless access would be a hazard to the resource (i.e., significant plant and wildlife habitat area). Public access can also increase your tax reduction and is required in some categories (i.e., viewpoints, trail linkage). **List groups to be allowed access.** Only one type of access can apply.

- \_\_\_\_\_ A. Unlimited Access (open year-round to general public) (5 points)
- \_\_\_\_\_ B. Limited Access - Due to Resource Sensitivity (limited to appropriate user groups, permission from landowner required) (5 points)
- \_\_\_\_\_ C. Limited Access (seasonal and/or upon special arrangements) (3 points)
- \_\_\_\_\_ D. None or members only (0 points)

If proposing public access, describe how the land can be reached. Are there private or public roads to the site? Are there any restrictions, such as an easement or physical barriers, which would inhibit public access? Are there any specific restrictions (such as hours, seasons, activities) you think are necessary.

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**Super Bonus Category:** (automatic total of 35 points)

- \_\_\_\_\_ A. Properties with at least one high priority resource, AND which allow unlimited public access or limited public access - sensitive area (due to resource sensitivity) AND which provide a qualifying conservation, historic, or trail easement in perpetuity are automatically eligible for a 90% tax reduction.

**OPTIONAL**

**Estimate of Tax Reduction:** The following is provided to assist you, but please remember that your application will be reviewed by County/City Staff and a decision made by the granting authority. When estimating the actual effect on your property's valuation and your tax bill, please remember that your assessment will be reduced only on the portion of your property that is enrolled as open-space/current use land. *You will still be assessed at "highest and best use" rates for your residence and for other non open-space lands on the property.*

\_\_\_\_\_ Subtotal Resource points from - high, medium, and low priority resources (count \_\_\_\_\_ points from no more than six categories - 30 pts. max.)

\_\_\_\_\_ Subtotal Bonus points (17 pts. max.)

\_\_\_\_\_ Public access points (5 pts. max.)

\_\_\_\_\_ **Grand Total of points, resulting in Public Benefit Rating**

\_\_\_\_\_ Super Bonus Category (Automatically qualifies for 35 points or a 90% reduction)

**VALUATION SCHEDULE**

<u>Public Benefit Rating</u>	<u>Tax Reduction</u>	<u>Current Use Value</u>
0 - 4 points	0%	100 % of Market Value
5 - 10 points	50%	50 % of Market Value
11 - 15 points	60%	40 % of Market Value
16 - 20 points	70%	30 % of Market Value
21 - 34 points	80%	20 % of Market Value
35 - 52 points	90%	10% of Market Value

**JUSTIFICATION:**

How does the property meet the definition for each category?

How many acres contain the open space resources?

What is the long-term viability of the property, considering also how adjacent land uses will affect the resource?



## Enrollment Example: Property A

This is a small parcel of 1.02 acres on a creek which was once a salmon spawning creek, but is now used by juvenile salmon from Cedar River. The house is just outside the floodplain of the Cedar River, and was built before the Critical Areas Ordinance. As it now stands, the property does not qualify for PBRs under wildlife (salmon) habitat or water quality, as the owner is not providing the necessary buffers. Even with restoration, the County may not award these points as the buffer will only be wide enough on a narrow segment of the stream. In that case the property owner will only get 5 points, for a 50% tax reduction.

The County has undertaken a small restoration project on the creek, on land which previously was used for a lawn. The owner did not want a very extensive restoration project as this would interfere with his landscaping. Now the owner is interested in maximizing his tax credit and is prepared to consider further restoration if the County is interested. The County is pursuing an option to purchase land further downstream on the creek for a park and salmon habitat.

The land to the north of the parcel, across the road, is a steep slope and is wooded. Development at the top of the slope has increased in recent years and the owner of this parcel has noticed increased runoff as a result.

## Property Scoring: Excerpt from King County PBRs Application

### Resource Inventory

- 5 C. Aquifer protection area
- 5 F. Surface water quality buffer area
- 5 I. Significant plant, wildlife, or salmonid habitat area

### Subtotal Resource Points

15 Count points from no more than 6 resources

### Bonus Categories:

- 5 1. Resource restoration (5 points)

Subtotal Bonus Points : 5

**Public Access:** No public access allowed.

**Estimate of Tax Reduction:**

15 Subtotal Resource points from - high, medium, and low priority resources (count points from no more than six categories - 30 pts. max.)

5 Subtotal Bonus points (17 pts. max.)

       Public access points (5 pts. max.)

20 Grand Total of points, resulting in Public Benefit Rating

    Super Bonus Category (Automatically qualifies for 35 points or a 90% reduction)

**20 points = 70% reduction**

**Justification:**

1) How does the property meet the definition for each category?

**High Priority Resources**

C. Aquifer protection area

King County DDES reports that this parcel is mapped for high aquifer recharge.

F. Surface water quality buffer area

The open space land, once restored will provide a buffer of 190 feet along a stretch of the north side of the creek, 30 feet along the remainder of that side and 50 feet on the south bank. This creek is an important off-channel rearing area for sockeye salmon in Cedar River. The restoration would enhance the restoration efforts of King County.

H. Significant plant, wildlife, or salmonid area

The buffers provided to the creek would benefit the juvenile salmon rearing in the creek.

**Bonus Resources**

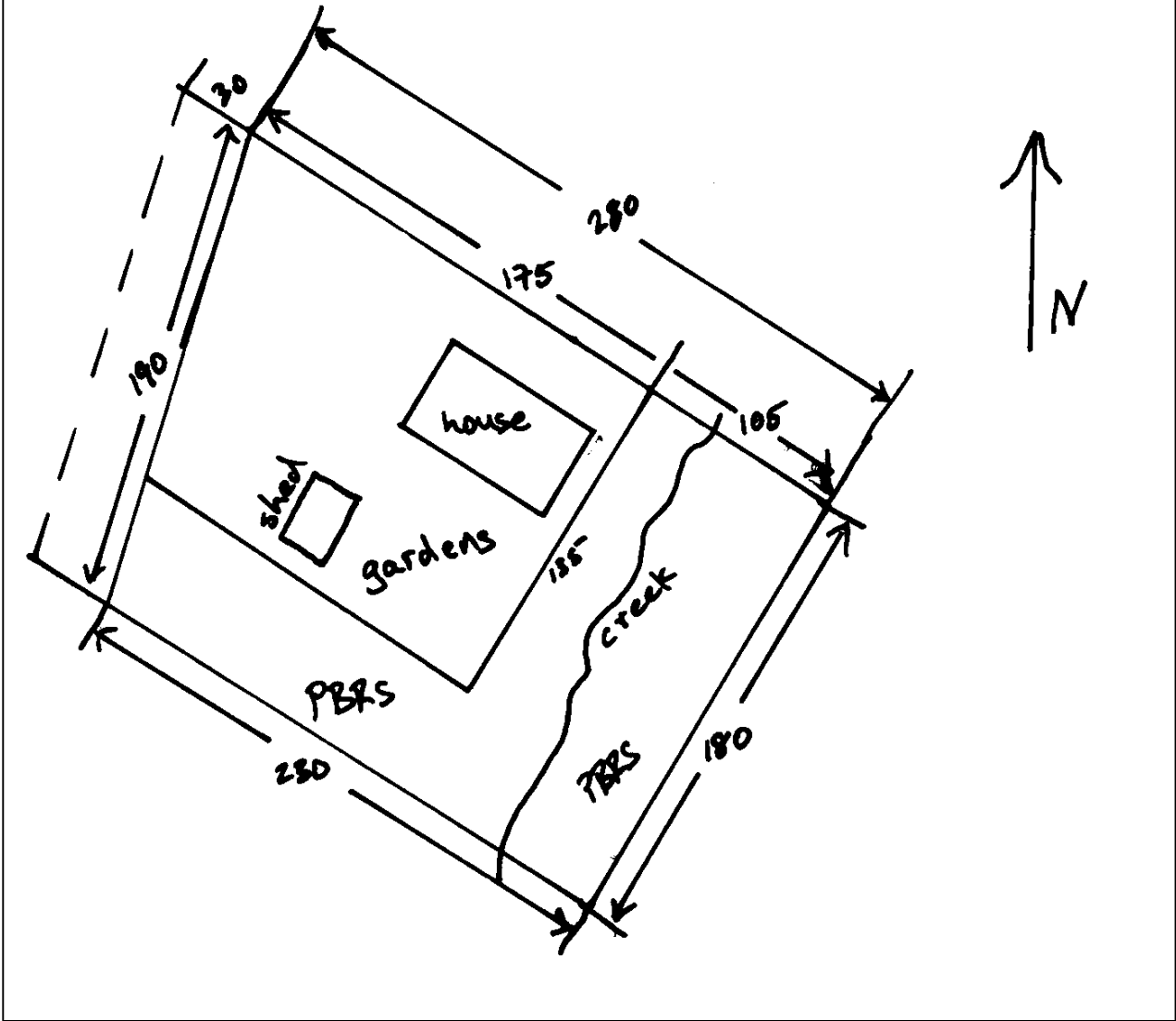
Resource restoration: The restoration begun by King County will be continued. A restoration plan is included.

2) How many acres contain the open space resources? 0.57 acres

3) What is the long-term viability of the property, considering also how adjacent land uses will affect the resource?

The property is in the floodplain of the Cedar River and subject to a number of restrictions based on sensitive areas on the parcel. The parcel cannot be developed any further. Any proposed developments in the vicinity will also be subject to these restrictions to protect the valuable salmon resources. Inclusion of this land in PBRs will enhance salmon conservation efforts on the Cedar River.

# PROPERTY A



## Enrollment Example: Property B

This is a parcel of 19.75 acres in Kent, just inside the urban boundary. The land adjacent has been developed to its full potential as a typical suburban development. The owner of this parcel is looking for a way to develop the land, to get some return from his investment, while still preserving its character. He has a plan to cluster 25 single family homes on 5 acres and enroll the remaining land in PBRS as an open space amenity for those living there. The homeowners would each own a share in the open space, or some form of trust would be set up for the land. The homeowners would have unlimited access to the open space – on trails which would be established so as to protect the remainder of the land. There is also the potential to invite others on to the land for field trips and educational events. The current owner is also interested in reforesting the property as part of a forest stewardship plan, which would also provide the opportunity for future owners to make some “use” of the land.

The parcel was used for pasture until fairly recently but still has some trees and shrubs. There are also two wetlands on the parcel, which is recovering from the grazing. The owner has been replanting trees and shrubs in the wetland buffer and throughout the parcel.

## Property Scoring: Excerpt from King County PBRS Application

### Resource Inventory

#### High Priority Resources (5 points each)

- 5 F. Surface water quality buffer area
- 5 H. Urban or growth area open space
- 5 I. Significant plant, wildlife, or salmonid habitat area
- 5 N. Forest stewardship land

#### Subtotal Resource Points

20 Count points from no more than 6 resources

### Bonus Categories:

- 5 1. Resource restoration (5 points)

Subtotal Bonus Points : 5

### Public Access:

5 user B. Limited Access - Due to Resource Sensitivity (limited to appropriate groups, permission from landowner required) (5 points)

**Estimate of Tax Reduction:**

20 Subtotal Resource points from - high, medium, and low priority resources (count points from no more than six categories - 30 pts. max.)

5 Subtotal Bonus points (17 pts. max.)

5 Public access points (5 pts. max.)

**30 Grand Total of points, resulting in Public Benefit Rating**

     Super Bonus Category (Automatically qualifies for 35 points or a 90% reduction)

**30 points = 80% reduction**

**Justification:**

1) How does the property meet the definition for each category?

**High Priority Resources**

F. Surface water quality buffer area  
The open space land provides a buffer of ? to a wetland.

H. Urban or growth area open space  
The area is zoned R6, which allows for more than 100 houses on this parcel. The owner plans to build 25 houses on part of the property leaving ? acres as open space.

I. Significant plant, wildlife or salmonid habitat area  
Pileated woodpeckers use the area – see enclosed photographs.

N. Forest stewardship land  
The owner has been planting trees and plans to continue to do so. A Forest Stewardship Plan is enclosed.

**Bonus Resources**

A. Resource restoration  
The owner has been planting trees throughout the property to restore it to its original forested condition. He has also been replanting native vegetation in the wetland buffer. A restoration plan is included.

**Public Access**

**B. Limited Access**

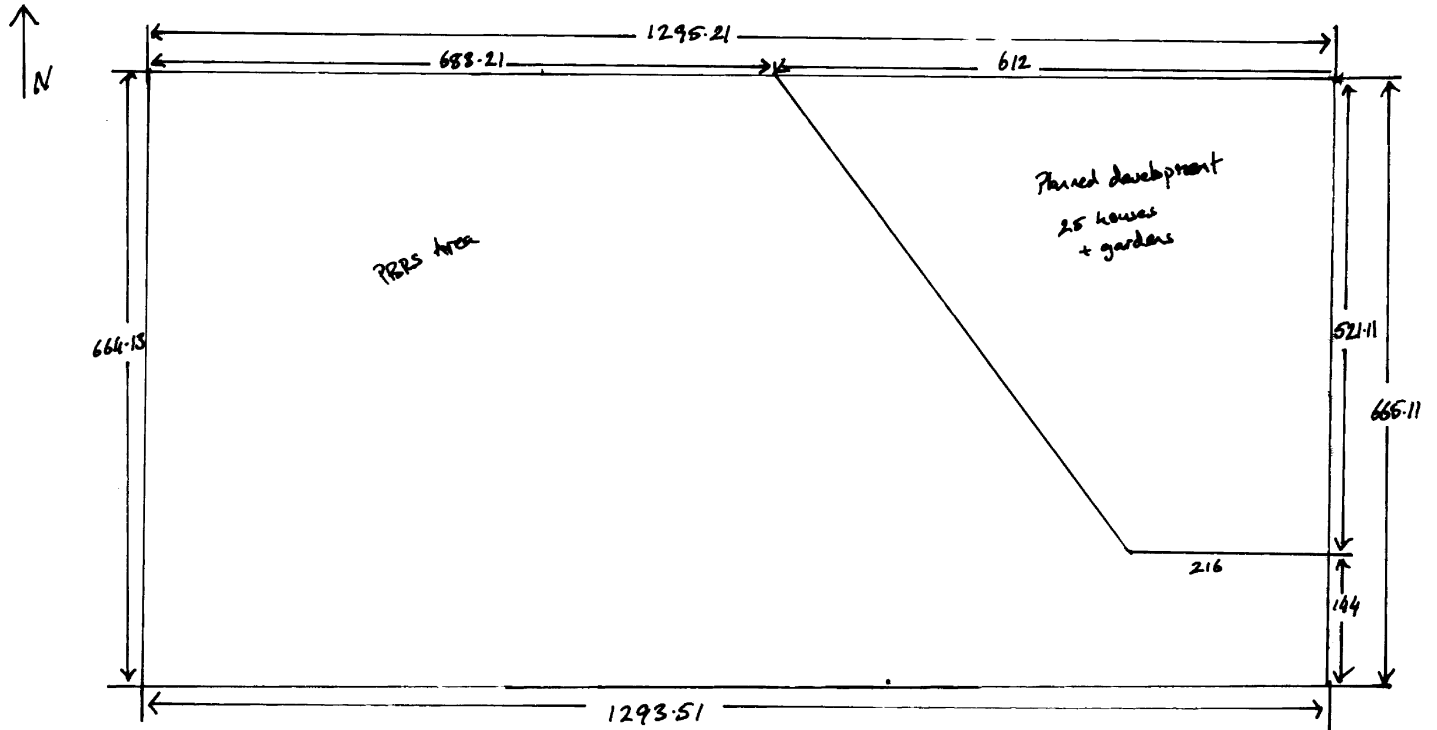
Due to the sensitivity of the resource, which includes a wetland, public access will be limited to field trips, for education purposes. Trails will be maintained through the non-wetland areas for the landowners.

2) How many acres contain the open space resources? 14.8 acres

3) What is the long-term viability of the property, considering also how adjacent land uses will affect the resource?

The owner is interested in developing the property while retaining a portion of it for open space for the use and enjoyment of the people living there as well as to protect the natural resources. A covenant, or other legal document, will be drawn up to ensure that the open space land remains protected.

PROPERTY B





## Enrollment Example: Property C

This property is close to Maple Valley, just off the Cedar River. The parcel between this and the river is under option for purchase by the County, as a park and for salmon habitat - because of its slope, its potential for development is limited. The northeast end of the property is also a steep slope, with a wetland at its bottom. There is no encroachment on the wetland, nor its buffer, as the owners enjoy the birds and other wildlife there.

## Property Scoring: Excerpt from King County PBRs Application

### Resource Inventory

#### High Priority Resources (5 points each)

- 5 C. Aquifer protection area
- 5 F. Surface water quality buffer area
- 5 I. Significant plant, wildlife, or salmonid habitat area

#### Subtotal Resource Points

15 Count points from no more than 6 resources

### Bonus Categories:

- 3 2. Bonus surface water quality buffer (3 or 5 points)

Subtotal Bonus Points: 3

**Public Access:** No public access allowed

### Estimate of Tax Reduction:

15 Subtotal Resource points from - high, medium, and low priority resources (count points from no more than six categories - 30 pts. max.)

3 Subtotal Bonus points (17 pts. max.)

     Public access points (5 pts. max.)

18 = Grand Total of points, resulting in Public Benefit Rating

     Super Bonus Category (Automatically qualifies for 35 points or a 90% reduction)

**18 points = 70% property tax reduction**

## Justification

1) How does the property meet the definition for each category?

### **High Priority Resources**

#### C. Aquifer protection area

King County DDES reports that the west five sixths of this parcel is mapped for high aquifer recharge, which includes part of the PBRs portion of the property

#### F. Surface water quality buffer area

The open space area provides a buffer of 65 feet to a Class 3 wetland at the foot of a steep slope.

#### H. Significant plant, wildlife or salmonid habitat area

Pileated woodpeckers use the area regularly. Other wildlife seen on the property include: northern flickers, spotted towhee, band-tailed pigeons, cedar waxwings, mallards, which nest in the wetland, great blue heron, bald eagle hummingbirds, deer, which seem to use the open space area for night-time cover, and pacific chorus frogs.

### **Bonus Resources**

#### B. Bonus surface water quality buffer

The open space area provides a buffer of 65 feet to the wetland which is twice that required by the King County Sensitive Areas Ordinance.

2) How many acres contain the open space resources?      0.80 acres

3) What is the long-term viability of the property, considering also how adjacent land uses will affect the resource?

This is a rural area, zoned for large lots; it has already been subdivided to its full extent, so further development is unlikely. The open space area contains a steep slope and a wetland, both protected by regulations, and these areas extend to neighboring properties. King County is considering purchasing the property between this piece and Cedar River which would make this open space area even more valuable to the community. This property is also close to the Cedar River Trail so having it as open space would improve the quality of experience for people on that trail. The property owners are anxious to see the property protected as wildlife habitat in the long-term and see the PBRs program as a way to achieve that goal.

PROPERTY C

