

Revised Pierce County In-Lieu Fee Prospectus

Pierce County Surface Water Management

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Acknowledgements

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List of Acronyms

BMP	Best Management Practice
CAO	Critical Areas Ordinance
CFR	Code of Federal Regulations
DA	Department of the Army (usually indicating Corps permits)
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FCD	Flood control District
GIS	Geographic Information Systems
HGM	Hydrogeomorphic
IGA	Inter-governmental Agreement
ILF	In-lieu fee
IRT	Inter-agency Review Team
LWD	Large Woody Debris
NOAA	National Oceanic and Atmospheric Administration
PC	Pierce County
PCC	Pierce County Code
PCD	Pierce Conservation District
PCSWM	Pierce County Surface Water Management
PSP	Puget Sound Partnership
RCW	Revised Code of Washington
SMG	Site Management Guidelines
SMWR	South Midland Wetland Reserve
SWM	Surface Water Management
USFWS	United States Fish and Wildlife Service
WDFW	Washington Department of Fish and Wildlife
WRIA	Watershed Resource Inventory Area

1. Introduction

This revised prospectus provides a summary of the In-lieu-fee Mitigation (ILF) Program for Pierce County. This ILF Program was originally proposed as a pilot by the Puget Sound Partnership (PSP) in a public notice published May 12, 2010. PSP has reconsidered its role in sponsoring ILF programs in Puget Sound. PSP decided that sponsorship of ILF programs is an implementation role that would be better led by local governments or non-profit organizations. Pierce County Surface Water Management (PCSWM) has assumed the role of ILF sponsor for the Pierce County Program.

PSP continues to support the development of ILF Programs as an important tool to mitigate for impacts to aquatic and other resources. The development and implementation of ILF Programs are identified as near-term action items (D.4.6, E.2.9, and E.2.10) in the Puget Sound Action Agenda, a blueprint for cleaning up the Sound by 2020.

The following revised prospectus outlines the circumstances and manner in which the Pierce County ILF Program will serve to satisfy compensatory mitigation requirements of federal, state, and local regulatory programs in select watersheds of Pierce County.

2. Need for Program

Studies of compensatory wetland mitigation in Washington State and across the country generally demonstrate that less than 50 percent of mitigation sites are successful ecologically or in achieving their performance standards and intended goals (Johnson et al., 2002; Mockler et al., 1998; National Research Council, 2001; Sheldon et al., 2005). Furthermore, they fail to effectively replace lost or damaged resources, habitats, and functions (National Research Council, 2001; Sheldon et al., 2005). These studies identify several common flaws, including inappropriate site selection, project design without a landscape or watershed context, poor planning and implementation of projects, lack of oversight, maintenance, and follow-through, and insufficient long-term management and monitoring. In addition, most mitigation projects implemented by permittees are small, less than one acre in size. The environmental benefits of these piecemeal, “postage stamp” projects, even when successful, are often limited in scope. This is because mitigation typically occurs “on the same site where impacts occur (“on-site” mitigation) regardless of whether the mitigation would be successful and sustainable over time or contribute in a meaningful way towards the overall health of watershed processes” (ESA and Ross & Associates Environmental Consulting, Ltd. 2008).

Federal regulations have identified in-lieu fee programs as one potential option to correct some of the shortcomings in existing mitigation techniques (33 CFR Part 332 and 40 CFR Part 230). In-lieu fee programs consolidate compensatory mitigation projects and resources to target more ecologically significant functions, provide financial planning,

provide scientific expertise, reduce temporal loss of function, and reduce uncertainty about project success.

The Mitigation That Works Forum also supports development of in-lieu fee programs. The Forum was convened by the Department of Ecology, and included 22-members representing state and federal agencies with mitigation responsibilities, local governments, ports, business, environmental, and land use/conservation interests. The Forum endorsed watershed-based mitigation, such as ILF, which directs mitigation dollars to the places in a watershed that are most likely to be successful and meaningful (ESA and Ross & Associates Environmental Consulting, Ltd. 2008).

The population of the Puget Sound region is expected to grow substantially in coming years. The resulting development activity associated with this growth will require more effective mitigation. Improving mitigation success rates will help achieve regional restoration goals, by preventing a decline in baseline conditions. The Puget Sound Partnership's Action Agenda describes the need to improve the quality of Puget Sound and supports the creation of in-lieu-fee programs around Puget Sound.

Pierce County has experienced considerable population growth. Between 2000 and 2010 Pierce County's population increased by 13.5% (US Census Bureau, 2011). Increasing population inevitably leads to an increase in new development. From January 2008 through December 2010 Pierce County Planning and Land Services issued permits for 447 commercial buildings and 2886 single family residences. For the eight month period from January through August 2011 Pierce County Planning and Land Services issued 21 new commercial building permits and 685 new single-family-residence building permits.

New development either results in the direct loss of natural resource acreage and function, or it indirectly impairs processes and function due to urbanization and increases in impervious surfaces. The effects of expanding imperviousness include: increased flooding, erosion, elevated water temperatures, high nutrient loads and turbidity, and low dissolved oxygen. All of which adversely affect fish and wildlife habitat. Restoration efforts in key locations could provide significant improvements to hydrologic processes as well as benefits to water quality.

Though development pressures are affecting resource functions throughout the Puget Sound region, the Pierce County ILF Program aims to provide an alternative to permittee-responsible mitigation within select watersheds of Pierce County where currently no alternative exists.

3. Objectives

- A. Provide high quality mitigation for unavoidable impacts to aquatic resources at development sites.
- B. Develop an ecologically-based site selection process to identify the most appropriate mitigation options that result in greater ecological benefit to a sub-basin, basin, or watershed than could be achieved through permittee-responsible mitigation.
- C. Utilize scale efficiencies by combining the impacts from individual smaller projects within a service area into mitigation at larger sites.
- D. More efficiently meet regulatory requirements by streamlining the compensatory mitigation process.
- E. Select the best mitigation-receiving sites for the program through a rigorous analysis by a group of professional resource managers and local experts, drawing from personal knowledge and best available science and analyses for a particular basin or watershed.
- F. Develop a self-sustaining program to complete mitigation projects and address “no net loss” of functions on a watershed scale.
- G. Provide an alternative to permittee-responsible mitigation where currently no alternative exists.
- H. Provide an effective and transparent accounting structure for collecting in-lieu fees, disbursing project funds, and compliance reporting.
- I. Work in an efficient and transparent manner with the Interagency Review Team to implement mitigation projects and enact amendments to the program Instrument.
- J. Provide a functionally viable option to mitigate for small unavoidable impacts that currently may be falling through the cracks, because they qualify for exemptions under Title 18E.20.030 and Reasonable Use Exceptions under 18E.20.050.

4. Definitions

Terms used for in-lieu fee programs may have different meanings than their colloquial usage would suggest. There are also differences in the legal definitions used by Pierce County and the federal agencies. For all terms not described below, the definitions used by the Regulatory Program of the U.S. Army Corps of Engineers and U.S. Environmental

Protection Agency [33 CFR Parts 320-331; 40 CFR Part 230] are adopted by Pierce County for the ILF Program.

- A. *Applicant* means an entity seeking a permit for a project that will result in impacts to aquatic resources. Use of the term applicant indicates that a permit has not yet been issued.
- B. *Credit* means a unit of measure (e.g. a functional or areal measure or other suitable metric) representing the accrual or attainment of aquatic functions at a compensatory mitigation site. The measure of aquatic resource functions is based on the resources restored, established, enhanced, or preserved (see Section 6). *Credits* may also be provided through preservation pursuant to 33 CFR 332.8(o)(6).
- C. *Credit Fees* are fees paid by a permittee to purchase PC ILF mitigation credits. Credit Fees are used to pay for all aspects of implementing and managing mitigation projects, as well as Long Term Management duties.
- D. *Debit* means a unit of measure (e.g., a functional or areal measure or other suitable metric) representing the loss of aquatic resource functions at an impact or project site. The measure of aquatic resource functions is based on the resources impacted by the authorized activity (see Section 6).
- E. *Enhancement* means the manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area. [33 CFR 332.2]
- F. *Establishment* (also *creation*) means the manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area and functions. [33 CFR 332.2]
- G. *Establishment phase* (also *performance period*) means the period of time from project construction until all mitigation credits associated with a project have been released, i.e. when a mitigation project is still “earning” mitigation credit. The end of the establishment phase marks the beginning of the *long-term management phase*.
- H. *Credit/Debit Tool* is the abbreviated title for a functional mitigation assessment methodology that Ecology, with input from King County scientists and policy staff, completed. The full title for this document is *Calculating Credits and Debits for Compensatory Mitigation in Western Washington: Operational Draft*. This method is referred to in this instrument as the “Credit/Debit Tool” or as “the tool”. The purpose of the tool is to provide a predictable and reproducible method for assessing mitigation requirements at a given impact project based on losses of

wetland functions and values, and similarly, to assess lift in wetland functions and values resulting from a mitigation project. The tool comprises indicators to rate functions in a wetland unit related to habitat, hydrology, and water quality. The tool is not designed for use in aquatic areas. Many indicators used in the tool are the same as those used in the Wetland Rating System for Western Washington (Hruby 2006). The tool is designed for use at both impact sites (to assess functional loss, “debits”) and at mitigation sites (to assess functional lift, “credits”). The output of the tool (for both impact sites and mitigation projects) will serve as the basis for assigning debits and credits, but it will not be the only factor. Depending on site conditions and project variables, regulatory agencies can adjust the mitigation requirements related to an impact project so long as all regulatory agencies with authority approve of the modified requirements and rationale. Similarly, the mitigation credit earned at a proposed mitigation project may differ from the credit suggested by the tool so long as the program Sponsor provides adequate rationale for the modification and the IRT approves; in all cases, the IRT must approve the amount of mitigation credit to be earned and the “credit release schedule” (see Section 15.3) for each mitigation project. The tool is discussed in greater detail in Section 6 of this prospectus, and is available at:

<http://www.ecy.wa.gov/biblio/1006011.html>

- I. *Functional lift* (or simply “lift”) is the increase in aquatic resource functions provided by mitigation work and usually expressed in terms of credits.
- J. *Impracticable* means that site conditions or other constraints exist that would cause “extreme and unreasonable difficulty” in completing mitigation onsite (Black’s Law Dictionary, West Publishing Co., 1996)
- K. *Long term management phase* means the period beginning at a site when the final credits are released from a mitigation project. During the long term management phase, the monitoring and maintenance will continue according to long term management plans contained in reviewed and approved Mitigation Plans for a site.
- L. *Mitigation Fees, or credit fees*, are fees paid by a permittee using the PC ILF Program to purchase mitigation credits including to be used in implementing mitigation projects.
- M. *Permittee* means an entity which has been issued a permit by one or more regulatory agencies.
- N. *Preservation* means the removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions [33 CFR 332.2]. Preservation may generate mitigation credit (see Section 14).

- O. *Receiving site*, or simply "mitigation site," refers to the area where the compensatory mitigation project will be constructed, monitored, maintained, managed, and permanently protected,.
- P. *Regulating agencies* or "agencies with regulatory authority". For credit transactions through the PC ILF Program, each permitted impact and mitigation receiving project will require permits from one or more agencies (e.g. Corps, Ecology, WDFW, Pierce County). For all cases where mitigation will be required, Pierce County will have regulatory authority under the Critical Areas Ordinance (CAO) (Pierce County Code Title 18E). In most cases involving wetland impacts, Ecology will also have authority as provided under RCW 90.48. This authority may extend to buffer impacts as well. In many cases federal agencies will also have regulatory authority (e.g. the Corps, EPA, USFWS, NOAA, etc.). However, recent legal rulings have made determining federal jurisdiction over wetlands more difficult (e.g. *Rapanos v. United States* resulted in making determinations of Corps jurisdiction over wetlands more difficult). In cases where the Corps does have jurisdiction, addressing impacts to buffers and adequate buffer requirements on mitigation sites may be required to the extent specified in 33 CFR 332.3(i).
- Q. *Restoration* means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is *divided into two categories*: reestablishment and rehabilitation. [33 CFR 332.2]
- R. *Sending sites* are areas where impacts to aquatic resource are incurred, often called the "impact site".
- S. *Wetlands*. The Pierce County CAO regulates all wetlands that meet Washington State Wetland Identification and Delineation Manual (1997) standards. These wetlands include isolated wetlands that may not be regulated by the Corps and EPA.

Pierce County Code 18.25 defines *wetlands* as:

Wetland means areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands generally do not include those artificial wetlands intentionally created from nonwetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities; or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. However, wetlands may include those artificial wetlands intentionally created from non-wetland areas created to mitigate conversion of wetlands, if permitted by Pierce County.

This ILF Prospectus incorporates all other terms as defined in 33 CFR 332.2.

5. Program Establishment and Operation

5.1 Overview

The Pierce County Surface Water Management In-lieu-fee (ILF) Program will serve as one of many options available to permit applicants and permitting agencies to provide mitigation for unavoidable impacts to resources. Under the program, public and private applicants for environmental permits may be allowed to pay into a restoration fund instead of performing permittee-responsible or “their own” mitigation for unavoidable environmental impacts from their development actions. The amount of the payment will be based on the extent and severity of environmental impacts. Payment will be required before permitted impacts can occur.

Payments into the ILF fund will be used to implement mitigation projects at prioritized locations that provide environmental improvement within the watershed where the impacts occur. Mitigation projects will be selected based on an analysis of their ability to compensate for impacts and provide significant and broad ecological benefits. Some projects will be initiated in advance of payment. This will reduce the temporal loss of functions associated with ILF programs that typically have a time lag between the site development impact and the completion of compensatory mitigation.

The ILF program will be operated to ensure that unavoidable impacts are fully addressed and ecological benefits are maximized. Current federal, state, and local regulatory requirements to avoid and minimize impacts before allowing compensation remain unchanged. Mitigation-receiving sites will be designed and constructed to ensure success and managed in perpetuity to support ecological functions. Every dollar deposited into the fund will be tracked to ensure that the appropriate actions are funded. The performance of the program will be monitored and reported. Any deficiencies will be corrected or adaptively managed.

5.2 Program Scope

This prospectus addresses in-lieu fee mitigation for freshwater wetlands and their buffers. However, agencies with regulatory authority may determine, on a case by case basis, ILF mitigation provides the most ecologically preferable option to compensate for unavoidable impacts to other aquatic resources.

In this prospectus, PCSWM proposes two pilot service areas, also called watersheds. Each of the following proposed watersheds within Pierce County drains to the Puget Sound. (Figure 1):

- WRIA 12 – Chambers-Clover
- WRIA 11 - Nisqually

PCSWM plans to have its ILF program approved and operating in the aforementioned pilot watersheds of Pierce County. After demonstrating the success of mitigation-receiving sites in these pilot watersheds, the sponsor intends to add other watersheds within Pierce County to its ILF program, dependent on interest and need.

PCSWM would add additional watersheds through an amendment to the ILF program instrument. The amendment would include a compensation planning framework specific to each joining watershed. Any proposed amendments to the ILF program would go out for official public notice and comment period. Further, proposed amendments would need approval from the IRT, as well as local and tribal entities within the proposed service areas.

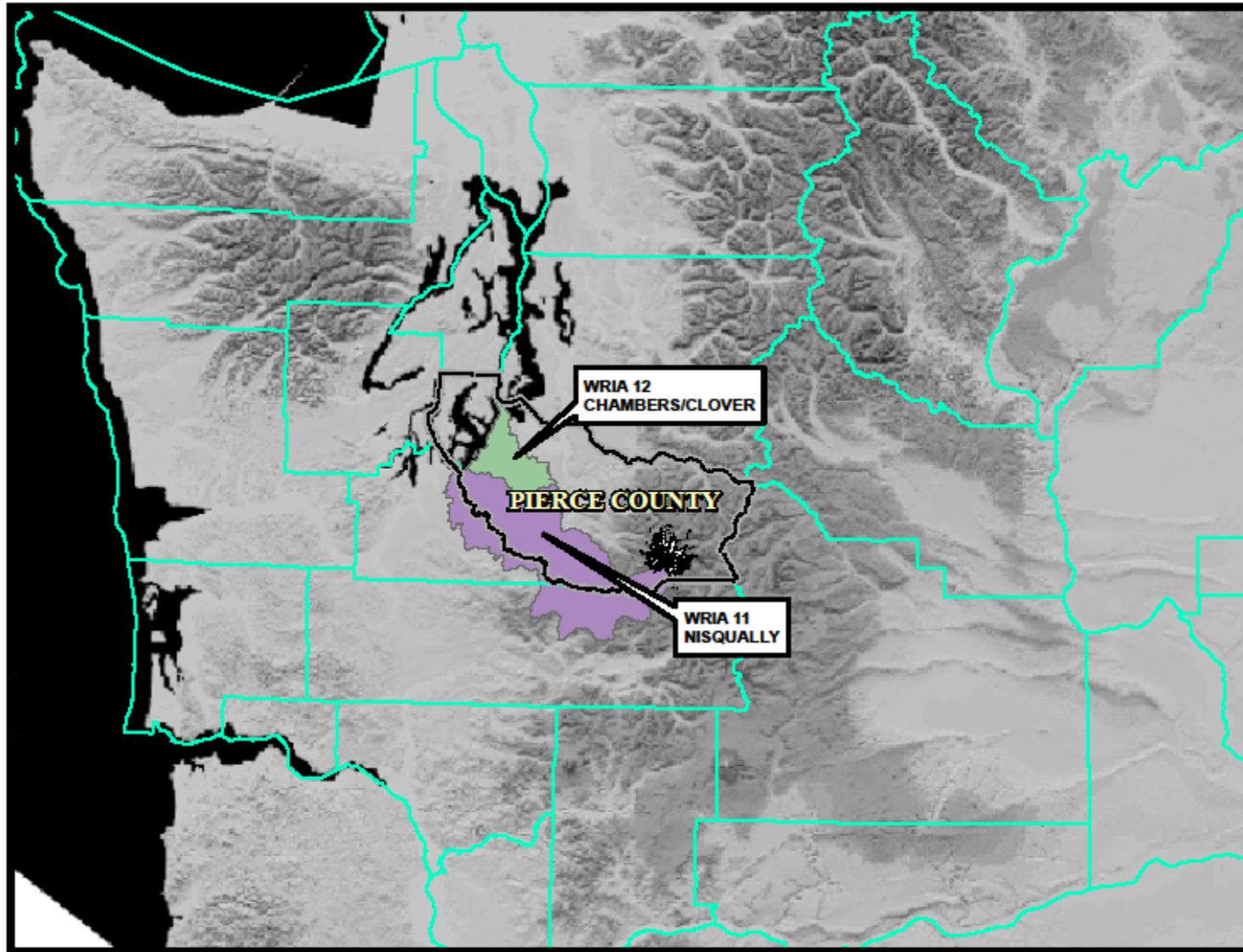


Figure 1. Vicinity map shows the location of Pierce County and its pilot watersheds in relation to Puget Sound and Western Washington.

5.3 Regulatory Authorities

Pierce County Surface Water Management seeks approval of the ILF program through the federal rules for Compensatory Mitigation, published in 2008 (33 CFR Part 332). If approved, the ILF program would become an additional option for permit applicants to provide compensatory mitigation. Specifically, the program allows applicants to pay a fee to the program sponsor in-lieu of completing their own compensatory mitigation projects. However, compensatory mitigation becomes an option only after higher priorities in the mitigation sequence, specifically avoidance and minimization, have been exhausted.

The establishment, use, operation, and maintenance of this ILF program will be carried out in accordance with all applicable authorities. The following list includes the most relevant authorities:

Federal

- Clean Water Act (33 USC §1251 et seq.)
- Rivers and Harbors Act of 1899 Section 9 and 10 (33 USC § 403)
- Regulatory Programs of the Corps of Engineers, Final Rule (33 CFR Parts 320-332)
- Memorandum of Agreement between the Environmental Protection Agency and the Department of the Army concerning the Determination of Mitigation Under the Clean Water Act, Section 404(b)(1) Guidelines (February 6, 1990)
- U.S. Army Corps of Engineers Regulatory Guidance Letter 05-1, Guidance on Use of Financial Assurances, and Suggested Language for Special Conditions for Department of the Army Permits Requiring Performance Bonds, U.S. Army Corps of Engineers, February 14, 2005
- Guidelines for the Specification of Disposal Sites for Dredged and Fill Material (40 CFR Part 230, Section 404(b)(1))
- National Environmental Policy Act (42 USC §§ 4321 et seq.)
- Council on Environmental Quality Procedures for Implementing the National Environmental Policy Act (40 CFR Parts 1500-1508)
- Executive Order 11990 (Protection of Wetlands)
- Executive Order 11988 (Floodplains Management)
- Executive Order 13112 (Invasive Species)
- Fish and Wildlife Coordination Act (16 USC §§ 661 et seq.)
- Fish and Wildlife Service Mitigation Policy (46 FR 7644-7663, 1981)
- Endangered Species Act (16 USC 1531-1544, 87 Stat. 884);
- Magnuson-Stevens Fishery Conservation & Management Act (16 USC § 1801 et seq.)
- Coastal Zone Management Act (16 USC 1451-1465);
- National Historic Preservation Act, Section 106 (16 USC§ 470)

State of Washington

- Water Pollution Control Act, Chapter 90.48 RCW and Chapter 173 -225 WAC)
- Environmental Policy Act (Chapter 43.21C RCW and Chapter 197-11 WAC)
- Growth Management Act (Chapter 36.70A RCW and Chapter 365-195 WAC)
- Construction Projects in State Waters (Chapter 77.55 RCW)

- Shoreline Management Act of 1971 (Chapter 90.58 RCW and Chapter 173-20 RCW)
- Salmon Recovery Act (Chapter 75.46 RCW)
- Aquatic Resources Mitigation Act (Chapter 90.74 RCW)
- Aquatic Lands (Chapters 79.105 - 79.140 RCW)
- Alternative Mitigation Policy Guidance For Aquatic Permitting Requirements from the Departments of Ecology and Fish and Wildlife, February 10, 2000.

Pierce County Code ("PCC") and other Local Authorities

- PCC 2 Administration
- PCC 18E Critical Areas Ordinances
- Shoreline Master Programs

PCSWM intends that its ILF program would be available to compensate for impacts to wetlands and their buffers, regulated at all levels of government, including local, state, and federal permits.

5.4 Mitigation Sequencing and Participating Agencies

The Pierce County ILF Program provides project applicants an option for compensatory mitigation after higher priorities in the mitigation sequence have been exhausted. Specifically, the program provides applicants the opportunity to pay a fee to Pierce County in-lieu of completing mitigation on their own.

Local, state, and federal governments all adhere to regulations requiring mitigation sequencing for proposals that will adversely affect wetlands and other aquatic resources. Mitigation sequencing refers to a series of steps. Applicants must follow these steps and revise their project proposals to the maximum extent practicable in order to eliminate or decrease the negative effects of a proposed project. The following are the steps in the mitigation sequence according to the implementing rules of SEPA (Chapter 197-11-768 WAC) and Pierce County Code 18E.30.050:

1. Avoiding the impact altogether by not taking a certain action or parts of an action;
2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;
3. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
4. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;
5. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and/or
6. Monitoring the impact and taking appropriate corrective measures.

Projects that require Clean Water Act authorization by the Corps must also comply with the Section 404(b) (1) guidelines. These guidelines presume, unless clearly rebutted by the applicant, that less environmentally damaging alternatives to filling special aquatic sites,

such as wetlands, are available for non-water-dependent activities. Whether a project is water dependent or not, the guidelines presume that all practicable alternatives that do not involve a discharge into a special aquatic site, which includes wetlands, have less adverse impact on the aquatic ecosystem.

The Section 404(b)(1) guidelines prohibit the Corps from authorizing a project under an individual permit unless that project would use the “least environmentally damaging practicable alternative” (as determined by the Corps and EPA). If a less environmentally damaging alternative is available and practicable, then a permit would be denied.

In order to qualify for this in-lieu fee program, a project applicant would have to demonstrate, and regulatory agencies concur, that all practicable avoidance and minimization measures have been taken. In addition, the applicant would need to demonstrate that in-lieu fee compensation offers the most ecologically preferable option for offsetting losses.

The ILF Program becomes an option in the sequence only when the applicant can demonstrate that on-site mitigation alternatives are impracticable or of low ecological value and that greater ecological benefits in the basin or watershed can be achieved through off-site, in-lieu fee mitigation.

Pierce County Code 18E.30.070 – Appendix E, II. LOCATION CRITERIA

In cases in which it is determined that compensatory mitigation is appropriate, the following shall apply:

- A. Compensatory mitigation shall be provided on-site, except where the applicant demonstrates that on-site mitigation is not scientifically feasible or practical due to physical features of the site.
- B. When compensatory mitigation cannot be provided on-site, it shall be provided in the immediate vicinity of and within the same watershed as the regulated activity.

After the ILF program is implemented and PCSWM can demonstrate that the program and mitigation-receiving sites successfully and adequately compensate for unavoidable permitted impacts, Pierce County will evaluate whether it is necessary and desirable to amend the code and make ILF mitigation a more preferable option.

5.5 Sponsor Qualifications

Pierce County Surface Water Management (PCSWM) will serve as sponsor of the Pierce County ILF program. The mission of PCSWM is to be a responsive service organization that effectively addresses flood control, water quality, and the preservation of natural drainage systems by constructing stormwater control facilities and by preserving and restoring floodplains and aquatic habitat areas.

PCSWM contains the following sections with the expertise and professional experience necessary to successfully implement and operate an ILF Program:

- Capital Improvement Program – designs and constructs projects that have been highly successful in reducing local flooding, improving surface water quality, and preserving the environment.
- Environmental Permitting and Planning - maintains the scientific expertise to perform environmental services including basin planning, real property management, code amendments, environmental assessments, adverse impact mitigation, design and permitting for compliance with environmental and land use laws, and construction of wetlands and riparian restorations.
- Water Quality and Watershed Services – improves ecosystem health in Pierce County by managing stormwater systems, monitoring watersheds, and building partnerships.
- Maintenance – maintains all public storm facilities and natural storm systems in unincorporated portions of Pierce County.

PCSWM will retain sole responsibility for ensuring the success of its mitigation-receiving sites and the Pierce County ILF program. As such, PCSWM will perform all roles required of a program sponsor in 33 CFR Part 332.8, including the following:

- Prioritize, identify, select, and acquire sites for ILF projects as described in this prospectus
- Design, permit, and oversee construction of mitigation-receiving sites
- Monitor, maintain, and manage ILF projects as described in this prospectus.
- Ensure the success of compensatory mitigation for which fees have been collected.
- Maintain accounting ledgers, tracking all fees collected and expenditures.
- Attain IRT approval for mitigation plans and expenditures from the ILF account.
- Maintain sufficient funds for the long-term management of mitigation projects.
- Report annually on the progress and status of the program including financial accounting reports, credit transaction reports, mitigation receiving site monitoring and progress toward success, status of long term management endowment account, amount of mitigation provided for authorized impacts/fees collected, and any changes in land ownership or transfers of long term management responsibilities.

5.6 Interagency Review Team

In addition to reviewing and commenting on this prospectus, the Interagency Review Team (IRT) reviews, advises, influences, and ultimately approves of the establishment, operation, and management of in-lieu fee programs. The IRT will review and provide comments on the Instrument and subsequent modifications or amendments. Once the program is approved and operational, the IRT will play an integral role in reviewing and approving the sites selected for mitigation and the proposed mitigation plans. IRT members will also review and may provide written comments on annual monitoring reports and field inspections, credit release requests, and remediation plans. The IRT agencies may also provide expertise on other related matters, such as assessing the achievement of

performance standards, reviewing long term management plans, and recommending corrective actions or adaptive management. Some IRT member agencies will also play a role in reviewing permits for impact projects as well.

The IRT is made up of representatives of federal, state, local, and tribal agencies with regulatory authority or natural resource interest. The U.S. Army Corps of Engineers (Corps) and the Washington Department of Ecology (Ecology) will co-chair the IRT. The composition of the IRT will vary depending upon the location of the pilot area and its relevant service area. Agencies and tribes represented on the IRT will likely change through time depending on the nature of the impacts and location of the proposed mitigation receiving sites.

6. Credit and Debit Procedure

The standard unit of measure used for in-lieu fee programs to quantify an impact is a “debit.” Lift at a mitigation site is measured in “credits.” PCSWM proposes to use *Calculating Credits and Debits for Compensatory Mitigation in Wetlands of Western Washington* (Hruby, et. al., 2011), also called the Credit/Debit Tool, for the assessment of impacts and mitigation needs within the pilot service areas in the Pierce County ILF program.

The Credit/Debit Tool is a method that estimates and quantifies:

1. The loss of functions and values when a wetland is altered, also called *Debits*
2. The gain in functions and values that result from compensatory mitigation, also called *Credits*.

The use of the tool offers a critical step needed to establish a functional equivalency of credits and debits.

6.1 Method for Determining Debits and Credits

The ILF process will begin with the assessment of unavoidable impacts to wetland functions resulting from the proposed development. Applying the Credit/Debit Tool will result in the quantification of units of functional loss, or “debits,” associated with the development project. A “debit” equates to one unit of function per acre or square foot of impact. When quantifying an impact to a wetland system, the debits will be divided into three buckets based on wetland functions: (1) habitat debits, (2) hydrology debits and (3) water quality debits. Once the number of debits has been determined, then the appropriate number of credits can be purchased from PCSWM’s ILF program to offset the debits.

At the proposed mitigation-receiving site, the Credit/Debit Tool will be applied to document existing conditions (units of function currently being provided). The tool will also be applied to determine the potential lift associated with the conceptual mitigation plan (anticipated units of function provided by the site after the proposed mitigation has been implemented). A “credit” equates to one unit of function gained per acre or square

foot of mitigation at the receiving site.

Like “debits,” mitigation projects will earn credits in the same three wetland functional buckets: (1) habitat credits, (2) hydrology credits, and (3) water quality credits. There may be cases when pre-mitigation project functions in one or more categories are already high. In these cases, the project will only achieve lift in the functional bucket(s) in which functions were improved (i.e. only when the tool calculates a lift in functions as a result of the project). For example, a reed canary grass-dominated riverine wetland with ample over bank storage may provide high hydrologic and water quality functions in its pre-mitigation project condition. If the mitigation project mainly improves habitat complexity, the project might only earn “habitat credits,” and not earn any hydrology credits or water quality credits. Refer to Appendix A and B for the proposed credit calculations for the pre-capitalization mitigation-receiving sites.

The Credit/Debit Tool is designed to assess wetland and buffer impacts. Determinations of debits (and thereby an applicant’s credit requirement) must be approved by regulatory agencies permitting an impact. If all regulatory agencies issuing permits for an unavoidable impact project agree that the PC ILF Program is the most practicable way for the applicant to meet mitigation needs, then mitigation requirements must be quantified and approved prior to permit issuance. The tool will provide the initial basis for quantifying wetland impact “debits.” However, the number of debits associated with the impact as determined by the tool may be adjusted for site-specific variables such as implementation of best management practices, etc. All regulatory agencies issuing permits for an unavoidable impact project must agree to the mitigation requirements.

Similarly, the Credit/Debit Tool will be used to assess wetland and buffer mitigation, including the preservation, enhancement, re-establishment, rehabilitation, and establishment of wetlands. The IRT must review and approve the proposed amount and type of mitigation credit generated by mitigation-receiving sites. Any time best professional judgment is used to alter mitigation requirements or proposed earned mitigation credit, the sponsor will provide detailed rationale based on best available science. The sponsor will document and deliver this rationale to the appropriate entities (i.e. regulatory agencies for impact projects and the IRT for mitigation projects).

After the PC ILF Program is approved and getting started, it may be necessary to provide training to local, state, and federal regulatory agencies and tribal representatives. The training would focus on the use of ILF credits and how to equitably interpret the results of the credit/debit tool on both the debit and credit end.

In cases where the tool is inappropriate (e.g. for aquatic area or aquatic area buffer impacts) or for jurisdictions that strictly adhere to mitigation ratios in their Critical Area Ordinances, mitigation requirements may be determined according to area-based ratios. Mitigation ratios will be based on area and wetland category, as described in the interagency document, *Wetland Mitigation in Washington State – Part 1: Agency Policies and Guidance* (Ecology, 2006).

6.2 Advance credits

Advance credits pertain to any credits that are available for sale prior to being fulfilled as specified in an approved mitigation project plan. As described in the federal rule on compensatory mitigation (33 CFR 332.8.D.6.iv.D), the ILF program sponsor may request advance credits within each service area based on the projected volume of development activity occurring in that service area.

Advance mitigation credits are like a pre-approved mitigation “credit card” with a set spending limit that the IRT issues to the in-lieu fee program sponsor based on the track record of implementing successful restoration/mitigation projects. The credit card itself actually has no value. When an unavoidable impact project occurs, the sponsor can “borrow” a mitigation credit from the pre-approved credit card, and in turn sell that mitigation credit to the applicant who uses it to satisfy the compensatory mitigation requirements. The sponsor must then pay off the balance on the “credit card” by fulfilling (i.e. “producing”) mitigation credits equal to (or greater than) the number of credits borrowed from the credit card. The remaining allowable “spending limit” on the credit card decreases as mitigation credits are sold to applicants, but increases accordingly when the sponsor “produces” mitigation credits at mitigation projects (i.e. pays off the balance on the card). Section 33 CFR 332.8(n)(3) of the federal rule describes this concept.

In the ILF Program Instrument PCSWM will provide an advance credit request and rationale for each service area.

6.3 Pre-capitalization

PCSWM’s ILF program aims to reduce the temporal loss and exposure to risk by pre-capitalizing credits with mitigation-receiving sites that are ready for implementation. Funds allocated by the state legislature are being used to develop a pilot mitigation – receiving site prior to the collection of fees for unavoidable, permitted impacts (refer to Appendix A). Pierce County has likewise invested funds to acquire, design, and implement a mitigation-receiving site before any unavoidable, permitted impacts occur (refer to Appendix B). This will help ensure no net loss of ecological function as the new program is being established. Refer to Appendix A and B for draft mitigation plans of proposed mitigation-receiving sites.

Pre-capitalized mitigation credits are like a pre-paid credit card. The value of the pre-paid credit card is equal to the amount of mitigation credits that the sponsor has produced (and the IRT has released) prior to an applicant’s need to compensate for unavoidable permitted impacts. These pre-capitalized credits are available for sale without the need to borrow against valuable wetland resources, functions, and values. When an applicant needs mitigation credits to compensate for an unavoidable, permitted impact, the applicant buys the required number of credits from the sponsor. This “purchase” draws down the pre-paid value of the credit card by the exact amount sold to the applicant. If credit sales draw down the balance of pre-capitalized credits to zero, then the sponsor can use advance credits allocated by the IRT (refer to Section 6.2).

PCSWM intends to stay ahead of unavoidable, permitted impacts by continually re-investing funds earned through the sale of pre-capitalized credits to select, design, and implement future mitigation-receiving sites (keeping a positive balance on the pre-paid credit card). The sponsor aims to minimize the use of advance credits, and thereby, reduce the loss of functions typically associated with temporal loss and mitigation failures.

7. Program Account

The sponsor shall establish a mechanism to ensure that funds from in-lieu fee permittees are deposited into a specific ILF Program account. This account will be separate from any accounts that receive funds from entities other than permit applicants. PCSWM shall ensure that the program account is established at a financial institution that is a member of the Federal Deposit Insurance Corporation (FDIC). All interests and earnings accruing to the program account shall remain in that account for use by the ILF Program for the purposes of providing compensatory mitigation.

7.1 Mitigation Fees

According to the federal rule, mitigation fees must represent full-cost accounting. “For in-lieu fee programs, the cost per unit of credit must include the expected costs associated with the restoration, establishment, enhancement and/or preservation of aquatic resources in that service area. These costs must be based on **full cost accounting**, and include, as appropriate, expenses such as land acquisition, project planning and design, construction, plant materials, labor, legal fees, monitoring, and remediation or adaptive management activities, as well as administration of the in-lieu fee program.” 33 CFR 332.8(o)(5)(ii).

PCSW will ensure that the mitigation fees, also called Credit Fees, will reflect the average costs for implementing all aspects of a mitigation project, including land acquisition. The sponsor will base the average costs upon analyses of recent projects completed by Pierce County.

Mitigation fees are intended for use in activities related to producing mitigation credit. Section 332.8(o)(5)(ii) of the federal rule states that credit costs may also be used for “administration of the in-lieu fee program.” This statement implies that credit fees can be used for administrative activities, so long as they are directly related to production of mitigation credit.

Mitigation fees cannot be used for activities such as trail maintenance, litter patrol, and other types of routine public land stewardship or maintenance activities unrelated to management of a mitigation site.

7.2 Calculation of Mitigation Fees

PCSWM will establish the mitigation fees, or credit price, by accounting for all aspects of mitigation project implementation, including site selection, land acquisition, design and permitting, construction (plus costs associated with contracting), performance period maintenance and monitoring, and long-term stewardship. The credit price will also account for inclusion of contingency funds for each project. The sponsor will base the credit price on recent mitigation or restoration projects within Pierce County. PCSWM will use a three-step process to determine a cost per credit for each project (see below). A final credit price will result from a weighted average of costs per credit from the recent projects.

The three-step process for each project will entail:

1. Evaluating the number of credits of lift generated by each project, as determined by using the Credit/Debit Tool. Each analysis will calculate the number of habitat credits, hydrology credits, and water quality credits gained as a result of activities performed at each project.
2. Determining full costs for each project, including all expenditures to date and all expected future expenditures necessary to complete the project (achieve desired performance standards). PCSWM will review and analyze project budgets thoroughly to ensure that budgeted costs will be sufficient to cover all requirements for implementing a mitigation project according to the federal rule.
3. Calculating the cost per credit by dividing the total (adjusted) project costs by the total number of credits (i.e. the sum of all functional credit types) of lift associated with the project.

PCSW would have great difficulty determining which proportion of project costs is associated with generating specific functional subtypes of credits (i.e. habitat, hydrology and water quality). Therefore, the sponsor will assume each type of credit costs the same as the next.

The prices of mitigation fees will be adjusted periodically to reflect actual costs associated with implementing mitigation projects through the program.

7.3 Allocation and Use of Mitigation Fees

Upon receipt of mitigation fees, the sponsor will allocate funds to an account specific for the service area in which the impact occurred. Within the service area account, the sponsor will allocate pre-determined percentages of the fee into the following sub-accounts:

- Contingency Fund used to ensure financial resources for construction cost overruns, site repair, implementation of adaptive management plans, and site replacement during the performance period. Any unused contingency funds will be transferred into long-term management fund at the end of the performance period.
- Long Term Maintenance and Management Fund solely for use in long term management, such as long-term monitoring, site protection enforcement, site management and maintenance (if needed), long-term reporting, and all other aspects involved in implementing the long-term management plans included in IRT-approved Mitigation Plans. Long term management funds are not available for use

on a project until the project enters the long term management phase (i.e. after the performance period is complete and all credit associated with a project is released.

- Program Administration Fund will pay for program administration duties, including but not limited to:
 - a. Site selection and concept designs
 - b. Fee and Credit accounting
 - c. Legal services
 - d. Data management (e.g. maintaining spreadsheets and a database)
 - e. Reporting
 - f. Correspondence and meetings with the IRT and other regulatory agencies
 - g. Program development (e.g. working to improve how the program works to ensure highest quality mitigation)
 - h. Other program administration duties as necessary

The remaining money from the mitigation fee (after percentages have been allocated to the above funds) will fund Project Implementation, including the following aspects of future mitigation-receiving site development:

- Land acquisition
- Mitigation-receiving site design and project permitting
- Construction and implementation
- Performance period maintenance and monitoring

The process for planning and implementing mitigation projects is described in Section 15.

Prior to using any mitigation fees for land acquisition or project implementation, the sponsor will consult the IRT and adhere to the requirements specified in the federal rule, 33CFR 32.8(i)(2):

(2) The sponsor must submit proposed in-lieu fee projects to the district engineer for funding approval. Disbursements from the program account may only be made upon receipt of the written authorization from the district engineer, after the district has consulted with the IRT. The terms of the program account must specify that the district engineer has the authority to direct those funds to alternative compensatory mitigation projects in cases where the sponsor does not provide compensatory mitigation in accordance with the time frame specified in paragraph (n)(4) of this section.

If advance credits are used, PCSWM's ILF Program will have three growing seasons (~3 years) to obligate funds for compensatory mitigation after fees are collected.

8.0 Ledger

The sponsor will maintain two ledgers: one to track mitigation fees and expenditures, and a second to track debits and credits. Both ledgers will be organized by service area, and the

two will be related to each other. The ledgers will be used to track the source of funding for mitigation projects as well as where and how impact mitigation fees are spent.

8.1 Mitigation Fee Ledger

The program sponsor will compile an annual ledger report for the District Engineer of the Seattle District, U.S. Army Corps of Engineers and the Wetland Section of the Washington State Department of Ecology that will include the following information:

- Beginning and ending balances of available credits for each resource type and service area
- Beginning and ending balances of permitted impacts for each resource type and service area
- All additions and subtractions of credits
- Any other changes in credit availability (e.g., additional credits released, credit sales suspended)

The fee ledger will track all income (Mitigation Fees) and expenditures within the program. The fee ledger will comprise separate “sub-ledgers” for each service areas. Each service area fee ledger will clearly show the following:

Mitigation fees collected for each impact project:

- Credit Fee amount
- Impact project Permit Number
- Jurisdictional notation – indicates whether fees collected for unavoidable, permitted impacts involved federally jurisdictional wetlands, non-federally jurisdictional wetlands (i.e., isolated wetlands), locally-regulated critical area resources (i.e., buffer only impacts), or some combination.

Deposits and Expenditures for the Contingency Fund:

- Origin of deposits (Impact Permit Number(s))
- Contingency Expenditures (Mitigation Project Name)

Deposits and Expenditures for the Long-term Management Fund:

- Origin of deposits (Impact Permit Number(s))
- Long-term Management Expenditures (Mitigation Project Name)

Deposits and Expenditures for the Program Administration Account:

- Origin of deposits (Impact Permit Number(s))
- Program Administration Expenditures

Deposits and Expenditures for each Project Implementation Fund:

- List of expenditures by Task categories covering all aspects of implementing mitigation-receiving projects, e.g., land acquisition, design, permitting, construction, maintenance and monitoring, etc. (See Section 15 for implementation tasks).

8.2 Credit Ledger

The credit ledgers will track credits that are sold, as well as fulfillment credits that will be released once mitigation projects achieve performance standards. From a credit accounting standpoint, the sponsor will seek to maintain a surplus of credits available to sell (pre-capitalized credits and advance credits). PCSWM aims to stay ahead of unavoidable, permitted impacts by continually generating credits through mitigation prior to drawing down the total amount of pre-capitalized credits (keeping a positive balance on the pre-paid credit card). The sponsor aims to minimize the use of advance credits and reduce the loss of functions typically associated with temporal loss and mitigation failures.

8.2.1 Balancing Credits by Functional Type

Until the PC ILF program begins to sell credits to offset debits associated with unavoidable, permitted impacts, it is hard to predict how credit in each function bucket will balance with debits in each function bucket (see Section 6). For example, identifying mitigation-receiving sites and designing projects to earn habitat credits may prove easy, while implementing mitigation projects that will earn hydrology and water quality credits may be more difficult. Depending on the service area, the identified priorities in a watershed may indicate that an imbalance among function buckets is desirable. In other cases, balancing debits and credits across function types may be the goal.

As the program accrues mitigation fees and implements mitigation through time, the type and amounts of debits and credits, and the balance among them, will be tracked and reported to the IRT (via the Credit Ledger, see below). The sponsor will consult with the IRT to discuss whether the function buckets of credits should balance the function buckets of debits or if “trading” among function buckets would be preferable. Tracking each of the three function buckets of debits and credits separately will allow these decisions to be made in an explicit and transparent way.

8.2.2 Wetland Credit/Debit Ledger

The sponsor will maintain a Wetland Credit/Debit Ledger to account for all wetland and wetland buffer credit transactions. This ledger will be used to track credits that are sold as well as credits that are released as mitigation projects meet performance success standards (see Section 15.3, Credit Release).

PCSWM will compile an annual ledger report for the District Engineer of the Seattle District, U.S. Army Corps of Engineers and the Department of Ecology that will include the beginning and ending balance of available credits (released and advance credits), permitted impacts for each resource type, all additions and subtractions of credits and any other changes in credit availability (e.g. additional credits released or if credit sales are suspended).

The credit ledger will contain basic information about each impact site and mitigation project. At a minimum, PCSWM will develop a spreadsheet that will contain much more

detail about each of the projects. The sponsor will include an example of the spreadsheet in the ILF Program Instrument.

9.0 Reporting

The ILF program sponsor will compile an annual ledger report for the District Engineer of the Seattle District, U.S. Army Corps of Engineers and Ecology that will include all financial activity in the program account, the beginning and ending balance of available credits, permitted impacts for each resource type, all additions and subtractions of credits, and any other changes in credit availability (e.g. additional credits released or if credit sales are suspended).

The Sponsor will submit annual reports according to 33CFR 332.8(i)(3), which states:

(3) The sponsor must provide annual reports to the district engineer and the IRT. The annual reports must include the following information:

(i) All income received, disbursements, and interest earned by the program account;

(ii) A list of all permits for which in lieu fee program funds were accepted. This list shall include: The Corps permit number (or the state permit number if there is no corresponding Corps permit number, in cases of state programmatic general permits or other regional general permits), the service area in which the authorized impacts are located, the amount of authorized impacts, the amount of required compensatory mitigation, the amount paid to the in-lieu fee program, and the date the funds were received from the permittee;

(iii) A description of in-lieu fee program expenditures from the account, such as the costs of land acquisition, planning, construction, monitoring, maintenance, contingencies, adaptive management, and administration;

(iv) The balance of advance credits and released credits at the end of the report period for each service area; and

(v) Any other information required by the district engineer.

The following sections of the federal rule describe reporting requirements:
33 CFR 332.8(q) *Reporting*.

(1) *Ledger account*. The sponsor must compile an annual ledger report showing the beginning and ending balance of available credits and permitted impacts for each resource type, all additions and subtractions of credits, and any other changes in credit availability (e.g., additional credits released, credit sales suspended). The ledger report must be submitted to the district engineer, who will distribute copies to the IRT members. The ledger report is part of the administrative record for the

mitigation bank or in-lieu fee program. The district engineer will make the ledger report available to the public upon request.

(2) *Monitoring reports.* The sponsor is responsible for monitoring the mitigation bank site or the in-lieu fee project site in accordance with the approved monitoring requirements to determine the level of success and identify problems requiring remedial action or adaptive management measures. Monitoring must be conducted in accordance with the requirements in 33 CFR 332.6, and at time intervals appropriate for the particular project type and until such time that the district engineer, in consultation with the IRT, has determined that the performance standards have been attained. The instrument must include requirements for periodic monitoring reports to be submitted to the district engineer, who will provide copies to other IRT members.

(3) *Financial assurance and long-term management funding report.* The district engineer may require the sponsor to provide an annual report showing beginning and ending balances, including deposits into and any withdrawals from, the accounts providing funds for financial assurances and long-term management activities. The report should also include information on the amount of required financial assurances and the status of those assurances, including their potential expiration.

Finally, as provided in 33 CFR 332.8(i)(4), “the district engineer may audit the records pertaining to the program account. All books, accounts, reports, files, and other records relating to the in-lieu fee program account shall be available at reasonable times for inspection.”

Compensation Planning Framework

Pierce County contains all, or portions, of five major watersheds, or Water Resource Inventory Areas (WRIAs).

- WRIA 10 – the Puyallup/White watershed
- WRIA 11 – the Nisqually watershed
- WRIA 12 – Chambers/Clover watershed
- WRIA 15 – Kitsap watershed
- WRIA 26 – Cowlitz watershed

The Cowlitz watershed includes the southeast corner of Pierce County. However, the Cowlitz watershed drains into the Columbia River rather than the Puget Sound, and therefore will not be included in the pilot area for the ILF Program. The Kitsap watershed includes the northwest portion of Pierce County, including the Key and Gig Harbor Peninsulas, as well as Anderson, McNeil, and Fox Islands. This watershed contains the entirety of Kitsap County, and therefore will not be included in the pilot area for the ILF program.

The Puyallup/White Watershed was included in the initial Prospectus submitted for the Pierce County Pilot ILF Program (May 12, 2010). However, after receiving comments from tribes within the watershed and following-up with specific discussions, the sponsor has decided not to include the Puyallup/White Watershed as a pilot service area at this time. If the ILF program proves successful, the sponsor will begin discussions with the tribes in this watershed to investigate the possibility of selecting a future mitigation-receiving site within the Puyallup/White Watershed. If the tribes are open to this proposal, the sponsor will work with the tribes to amend the ILF Program Instrument by adding this watershed as a new service area.

Consequently, the Pierce County pilot area contains the remaining watersheds, which include the Chambers/Clover and Nisqually, see Figure 2. Each of these watersheds has some level of degraded function, providing ample opportunities for watershed-based mitigation activities to offset unavoidable, permitted impacts.

Pierce County provides an ideal location as a pilot area for PCSWM's in-lieu fee program due to the abundance of existing work and data available. Pierce County's Surface Water Management has developed several basin plans to address problems with flooding, water quality, and lack of floodplain habitat. The basin planning process characterizes the physical, biological, and habitat conditions within each watershed. Then it identifies action items and projects aimed at improving water quality and floodplain habitat and reducing flooding.

Watershed Councils in Pierce County have also developed watershed action plans. Originally formed to identify, reduce, and prevent non-point pollution, these groups advocate more broadly to protect, restore, and enhance their watersheds and to promote

stewardship. Watershed council members include representatives from local governments, tribes, businesses, elected officials, environmental agencies, non-profit groups, and private citizens.

In addition, Pierce County, with assistance from Salmon Recovery Funding Board and Puget Sound Acquisition and Restoration funds, serves as the “lead entity” for implementing salmon recovery in the Chambers/Clover watershed. This includes identifying and assessing priority areas for habitat and ecosystem restoration. In the Nisqually Watershed the Nisqually Tribe serves as the “lead entity.” The Nisqually Chinook Recovery Plan prepared by the Nisqually Chinook Recovery Team (2001) provides a resource for priority habitat areas in the Nisqually watershed.

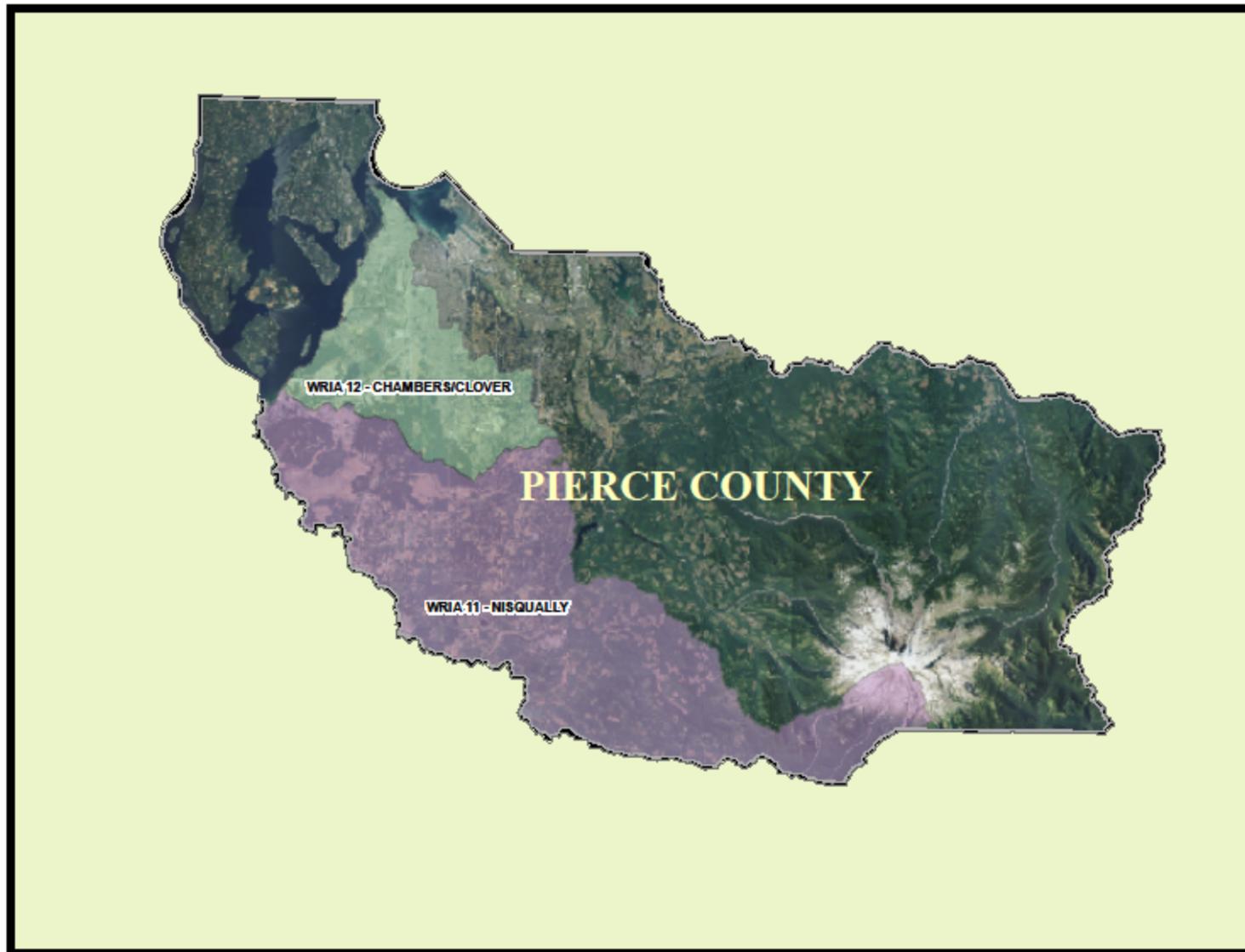


Figure 2. Map of Pierce County with pilot watersheds/service areas highlighted.

10.0 Descriptions and Assessments of Service Areas

For the purposes of PCSWM's ILF Program, service areas are defined by Water Resource Inventory Area (WRIA) boundaries. Ecology and other state natural resource agencies developed the WRIs as a way to delineate the state's major watersheds. A watershed is the geographic region that drains water (and everything water carries) into a river, stream, or body of water. In the state of Washington, the WRIA provides a common denominator for natural resource planning. Watershed goals and objectives and watershed plans for improving water quality and water quantity/in-stream flows and recovering salmon are based on WRIs.

PCSWM proposes two pilot service areas, which align with the Water Resource Inventory Areas (WRIs) in Pierce County:

- Chambers/Clover Watershed – WRIA 12
- Nisqually Watershed – WRIA 11

Figure 2 shows the service area boundaries in the Pierce County pilot area.

10.1 The Chambers-Clover Creek Watershed – WRIA 12

The Chambers-Clover Creek Watershed extends from the Puget Sound east to Graham and from Point Defiance on the north to DuPont at the south boundary. It has a drainage basin of about 180 square miles. It includes Fircrest, Ruston, University Place, Lakewood, DuPont, Steilacoom, Frederickson, Parkland, Spanaway, and portions of Tacoma and Joint Base Lewis-McChord (JBLM).

Clover Creek is the main stream in WRIA 12. Clover Creek emerges from the ground near the town of Frederickson. It flows generally northwest for about 14 miles through the communities of Spanaway and Parkland and the city of Lakewood before flowing into Lake Steilacoom. Significant tributaries to Clover Creek include Morey Creek and the North Fork of Clover Creek. The largest lakes in the Clover Creek basin are Spanaway, Tule, and Lake Steilacoom.

Chambers Creek flows out of the north end of Lake Steilacoom, and approximately five miles later it discharges into Chambers Bay of the Puget Sound. Most of the Chambers Creek basin falls into the jurisdiction of either the City of Tacoma or City of Lakewood.

Pierce County has divided this watershed into the following four basins (See Figure 3):

- Chambers Bay
- Clover Creek/Steilacoom
- American Lake (no surface water connection to Chambers or Clover Creek, but all lakes within the watershed have the same groundwater source)
- Tacoma West (short watersheds which drain directly to Puget Sound)

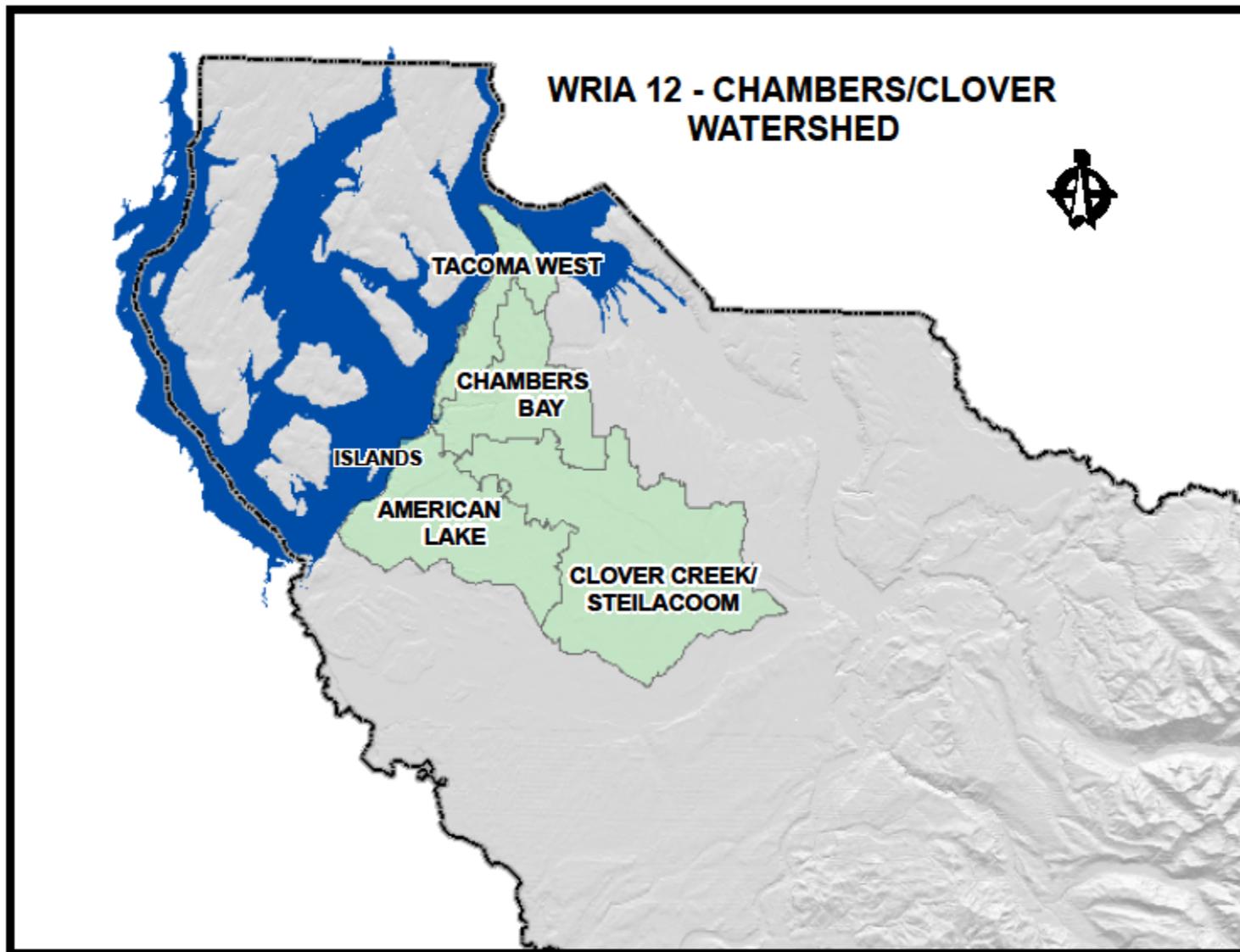


Figure 3. Chambers-Clover Watershed – WRIA 12, with basins identified.

10.1.1 Historic Conditions

Glaciations in the Chambers-Clover Creek watershed gave rise to alternating layers of permeable glacial outwash and impervious glacial till. The till restricts the vertical movement of water. Thus, groundwater moves horizontally through the outwash layers. Many of the wetlands in the Clover Creek basin were formed by glacial melt-water depositing over time in closed depressional basins as the glaciers receded.

A shallow groundwater layer supplies most of the lakes in the western portion of the watershed. It also produced aquifers that most of the residents in the watershed use for drinking water. The depth to groundwater in the basin ranges from 0 to more than 100 feet.

Highly permeable outwash soils cover much of the watershed. This allows much of the precipitation that falls to readily infiltrate and recharge groundwater. Stormwater and septic systems failures also infiltrate and have historically contributed to groundwater contamination. Contamination of shallow groundwater occurred as early as 1939. As a result, wells were constructed to tap into the deeper groundwater system. Due to the interconnection between surface and ground water, EPA designated all of the area within the watershed as part of a Sole Source Aquifer System to provide limited federal protection to drinking water supplies.

In general, water quality has deteriorated over time, particularly since the 1960s. Between 1960 and 1980, the levels of nitrates and chlorides in the shallow groundwater system rose by 40 and 75 percent, respectively. The contamination appears to be most closely linked to high-density residential areas using septic tanks and stormwater recharge systems.

Historically, the watershed provided an extensive shoreline connected to surface water drainages. This supported diverse populations of marine, freshwater, and anadromous fish. The Puyallup and Steilacoom Indian tribes have a long history of dependence upon fish and shellfish resources in this area. The Clover Creek area was also known to support Western pond turtles and Western gray squirrels (Tobias, 2003).

Over time, agricultural, residential and commercial activities have moved, modified, and channelized Clover Creek over most its length. A mile-long segment of the creek, which is known as the middle-reach, was split into two channels for agricultural purposes around 1900. The existing stream channels are perched (at higher elevation) above the area between the channels, which is mostly seasonal wetland. The channel banks frequently fail and release flow to the middle area, where it disappears into the soils (Thomas, 2005).

In the late 1930s the Clover Creek was shunted into underground pipes to flow underneath McChord Air Force Base (now JBLM). Around the same time projects were implemented upstream to prevent flooding. It is believed that dredging and bulldozing activity may have broken through a layer of glacial till. After this, the stream started to dry on occasion in the summer (Tobias, 2003). Another belief is that excess water withdrawal from aquifers and waste water discharge through sewer pipes, into the Sound have lowered the shallow

groundwater aquifer to the point that streams go dry for an extended part of the season. Regardless of the cause, salmon and large fish have disappeared in the mid-range of the stream.

Historically, Lake Steilacoom was a small pond in a wetland, which formed the headwaters for Chambers Creek. This was dammed in the mid 1800s, which created a reservoir that became known as Lake Steilacoom. Additionally, a dam was constructed at the mouth of Chambers Creek where it discharges into Chambers Bay. This dam effectively limits the tidal influence of the estuary, as well as the natural upstream migration of salmonids. The dam on the mouth of Chambers Creek also blocks the downstream flow of sediment into Chambers Bay. A railroad dike highly constricts the outlet of Chambers Bay to Puget Sound. The ingress and egress of the tides are therefore forced through a narrow railroad bridge.

10.1.2 Current Conditions

The Chamber-Clover Creek watershed is predominately urban. It has a population of about 300,000 but this is expected to increase by a third over the next decade. Urban growth predictions assume that commercial and residential development will occur on much of the currently undeveloped land within this watershed. In fact, the majority of the watershed lays within existing urban growth boundaries for the many municipalities as well as Pierce County. Of the areas in the watershed that are currently undeveloped, approximately 20 percent are located on the federally managed military reservation.

NWI mapping from the 1980s identified 3.6 square miles of wetlands in the Clover Creek basin. The wetlands mapped by the NWI are primarily palustrine emergent and scrub-shrub wetlands associated with creek channels and the headwaters of North Fork Clover, Clover and Spanaway Creeks. In fact, the Spanaway Creek area contained nearly 50 percent of the wetland area in the Clover Creek basin. Large tracts of forested and scrub-shrub wetland are located south and southwest of Spanaway Lake, forming the headwaters of Spanaway Creek. This wetland complex also extends east onto Fort Lewis (Thomas, 2005).

Today, Clover Creek has perennial flow upstream of Brookdale Golf course where it is fed by the upper Clover Creek subbasin. This upper subbasin appears to be relatively unaltered and still exhibits a wide and active floodplain. However, the middle reach of Clover Creek has intermittent flow. This is attributed to the significant influence of groundwater on the creek's flows. Thus, rainfall events in the upper subbasin have only a slight effect on creek level. After Clover Creek connects with Spanaway Creek it flows year-round. In a typical water year, Clover Creek begins to flow throughout its channel by late December (Thomas, 2005).

Flooding is a concern, particularly in the Clover Creek basin. Flooding problems will likely intensify as the watershed continues to develop and impervious area increases. A lack of floodplain connectivity due to channelization contributes to flooding issues. Reed canary grass and other invasive vegetation have clogged some creek segments, thereby reducing channel capacity. In addition, flood storage has been lost due to illegal filling and grading in wetlands and floodplains.

Low flows or intermittent flows are also a concern. Numerous private landowners have created ponds by diverting flows from creeks in the Chambers-Clover watershed. Landowners have not received permits to construct most of these ponds. Furthermore, the landowners, for the most part, did not line the ponds to prevent surface water from infiltrating to become groundwater (Pierce County Public Utilities, 2002).

Additionally, high flows that flush down the creek are a concern especially during fall and early winter when the creek is transitioning between being dry and ephemeral flow. The man-made efficient storm system in the North Fork Clover Creek subbasin will respond quickly to storm events and send a pulse of stormwater down the creek. This will give fish waiting in Lake Steilacoom a false indication to start upstream. Then the pulse dies out and the creek rapidly goes dry again, resulting in potential fish stranding.

Poor water quality is a primary concern because drinking water in the Chambers-Clover watershed comes from a sole source aquifer. Water quality issues include fecal coliform, low dissolved oxygen, temperature, phosphorus, pH, turbidity, and toxic metals (such as arsenic, copper, and zinc) in surface waters. Groundwater contaminants include organic chemicals, nitrates, and chlorides. The water quality issues in this watershed impair drinking water, recreation, and wildlife habitat, including reduced native salmon runs.

A dam at the mouth of Chambers Creek poses a barrier to migrating fish in the Chambers-Clover basin. Washington Department of Fish and Wildlife (WDFW) operates a trap at the upper end of Chambers Bay for returning adult salmonids. Chinooks are exclusively used for hatchery production. WDFW releases Coho, chum, and other incidentally returning salmonids upstream of the dam. However, loss of feeding, spawning, and rearing habitat throughout all portions of the watershed has limited native anadromous fish populations. Water quality and flow conditions in the Chambers/Clover Creek Watershed have also significantly deteriorated as the area has become urbanized over the past century. As a result of these impairments, native runs have substantially declined. In fact, the Chambers-Clover early coho run (*O. kisutch*) and the Chambers - Leach summer chum run (*O. keta*) are extinct.

Improvement of the beneficial uses, including drinking water, recreation, and wildlife habitat, within the watershed depends upon the protection and restoration of high functioning wetlands and other aquatic resources.

10.1.3 Threats

The Chambers-Clover watershed faces several major threats including:

1. Development, including residential, commercial, industrial, as well as roads, transportation and utility infrastructure, and shoreline armoring – Increased development will result in further alteration of terrestrial, freshwater, and marine habitats, habitat forming processes and foodwebs.

Development results in impacts that are often irreversible or prohibitively costly to restore. For example, The Burlington Northern railroad presents the biggest constraint to marine and nearshore restoration in the watershed.

Indirectly, development diminishes opportunities for restoration and habitat enhancement, while at the same time increasing dependency upon structural flood management measures. The Clover Creek basin currently experiences flooding, over roadways and on private property. These problems will only be exacerbated as more development and greater densities occur.

2. Surface water loading and runoff from the built environment – As development increases so do the threats posed by surface water loading and runoff. Existing laws and regulations govern the design of systems to manage surface water loading/runoff for new development. However, in a watershed with shallow groundwater and highly permeable soils, run-off and effluent must be carefully treated to prevent further contamination of groundwater. Studies indicate that septic systems from existing residential developments in the Clover Creek basin substantially contributed to increases in nitrates and chlorides in groundwater.

In addition, water withdrawals and diversions may affect ground water fed aquatic systems and diversion of surface water due to stormwater treatment could deprive some aquatic systems of hydrologic input.

3. Channelization, dikes, dams, levees, and culverts – The creeks within the Chambers/Clover watershed have been highly modified, resulting in rivers disconnected from their floodplains, habitats which do not support complex food webs, reduced biodiversity, and threatened survival of some species, such as salmon. The watershed also contains dams, weirs, and culverts, which restrict juvenile and adult salmonid migration. A dike, supporting the Burlington Northern Railroad, almost completely constricts Chambers Bay.
4. Climate change – Increased temperatures, changes in volume and timing of precipitation and stream flows, as well as a reduction in snowpack will have major implications for in-stream flows, which are already so low in certain reaches that adult salmonids are unable to migrate further upstream and juveniles are stranded. Ecosystem health, fish and wildlife, forests, and agricultural practices are also likely to be affected. A rise in sea level would likely affect the Burlington Northern railroad line, which runs along the Puget Sound shoreline from north of the Nisqually Reach to just south of Point Defiance. Probable effects could include increases in coastal erosion, landslides, inundation and flooding.
5. Invasive species (terrestrial, freshwater, and marine) – Whether they are introduced deliberately or inadvertently, invasive species may out compete native species for resources, prey upon native species, reduce the resiliency of ecosystems, and change the character of habitat. Climate change may exacerbate the threats posed by invasive species within the Puget Sound Basin.

Clearly, some of the threats to this watershed are beyond the scope of the PCSWM's ILF Program to address. For example, climate change is a global problem that mitigation through the ILF Program will be unable to ameliorate. However, by understanding that climate change will affect the watershed, mitigation activities can be planned for in the context of this threat. This may be particularly important for estuarine and nearshore marine restoration projects.

10.1.4 Aquatic Resource Goals and Objectives

The PCSWM's ILF Program aims to address the following goals and objectives within the Chambers/Clover watershed:

- Restore and protect the natural conveyance system and flow regimes, such as channel sinuosity and complexity, sediment delivery, connection to floodplains, wetland flood storage, and natural water quality treatment.
- Improve surface water quality by preventing excess nutrients, sediment, and pollutants from discharging into waters, particularly those waters that flow into Puget Sound. Similarly, improve groundwater quality by preventing excess nutrients and pollutants from infiltrating and contaminating groundwater supplies
- Restore and protect the following habitats:
 - Wetland – to provide flood storage, improve water quality, and enhance habitat for flora and fauna
 - Riparian – to buffer the effects of urbanization, improve water quality, reduce flood damage, and provide habitat improvement
 - In-stream – to allow safe passage for fish and wildlife, reduce erosion and flood damage, and enhance habitat for flora and fauna
 - Estuarine and nearshore – to provide an increasingly rare ecosystem, as well as habitat for the flora and fauna dependent upon this ecosystem, including ESA listed salmonids
 - Vegetated corridors – to provide connections for wildlife movement between upland, riverine, estuarine, and open water habitats
- Reduce flood damage by restoring hydrologic processes, where possible, and restoring and creating additional wetland habitat

10.2 The Nisqually River Watershed – WRIA 11

The Nisqually River originates from the Nisqually Glacier on the south slope of Mount Rainier. It flows northwest approximately 78 miles to the Nisqually Estuary, where it discharges into the Puget Sound. The watershed encompasses about 768 square miles (see Figure 5). The La Grande Canyon provides a natural break between two physiographic areas in the watershed. Downstream of the canyon the Nisqually watershed consists of low hills and prairie plains of glacial outwash. Upstream of the canyon volcanic rock and steeper mountainous terrain dominate the area. The canyon itself contains 200-foot sheer

cliffs. Major tributaries include Mineral Creek, Little Nisqually River, Mashel River, Ohop Creek, Tanwax Creek, and Muck Creek.

The Nisqually River straddles the Thurston-Pierce County line, while the southern portion of the watershed lies within Lewis County. The western portion of the watershed lies in Thurston County and encompasses the cities of Yelm, and portions of Lacey. The eastern portion lies in Pierce County and contains the cities of Roy, and Eatonville. The lower watershed is predominately under federal management. The Nisqually National Wildlife Refuge manages the delta and estuary and the lower reaches are on the Fort Lewis Military Installation. The Nisqually Indian Tribe also manages a portion of the lower reaches of the Nisqually Valley as Reservation land. Much of the upper watershed is federally managed as either National Park or National Forest

Pierce County Surface Water Management has divided the portion of the watershed that lies within Pierce County into the following six basins:

- Upper Nisqually
- Mashel River
- Ohop Creek
- Mid-Nisqually
- Muck Creek
- Lower Nisqually

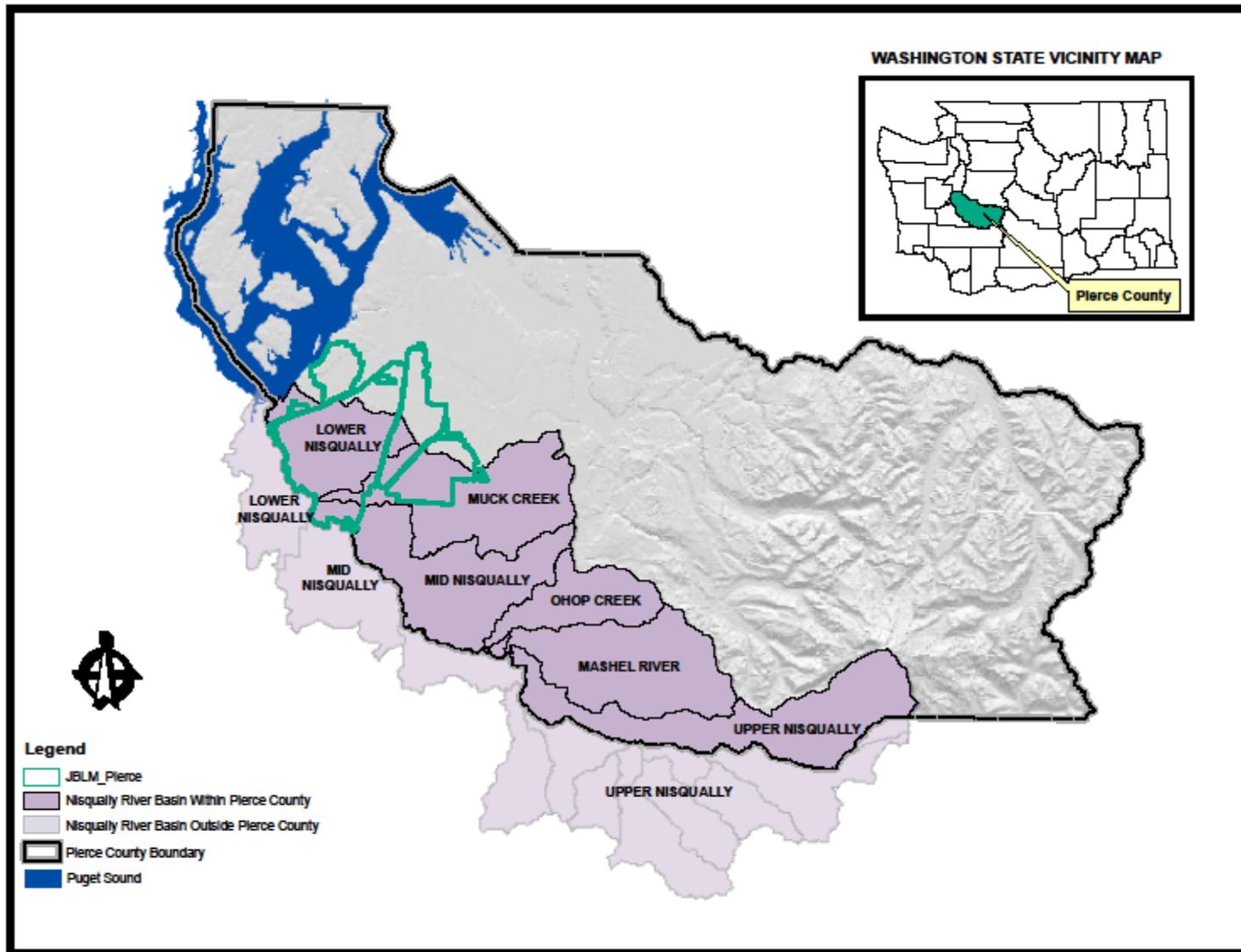


Figure 5. Nisqually Watershed – WRIA 11. Basins located within Pierce County delineated.

10.2.1 Historic Conditions

The Nisqually River is the traditional territorial center of the Nisqually tribe, who have lived and fished within the watershed for thousands of years. Historically, the watershed contained heavily forested mountain slopes, shrubs in the lowlands, and grasses in the prairie lands and meadows. Before European settlement, Nisqually people burned much of the prairie land each fall. Burning prevented the establishment and growth of trees into these areas. Once burning practices came to an end, fir-dominated forests replaced most of the former prairie areas and oak forests (Nisqually watershed plan).

Three dams have been built on the Nisqually River for hydroelectric power production, the Centralia Diversion Dam for Yelm Hydroelectric Project, the Alder Dam, and the LaGrande Dam. The dams have altered the river's hydrologic flow through impoundment, diversion, or both. The Yelm Project was installed in the 1930s. It diverts a portion of the river through a 9-mile canal and a powerhouse before returning the flow to the Nisqually River nearly 14 miles downstream. A standard fish ladder was installed in the 1950s.

In the 1940s Alder Dam and La Grande Dam were built to impound the Nisqually River for hydroelectric power production. Tacoma Power manages these dams today. The La Grande Dam prevents anadromous fish from ascending further upstream. However, before the construction of the dams, an impassable waterfall in the La Grande canyon prevented salmon from migrating further upstream. Flooding on the Nisqually River is related largely to the amount of water released from La Grande Dam. This, in turn, is related to how much water is released from Alder Dam.

Historically, the Nisqually River estuary was the largest in the South Sound. Estimates indicate it was greater than five square-miles, contained by steep bluffs on the sides and a steep drop off at the outer edge of the delta. This area provided several types of habitat, including mudflat, emergent saltmarsh, a transition zone between salt and fresh water, and tidally influenced, freshwater riverine.

Over time, a variety of development activities have significantly altered the Nisqually River estuary. The construction of dikes in the early 1900s converted most of the Nisqually River estuary into pasture. Beginning in 1912, railroad construction along the north end of the Nisqually Reach resulted in shoreline armoring to prevent erosion of the railroad bed. This armoring has drastically reduced sediment contribution to the beach, thereby damaging nearshore habitat. In the 1960s construction of Interstate-5 over the Nisqually River area not only filled but also hydrologically disconnected a portion of the historic estuary.

10.2.2 Current Conditions

The Nisqually watershed is considered much less altered and degraded than the majority of Puget Sound's lowland rivers. This can be attributed to the fact that the upper watershed is predominately forested and managed for forestry and recreation. In addition, significant stretches of the river below the dams are in protected ownership. Public ownership includes the Nisqually National Wildlife Refuge, Joint Base Lewis-McChord, Nisqually Tribe

Reservation, Tacoma Power mitigation lands, Centralia City Light mitigation land, and Nisqually Mashel State Park. The Nisqually Land Trust also owns and protects land. Currently 73 percent of the river shoreline is in protected ownership.

The mainstem of the river is still a very productive habitat for all species of salmon that are currently found in the Nisqually. However, modifications such as dikes, levees, and riprap confine and simplify some segments of the rivers and streams in the Nisqually Watershed. This prevents natural channel migration, disconnects rivers from their floodplains, and eliminates recruitment of large woody debris. All of these reduce aquatic habitat suitability and contribute to an increase in flooding problems. Losses of habitat result from declines in channel stability, habitat diversity, food availability, and key habitat features.

The relative distribution of land use is approximately 50 percent rural residential (5, 10, 20 and 40 acre parcels), about 30 percent open space/resource land, and about ten percent agricultural. Less than five percent of the watershed is urbanized (residential/commercial/industrial). The Nisqually Basin Plan (Pierce County Public Works and Utilities, 2008) estimates that urbanization will not dramatically increase. However, the areas zoned rural residential account for about 45 percent of the forested area in the basin. Due to development of these lots into residences and hobby farms, it is estimated that at about a third of this forested cover will be lost.

In general, water quality in the Nisqually Watershed is considered excellent. However, Ecology has designated portions of several streams, as well as several lakes, as polluted. Primary water quality impairments are elevated phosphorus concentrations, elevated temperature, not enough dissolved oxygen, and fecal coliform.

Landscape analyses in the basin estimate that wetlands currently represent approximately 7% of the Nisqually Basin area. This equates to approximately 11,000 acres of wetlands, most of which are located in the northwestern half of the Basin in areas where lakes are prevalent (Pierce County Public Works and Utilities, 2008). However, significant restoration activities are underway in the Nisqually Basin. Primarily, the Nisqually Tribe and the Nisqually National Wildlife Refuge have removed over 10,000 feet of dikes and restored more than 900 acres of estuary. In addition, portions of a few major tributaries to the Nisqually River are being restored along with associated wetland and floodplain habitat.

10.2.3 Threats

The Nisqually Watershed faces several major threats including:

1. Development, including residential, commercial, industrial, as well as roads, transportation and utility infrastructure, and shoreline armoring – The Nisqually Watershed is the least developed in the South Puget Sound. Despite federal protection or management of large portions of the watershed, the cities and other urban areas are growing rapidly. Fort Lewis in particular is experiencing high levels of growth, with an estimated current population of 29,000 active duty soldiers, plus

families and civilian personnel. The City of Yelm has experienced a 42 percent population increase from 2000 to 2009. The urban growth area around the Town of Eatonville straddles the land between the two highest priority tributaries for protection and restoration in the Nisqually Salmon Recovery Plan, the Mashel River and Ohop Creek. Increased development will result in further alteration of terrestrial, freshwater, and marine habitats, habitat forming processes and foodwebs. The resulting impacts are often irreversible or prohibitively costly to restore.

2. Flooding – The Nisqually mainstem flooding problems are complex and have the potential to cause extensive damage, particularly in the McKenna area, and in the Nisqually Park community near the Mount Rainier National Park boundary where County-maintained levees sustained extensive damage during a flood event in November 2006. In addition, channel aggradation in the upper Nisqually Valley near the Mount Rainier National Park boundary has compounded flooding issues.
3. Surface water loading and runoff from the built environment – As development increases so do the threats posed by surface water loading and runoff. Existing laws and regulations govern the design of systems to manage surface water loading/runoff for new development. However, diversion of surface water due to mandated stormwater treatment could deprive some aquatic systems of hydrologic input.
4. Climate change – Increased temperatures, changes in volume and timing of precipitation and stream flows, as well as a reduction in snowpack will have major implications for in-stream flows, ecosystem health, fish and wildlife, forests, and agricultural practices. A rise in sea level is likely, which would affect the railroad line along the east side of the Nisqually Reach. Probable effects could include increases in coastal erosion, landslides, inundation and flooding.
5. Dikes and levees – The Nisqually River watershed contains dikes and levees, which result in: the disconnection of rivers with their floodplains; habitats which do not support complex food webs; reduced biodiversity; and threatened survival of some species, such as salmon.
6. Invasive species (terrestrial, freshwater, and marine) – Whether they are introduced deliberately or inadvertently, invasive species may out compete native species for resources, prey upon native species, reduce the resiliency of ecosystems, and change the character of habitat. Japanese knotweed (*Polygonum cuspidatum*) has become a significant concern along river and stream corridors. Currently, there are large infestations of knotweed in the upper watershed with pockets of occurrence in the lower watershed. Reed Canary Grass (*Phalaris arundinacea*) chokes many small channels and off-channel areas, which appears to have reduced potential spawning habitat for salmonids. Within the Nisqually River watershed, prairies are particularly vulnerable to the effects of invasive species colonization. Scotch broom (*Cytisus scoparius*) and tall oatgrass (*Arrhenatherum elatius*) are examples of plant

species that have undermined the ability of prairie areas to support native species. Climate change may exacerbate the threats posed by invasive species.

10.2.4 Aquatic Resource Goals and Objectives

PCSWM proposes that the ILF program will help to meet the following general resource goals for the Nisqually River watershed:

- Wetland, channel migration zone, and floodplain preservation through property acquisition
- Removing fish passage barriers
- Wetland, instream, and riparian habitat restoration
- Revegetation projects
- Reduce flood hazards, i.e., property loss and damage from flood events and adverse impacts to streams from flood events
- Improve water quality, i.e., reduce number of impaired waterbodies and risk of groundwater contamination

More specifically, the Nisqually Salmon Recovery Habitat Restoration and Protection Priorities from the *Nisqually 2011 Three-Year Work Program* identify the following:

1. Tier 1 (Highest Priority)
 - a. Estuary Protection and Restoration
 - b. Protection of functioning reaches of the mainstem Nisqually River and the mouth of the river.
 - c. Preservation of the lower Mashel River.
2. Tier 2 (High Priority)
 - a. Protection of the rest of the mainstem Nisqually River reaches, except upper Nisqually.
 - b. Improving upstream fish passage at Centralia Diversion Dam
 - c. Restoration of the lowest reach of the Nisqually River reaches near Mounts Road
 - d. Restoration of lower Ohop Creek valley
 - e. Protection and restoration of the rest of mainstem Mashel River
 - f. Restoration of South Puget Sound
 - g. Preservation of lower Yelm Creek
3. Tier 3 (Medium Priority)
 - a. Protection and restoration of Busywild Creek
 - b. Protection of Upper Nisqually River from Alder/LaGrande dams to mouth of Ohop Creek
 - c. Restoration of McKenna and Whitewater Reaches of Nisqually River
 - d. Protection of lower and middle Tanwax Creek and restoration of upper Tanwax
 - e. Protection and restoration of Muck Creek downstream of Roy and South Fork Muck
 - f. Restoration of Muck Creek upstream of Roy
 - g. Restoration of Nisqually and Commencement Bays and Central Puget Sound and Eastern Straits

- h. Protection of entire Ohop Creek Basin
- i. Protection of Little Mashel
- j. Protection of lower sections of Toboton and Powell Creek

11. Site Selection Process

One of the main objectives of PCSWM's ILF program is to provide compensation for resource impacts that result in greater ecological benefit to a sub-basin, basin, or watershed than could be achieved through permittee-responsible mitigation. In addition the program aims to achieve "no net loss" of functions on a watershed scale. Therefore, sites will be prioritized based on their ability to meet watershed goals and restore watershed processes.

PCSWM's ILF Program will use a method developed by the Puget Sound Watershed Characterization Project as an initial screen (<http://www.ecy.wa.gov/services/gis/data/pugetsound/characterization.htm>) coupled with assessments and recommendations within existing basin plans. Watershed characterization has integrated information from several environmental assessments to provide an ecosystem view of the landscape. The results of this characterization are useful for local governments in many ways. For the purposes of ILF the results can help to develop restoration and protection strategies within a watershed.

The characterization results prioritize general areas for restoration based on the following:

- The importance of the area for providing specific watershed processes (e.g., surface water storage, recharge, and discharge, and sediment export)
- The level of degradation the area has experienced which has reduced an area's ability to contribute to the performance of watershed processes

PCSWM plans to use the characterization results to prioritize the general areas (similar to sub-basins) within a service area where mitigation activities would provide the greatest potential improvement to watershed processes (i.e., important but degraded). Characterization results can be considered in total, or for a specific watershed process. For example, if flooding is a major issue in a service area, the sponsor would focus on the characterization results that prioritize the best areas to restore surface water storage processes.

In addition, as regulators approve the use ILF credits as compensation for unavoidable, permitted impacts, the acreage and functions lost will be recorded as debits within general function categories (refer to Section 6.1). If there is an imbalance in the number of debits across function categories (e.g., many more debits to a specific function category, such as water quality), it may influence the site selection prioritization (refer to Section 8.2.1). For example, if impact projects have many more debits to the water quality function, this may use up all the water quality credits and result in a surplus of hydrologic and habitat function credits. For the next selection of a mitigation-receiving site, the sponsor, in

consultation with the IRT, may focus on the characterization results that prioritize the best areas to restore water quality processes. An imbalance of credits among function groups may also influence the site-scale selection. In the example of more debits to water quality functions, the sponsor may focus on sites with a high potential to improve water quality functions.

After sub-basins (general areas) have been prioritized, the sponsor will review more detailed information to narrow the focus to a specific sub-basin or down to the level of potential sites within a couple of the prioritized sub-basins. The ILF sponsor will utilize the following existing plans and lists that identify priority habitats needing particular attention, vulnerable locations within the watershed, and areas most likely to benefit from restoration, creation, enhancement, and preservation:

- Salmon Conservation and Recovery Plans and three year work plans
- Watershed Action Plans, developed through Chapter 400-12 WAC
- Watershed Plans, developed through RCW 90.82
- County Basin Plans
- County Rivers Flood Hazard Management Plan
- Ecoregional Assessments: Willamette Valley/Puget Trough/Georgia Basin (Nature Conservancy, 2004)
- Pierce County Biodiversity Network Plans
- Staff resources: PSP Ecosystem Recovery Coordinators, Ecology Watershed leads; Tribal biologists

In addition, the sponsor will consult with local stakeholders, such as watershed groups to gain an understanding of recent local developments/conditions/situations and opportunities.

At the site-scale, PCSWM will refer to *Selecting Wetland Mitigation Sites Using a Watershed Approach* (Harper, et. al., 2010) to review the ecological suitability of any potential sites. This review will generally assess the ability of a site to provide benefits at a watershed scale. Further, the review will evaluate whether, and to what degree mitigation activities will be able to remove constraints on a site, thereby restoring processes and providing a lift in functions.

To the extent practicable, the sponsor will review and consider the following basic information to further refine the list of possible sites:

- A. Watershed-scale characteristics, such as aquatic habitat diversity, habitat connectivity, surface water areas (wetlands and streams), ground water flow patterns (including recharge, discharge, and storage areas), other landscape scale functions, and the degree of impairment of these characteristics
- B. Extent to which the site has potential to contribute to the restoration or protection of watershed processes
- C. Potential of the mitigation-receiving site to successfully contribute to a gain in functions as a result of mitigation activities

- D. Hydrologic conditions, soil characteristics, and other physical and chemical characteristics
- E. The size and adequacy of buffers necessary to protect the mitigation-receiving site from adjacent development or land use
- F. Location and availability of hydrologic sources (including availability of water rights, presence of State-Owned Aquatic Lands) and other ecological features
- G. Compatibility with adjacent land uses and watershed management plans
- H. Reasonably foreseeable effects the compensatory mitigation project will have on ecologically important aquatic or terrestrial resources (e.g., shallow sub-tidal habitat, mature forests), cultural sites, or habitat for federally- or state listed threatened or endangered species
- I. Other relevant factors including but not limited to:
 - 1. Development trends
 - 2. Anticipated land use changes
 - 3. Habitat status and trends
 - 4. Local or regional goals for the restoration or protection of particular habitat types or functions (e.g., re-establishment of habitat corridors or habitat for species of concern)
 - 5. Water quality goals
 - 6. Floodplain management goals
 - 7. The relative potential for chemical contamination of the aquatic resources.
 - 8. The relative locations of the impact and mitigation receiving sites in the stream network
 - 9. Cost of acquisition and implementation
 - 10. Location with respect to urban centers.

PCSWM believes that special consideration should be given to sites within urban areas. As an organization often tasked with engineering solutions to water flow problems that have resulted primarily from wetland loss and alteration of natural water flow processes, PCSWM recognizes the importance of preserving and rehabilitating the remaining fragments of wetland and green space in urban and residential areas. PCSWM is committed to counteract the trend for programmatic mitigation sites to be located in rural areas where properties are generally larger and land costs are lower (Brass, 2009).

Ecologically appropriate, watershed-based site selection, particularly for an in-lieu fee program, requires a process. And the process needs to be flexible to meet the needs of any participating stakeholders in the service area. For example, in WRIA 11 and 12, several basins run through Joint Base Lewis-McChord (JBLM). In this case, the site selection process would need to be flexible enough to encompass the needs and unique opportunities present on the base.

11.1 IRT Approval

When the sponsor has identified an appropriate site, the sponsor will formally submit the

proposed site to the IRT for approval. If approved, subsequent site visits will occur to collect additional data, such as:

- Rating the aquatic resource using HGM criteria and the Wetland Rating System for Western Washington (2004) as appropriate
- Applying the Credit/Debit Tool (or another IRT-approved mitigation assessment tool) based on existing conditions
- Assessing whether existing conditions are conducive to generating the desired number of credits.

The data collected will be used to create a conceptual mitigation plan specific to the selected site.

12. Stakeholder Involvement Strategy

PCSWM anticipates working with stakeholders, such as watershed groups, to help identify potential sites within the general areas prioritized for mitigation within each of the geographic service areas. The sponsor anticipates meeting with local stakeholders to help narrow the focus to a specific sub-basin or down to the level of potential sites within a couple of the prioritized sub-basins. The local watershed groups will provide input based on local priorities, individual expertise, and on-the-ground understanding of site feasibility, important ecological characteristics, and expected development pressures.

The Pierce County Surface Water Management will coordinate with watershed councils, and tribes to gain an understanding of recent local developments, conditions, situations and opportunities within the prioritized areas.

13. Preservation Strategy

Preservation of high value aquatic resources that are under immediate and verifiable threat of impact, i.e. conversion to residential development, commercial development, silvicultural forest practices, or other activity that would significantly alter ecosystem functions and values, may be used as a compensatory mitigation strategy by the ILF Program. In general, these lands must be determined to be consistent with the preservation criteria in the Federal Rules (33 CFR 332.3(h)) and must meet the above referenced selection criteria for inventory sites. In cases where preservation is proposed, project planning and implementation funds from the credit sale may be used to secure the property to be preserved.

To the extent appropriate and practicable, preservation shall be done in conjunction with aquatic resource restoration, creation, enhancement, or a combination of activities. In such cases, the Credit/Debit Tool will be used to assess existing conditions relative to the potential effects of conversion of the aquatic resources and adjacent terrestrial areas that support them (if present). This assessment will consider the likelihood of impacts actually

occurring and weight the assessment accordingly through application of risk and time-lag factors.

14. Site Acquisition and Protection

The federal rule (33 CFR 332.7) requires permanent site protection to ensure mitigation-receiving sites continue to provide ecological functions in perpetuity. The rule provides for flexibility in how sites are protected. All site protection mechanisms must be approved by the Corps and Ecology following consultation with the IRT.

PCSWM will secure project sites primarily through fee simple purchase, conservation easements, or long-term management and facility plans (for publicly-owned land). Long-term ownership (including responsibility for conservation easements), stewardship, or both may be passed to other qualified entities approved by the Corps, such as the Pierce County Conservation District, local tribes, The Nature Conservancy, Cascade Land Conservancy, the Trust for Public Lands, other local land trusts, or state and local agencies. If ownership or stewardship is transferred, the PCSWM will retain the ability to enforce conservation easements or other protection mechanisms. In all cases, legal responsibility for long-term site protection remains with the ILF sponsor. Where a real estate instrument, such as an easement, is used to protect the site, the protection mechanism will include a provision requiring 60-day advance notification to the sponsor and Corps before any action is taken to void or modify the instrument, including transfer of title.

Conservation easements placed on ILF sites will grant the sponsor the right to construct a mitigation project on the land, access the mitigation-receiving site for maintenance and monitoring, and to enforce the terms of the easement in perpetuity. Each easement will be negotiated individually based on specific attributes of the property, but there will be a template easement to use as a starting point included with the program Instrument, and this template will be made available to landowners upon request.

Lands that are already encumbered with conservation easements may also be eligible as ILF mitigation-receiving sites. In these cases, the existing easements will be reviewed to ensure they are consistent with the provisions of the model conservation easement used by PCSWM's ILF Program. If they are not, the landowner and the sponsor will negotiate changes to the existing conservation easement to incorporate any additional protections and allowances required for the site to conform to PCSWM's ILF mitigation-receiving site criteria.

In the event that a site is not adequately protected, and the landowner intentionally or unintentionally fails to abide by the terms of the conservation easement resulting in compromised functions of the applied mitigation, the sponsor or qualified stewards will enforce conservation easements, restrictive covenants, and other protection mechanisms through application of any or all of the following actions:

- Require the landowner to pay for restoration and/or enhancement necessary to

return the site to conditions that meet the original mitigation project performance requirements and the terms of the conservation easement,

- File a civil suit against the landowner for failure to meet the terms of the conservation easement.
- If stewardship or ownership of a site has been transferred to another party, the sponsor will regain stewardship or re-purchase that site, if necessary.

Following the signing and recording of the conservation easement, the sponsor will coordinate initiation of project design and construction according to the steps described in Section 15 *Mitigation Project Implementation*.

15. Mitigation Project Implementation

PCSWM has extensive experience designing, permitting, and implementing restoration, aquatic resource mitigation, and other water flow improvement projects. PCSWM plans to use this experience to successfully develop and implement mitigation-receiving sites that will generate/fulfill wetland mitigation “credits” to use in its ILF program.

PCSWM will design and complete the permitting process for mitigation-receiving sites. PCSWM will select a qualified construction contractor through a competitive bidding process and perform contract management and oversight. Once construction is complete, PCSWM will monitor and maintain mitigation-receiving sites throughout the regulatory performance period. PCSWM anticipates performing the long-term maintenance and management of its mitigation-receiving sites.

15.1 Credit Fulfillment Process

The fulfillment process will generally follow the following sequence:

- A. Mitigation-receiving site selection and assessment
 1. **Select a 'preferred' mitigation receiving site** according to process outlined in Section 11. There may be one or more preferred sites presented to the IRT as options for mitigation-receiving sites.
 2. **Submit preferred site and preliminary concept plans to IRT for review**, including the site description and any information about other restoration or mitigation activities in the vicinity of the preferred site to ensure the area proposed for mitigation is clearly defined and distinct from other projects and land-uses at the site.

The sponsor shall submit a copy of an unsigned conservation easement or other legal site protection mechanism approved by the Corps and Ecology that would protect the land in perpetuity.

The sponsor shall also submit a concept plan for the proposed site. At minimum, the concept plan should provide a simple graphic representation of key project elements and a short narrative description.

3. Pending IRT approval to proceed, PCSWM will develop a draft Mitigation Plan and cost estimate.
 4. Apply the Credit/Debit Tool to determine the number of potential credits the mitigation project should generate.
- B. PCSWM will begin data collection and validation of assumptions to confirm suitability of preferred mitigation receiving site.
- C. PCSWM will complete a final Mitigation Plan, which will be incorporated into the program instrument in the *Mitigation Plans* section at the end of the instrument, upon IRT approval.

In addition to the required components of a Mitigation Plan outlined in Section 15.2, the sponsor will also:

1. Identify project goals and objectives, as well as preliminary performance measures and goals.
 2. Include plans and specifications, including identification of necessary local, state and federal permits for proposed project.
 3. Identify affected stakeholders and provide a plan for stakeholder involvement
 4. Propose maintenance and monitoring plan with specific performance standards.
 5. Propose adaptive management and contingencies plan.
 6. Propose a Long Term Management Plan
- D. Develop site protection instrument (e.g. conservation easement or restrictive covenants) and long-term stewardship plan.
- E. Negotiation with and approval by the IRT of monitoring periods and credit release schedules. The credit release schedule identifies (1) when, during the performance phase of the project, and (2) how many credits will be “released” i.e. the point at which the sponsor has met the obligation for fulfilling the credit.
- F. Modify Program Instrument. The federal rule [33 CFR 332.8(g)] describes the process by which the program instrument is modified to incorporate Mitigation Plans. The rule describes two methods by which a program instrument may be modified: (1) a full review process [332.8(g)(1)] which is similar to the review and approval process for new in-lieu fee instruments, outlined in [332.8(d)]; and (2) a streamlined review process described in [332.8(g)(2)].
- G. Final IRT approval of Mitigation Plan and site protection instrument.

H. Implement approved Mitigation Plan

15.2 Mitigation Plan

PCSWM will produce mitigation plans and site designs for each site selected to compensate for unavoidable, permitted impacts. The plan will include a description of the proposed mitigation credits to be established.

The mitigation plan will meet the requirements specified in 33 CFR §332.4(c) and contain the following elements:

1. Objectives: A description of the resource type(s) and amount(s) that will be provided, the method of compensation, and the manner in which the resource functions of the project will address the needs of the watershed.
2. Site Selection: A description of the factors considered during the site selection process.
3. Site Protection Instrument: A description of the legal arrangements and instrument that will ensure the long-term protection of the project site.
4. Baseline Site Information: A description of the ecological characteristics of the proposed site.
5. Determination of Credits: A description of the number of credits to be provided, including a brief explanation of the rationale for this determination.
6. Mitigation Work Plan: Detailed written specifications and work descriptions for the project, including geographic boundaries; construction methods, timing, and sequence; source(s) of water, including connections to existing waters and uplands; methods for establishing the desired plant community; plans to control invasive plant species; the proposed grading plan; soil management; and erosion control measures.
7. Maintenance Plan: A description and schedule of maintenance requirements to ensure the continued viability of the resource once initial construction is completed.
8. Performance Standards: Ecologically based standards that will be used to determine whether the compensatory mitigation project is achieving its objectives.
9. Monitoring Requirements: A description of parameters to be monitored in order to determine if the compensatory mitigation project is on track to meet performance standards and if adaptive management is needed. A schedule for monitoring and reporting on monitoring results will also be included.
10. Long-term Management Plan: A description of how the project will be managed after achievement of performance standards to ensure the long-term sustainability of the resource, including long-term financing mechanisms and the party responsible for long-term management.
11. Adaptive Management Plan: A management strategy to address unforeseen changes in site conditions or other components of the project, including the party or parties

responsible for implementing adaptive management measures. The adaptive management plan will guide decisions for revising mitigation plans and implementing measures to address both foreseeable and unforeseen circumstances that adversely affect the project's success.

12. Financial Assurances: A description of financial assurances that will be provided and how they are sufficient to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with its performance standards.

13. Other information, such as

- Nearby mitigation or restoration projects and how the mitigation project may compliment them
- Adjacent land uses and potential effects of adjacent land uses on mitigation project
- Other information as identified by the IRT as necessary for inclusion in the Mitigation Plan

All Mitigation Plans for the PC ILF Program will adhere to the requirements for Mitigation Plans outlined in the federal rule, and the IRT will review and approve all Mitigation Plans.

Mitigation Plans will also clearly delineate the areas of a site where mitigation activities can occur. For example, Mitigation Plans will identify features that would disallow creation of credits such as trail corridors, utility easements, prior mitigation projects without any available additional credit, and restoration projects.

15.2 Fulfillment of Advance Credits

For fulfillment of the sale of "advance credits," a compensatory mitigation project plan will be submitted to and approved by the IRT, and the initial physical and biological improvements will be initiated by the end of the third full growing season after the impact that generated the credit sale(s) as required by the federal rule [33 CFR 332.8 (n)(4)]. The submittal of the Mitigation Plans to the IRT will include a credit release schedule. Generally, the sponsor will request credit release consistent with target schedules identified in Section 15.3.

In some cases, mitigation projects may require baseline data collection in order to reduce risk of project failure. In these instances, the collection of data will generally occur within one year of the unavoidable impact that generated the advance credit sale, but actual construction may not occur within three growing seasons. These cases would be limited to those which require multiple years of baseline data collection and would be contingent on Corps, Ecology, and/or IRT approval as appropriate.

15.3 Credit Release

For each mitigation-receiving site, a credit release schedule will be negotiated with the IRT.

Generally, credit release will correspond with the achievement of specific performance standards as observed during official monitoring events identified in the monitoring schedule.

Sections 33 CFR 332.8(o)(8)(i) and (iii) of the federal rule describe details related to the Credit release schedule for in-lieu fee programs:

“(i) *General considerations.* Release of credits must be tied to performance-based milestones (e.g., construction, planting, establishment of specified plant and animal communities). The credit release schedule should reserve a significant share of the total credits for release only after full achievement of ecological performance standards. When determining the credit release schedule, factors to be considered may include, but are not limited to: The method of providing compensatory mitigation credits (e.g., restoration), the likelihood of success, the nature and amount of work needed to generate the credits, and the aquatic resource type(s) and function(s) to be provided by the mitigation bank or in-lieu fee project. The district engineer will determine the credit release schedule, including the share to be released only after full achievement of performance standards, after consulting with the IRT. Once released, credits may only be used to satisfy compensatory mitigation requirements of a DA permit if the use of credits for a specific permit has been approved by the district engineer.

“(iii) For in-lieu fee projects and umbrella mitigation bank sites, the terms of the credit release schedule must be specified in the approved mitigation plan. When an in-lieu fee project or umbrella mitigation bank site is implemented and is achieving the performance-based milestones specified in the credit release schedule, credits are generated in accordance with the credit release schedule for the approved mitigation plan. If the in-lieu fee project or umbrella mitigation bank site does not achieve those performance-based milestones, the district engineer may modify the credit release schedule, including reducing the number of credits.”

Additionally, other entities on the IRT (e.g. Ecology) will have the opportunity and obligation to set and modify the credit release schedule. Furthermore, the Corps and Ecology, following consultation with the IRT, will also need to approve the credit release schedule based on documented project performance milestones, and if deemed necessary, a site visit (see 33 CFR 332.8(o)(9)).

The credit release schedule will be negotiated for each Mitigation Plan, though generally these credit release schedules will conform to discrete project milestones identified in the monitoring plans and ecological performance standards established for each project and approved by the IRT. The table below provides an example credit release schedule. Actual credit release schedules for each project may differ from the example below depending on site conditions and project variables.

Example Credit Release Schedule

Proposed Project Milestone	Portion of	Cumulative
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	Credit Released	Portion of Fulfillment
Site acquisition by sponsor or site protection mechanism in place (mitigation-receiving site plan approved by IRT)	1/8	1/8
Installation (approval of As-Built)	1/8	1/4
Year 1 performance standards achieved (primarily hydrologic)	1/8	3/8
Year 3 performance standards achieved	1/8	1/2
Year 5 performance standards achieved	1/8	5/8
Year 7 performance standards achieved	1/4	7/8
Year 10 performance standards achieved (including delineation, running credit debit tool) and transition to long-term stewardship (IRT sign-off on achievement of performance standards)	1/8	Credit fulfilled

Credit releases for in-lieu fee projects must be approved by the Corps and Ecology. In order for credits to be released, the sponsor will submit documentation to the Corps and Ecology demonstrating that the appropriate milestones for credit release have been achieved and requesting the release. The Corps and Ecology will provide copies of this documentation to the IRT members for review. IRT members will provide comments on this document. (See 33 CFR 332.8 (o)(9))

The Corps, Ecology, or both may determine that a site visit is necessary prior to the release of credits. Such a visit will be compliant with 33 CFR 332.8 (o)(9).

If the in-lieu fee project does not achieve the performance-based milestones, the Corps and Ecology, after consultation with the IRT, may modify the credit release schedule, including reducing the number of credits. (see 33 CFR 332.8(o)(8)(iii)).

If at any step in the credit release schedule, it is determined through monitoring that performance standards are not being met, the IRT and the sponsor shall identify appropriate adaptive management and contingency measures and devise a plan for implementation.

15.4 Project Implementation

Once the IRT has approved a project plan and credit release schedule, the sponsor will request spending authorization to initiate implementation of the mitigation project. The

sponsor will oversee contract development, select a qualified construction contractor following a competitive bidding process, and perform construction management and oversight. The construction process will include routine inspections, special inspections, pre-construction site review meetings, post-construction meetings, and compliance reporting as necessary.

15.5 Monitoring and Maintenance

Monitoring will require qualitative and quantitative assessments of physical, chemical and biological characteristics of the project as appropriate, using scientifically appropriate analytical methods. The purpose of monitoring is to determine the level of compliance with ecological performance standards established in the site-specific mitigation plan. In addition, monitoring data help to identify problems that may trigger maintenance activity, contingency plans, remedial action, or adaptive management measures.

Monitored parameters depend in large part on the type, scale and scope of a proposed project, but will generally include hydrologic conditions, vegetative cover, soil stability, and presence/extent of noxious weeds and nuisance species.

As necessary, the sponsor will coordinate with land managers and appropriate contractors to outline maintenance protocols for each mitigation project. Active maintenance practices will generally follow a three to ten year program that may include repair/replacement of engineered structures, nuisance species control, and adaptive management measures, such as grade or hydrology modifications, species substitutions, replanting, replacement of habitat features, and temporary fencing.

15.6 Adaptive Management and Contingency Planning

Once ILF mitigation projects are installed, they will be adaptively managed in response to the outcome of regular and routine maintenance and monitoring events. If any monitoring data reveal that a mitigation project is failing in whole or in part, the sponsor will determine whether conditions can be remedied through maintenance activities. If the failure is beyond the scope of routine maintenance, the sponsor will submit a Contingency Plan to the IRT. The Contingency Plan may range in complexity from a list of plant substitutions, to cross-sections of proposed engineered structures. Once approved by the IRT, the contingency plan will be implemented and will replace the approved mitigation plan. If the failure is substantial, the sponsor will extend the maintenance and monitoring period for that project.

16. Long Term Management/Site Stewardship

Projects will be designed, to the maximum extent practicable, to be self-sustaining once performance standards have been achieved. The ILF sponsor will ensure that projects are maintained and managed to protect their long-term viability as functional aquatic

resources.

Following the performance period (i.e., regulatory monitoring period) and release of all credits, ILF mitigation projects will be managed in accordance with long-term stewardship guidelines. Credit pricing will reflect the costs associated with long-term management obligations. In addition to long-term monitoring and management specified in the ILF program instrument, the sponsor will ensure the protection of ILF mitigation-receiving sites in perpetuity.

The ILF sponsor will either retain ownership of ILF project properties or transfer interests in property in part or in whole to a qualified local land manager such as a tribe, conservation district, or a non-profit land trust or other non-profit that has experience in conservation land management. If mitigation properties are transferred, the title will be encumbered in a way that will ensure long-term protection for ecological values. The sponsor will also either transfer maintenance funds to the new owner or enter into an agreement to provide the necessary long-term maintenance through other means.

PCSWM anticipates that a site protection mechanism, such as a conservation easement or restrictive covenant, will be placed on all mitigation-receiving sites. The site protection mechanism must grant the sponsor access for monitoring and enforcement, and stipulate long-term protection obligations. PCSWM will include templates for a conservation easement and a restrictive covenant with the program Instrument.

The sponsor will submit an annual protection status report for all mitigation-receiving sites, in addition to a rigorous audit report conducted every five years. Audits, based on visits to every project site and a review of all real estate instruments, will list current ownership and easements, detail current land uses, and include site photographs. Annual status reports will be based on prior audits, subsequent status changes reported to the sponsor through real estate instruments, and changes initiated by the PSP ILF Program.

17. How Mitigation Relates to Restoration Projects

Mitigation credit shall not be available from other County, State or Federal restoration projects in existence outside the PC ILF Program. In cases where mitigation sites are adjacent to or near to existing or proposed restoration sites, the Mitigation Plan will clearly show areas of restoration (where no credit is available) and where mitigation credit can be generated.

PCSWM will not derive credit from any project(s) already funded with Salmon Recovery Fund money or any projects already planned and funded or completed to meet a permit condition. However, there may be cases when ILF mitigation fees can be used to implement a salmon recovery project or other restoration project. For this to occur, all of the following must apply:

- The project is not funded

- There is not a restriction related to the funding used to acquire a site where the project will occur
- The project is not a requirement associated with a permit (e.g. a mitigation project)

The federal rule, [332.3(j)(2)] states:

“Except for projects undertaken by federal agencies, or where federal funding is specifically authorized to provide compensatory mitigation, federally-funded aquatic resource restoration or conservation projects undertaken for purposes other than compensatory mitigation, such as the Wetlands Reserve Program, Conservation Reserve Program, and Partners for Wildlife Program activities, cannot be used for the purpose of generating compensatory mitigation credits for activities authorized by DA permits. However, compensatory mitigation credits may be generated by activities undertaken in conjunction with, but supplemental to, such programs in order to maximize the overall ecological benefits of the restoration or conservation project.”

If mitigation fees are used to implement projects or portions of projects prioritized in a Salmon Recovery Plan, the unavoidable, permitted impacts for which mitigation fees were collected must be accounted for when measuring progress toward watershed-wide salmon recovery goals. For each mitigation project implemented through the PC ILF Program, the sponsor will provide details of the mitigation project to WRIA Forum staff for entry into the Habitat Work Schedule, which is an online mapping and tracking tool used to measure progress and increase accountability for implementation of salmon recovery projects statewide. At minimum, information added to the Habitat Work Schedule database will include the amount of funding from mitigation fees, the type and amount of enhancement, restoration, creation, etc. to aquatic resources and buffers at the mitigation project, and the reports about unavoidable, permitted impact projects from which mitigation fees were derived. Mitigation projects will be clearly categorized as such in the Habitat Work Schedule database so it is evident to salmon recovery planning staff that ecological lift at mitigation projects is achieved at the expense of allowing permitted ecological impacts elsewhere in the watershed.

18. Evaluation and Reporting

In addition to annual monitoring reports, which describe how well individual sites are doing at achieving performance standards, objectives, and goals, the ILF sponsor will annually review how the program as a whole is doing at meeting the goals and objectives within each service area. Furthermore, the ILF sponsor will review and update the goals and objectives for each service area based on new information, changing conditions, and the effects of restoration activities completed by other programs. The ILF sponsor will submit an annual report to the IRT describing the progress the ILF program has made within each service area. This report will also identify any changes that may be needed in the Compensation Planning Framework (CPF). If changes are needed, the report will include an explanation of how the CPF will be revised.

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