CITY OF BELLINGHAM MITIGATION PROGRAM

REVIEW AND RECOMMENDATIONS

SEPTEMBER 2012

prepared for
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EXECUTIVE SUMMARY

Protection of wetlands, streams, and habitat areas are central to wise land use. One tool for protecting wetlands, streams, and habitat areas is a requirement that development projects compensate, or "mitigate", impacts to these important resources. Unfortunately, some past approaches to mitigation have had high costs yet have also had high rates of failure and have struggled to achieve the goal of wise land use. Alternative approaches offer Bellingham the opportunity to improve the success rate, increase efficiency, and coordinate efforts to better reflect community values.

Bellingham is uniquely positioned to pursue one of the most promising approaches to mitigation - a mitigation program. While they believe permittee-responsible mitigation should remain one of the tools in the mitigation toolbox, federal and state agencies now prefer the use of mitigation programs (mitigation banks and in-lieu fee programs) for many projects (33 CFR Parts 325 and 332; and Ecology, 2012a). Mitigation banks and in-lieu fee programs are generally more consistent with the "watershed approach." The watershed approach requires looking at the entire drainage basin and how it functions. When used to select mitigation sites, the watershed approach helps identify sites that are appropriately located within the landscape, restore the underlying watershed processes, are sustainable, and have a high likelihood of ecological success. In addition to utilizing the watershed approach, mitigation banks and in-lieu fee programs also have a higher potential for success because they consolidate resources, utilize more rigorous scientific information, and have long-range financial management.

The purpose of this document is to present a strategy for implementing a mitigation program for the City of Bellingham with the following goals:

1) improving the success rate of mitigation projects,
2) reducing costs associated with mitigation,
3) coordinating mitigation efforts, and
4) streamlining the mitigation process.

The City of Bellingham has several options for developing a mitigation program:

1) mitigation bank,
2) in-lieu fee program, or
3) local-only program.

Mitigation programs, especially mitigation banks, have been widely used throughout the midwestern and eastern United States. Although mitigation programs are relatively new in Washington State, there are several examples of each in the Puget Sound region.

Based on current City of Bellingham needs and constraints, an in-lieu fee program appears be the best approach for the City. Although an in-lieu fee program would require a serious financial and strategic commitment on the part of City government and its citizens, the program has the potential to have significant economic and ecological benefits with only moderate risk.

Implementing a successful in-lieu fee program is anticipated to take approximately five to seven years. Total cost is estimated between $390,000 and $475,000. The City has already begun the most costly step, inventorying and prioritizing mitigation sites.

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Northwest Ecological Services, LLC (NES) is a small, service-oriented environmental consulting firm based in Bellingham, Washington. We provide a range of biological services including wetland assessments; biological assessments; wetland restoration and mitigation plans; natural resource analysis and regulatory compliance; landscape and ecological design; and environmental impacts assessments of plants, animals, fish and sensitive habitats to both the public and private sectors. NES staff have performed wetland and biological assessments on over 27,000 acres [1991-2011] in Whatcom, Skagit, Island, Snohomish and King Counties.

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1.0 INTRODUCTION

1.1 Overview

The citizens of Bellingham have long understood that wise land use is the foundation for sustainable economic development, health and safety of our families, high quality of life, and functional ecosystems. Protection of wetlands, streams, and habitat areas are central to wise land use. These critical areas provide important functions for citizens including flood control, ground water recharge, water quality improvements, erosion control, recreation, education, and habitat for commercially important species.

The desire and need to protect Bellingham's ecological assets such as wetlands, streams, and habitat areas is reflected in numerous policies and regulations including Bellingham's Critical Areas Ordinance (CAO), Shoreline Master Program (SMP), Comprehensive Plan, and the City Council 2009 Legacies and Strategic Commitments. These values are supported in federal and state laws including the federal Clean Water Act (CWA), the federal Endangered Species Act (ESA), the state Growth Management Act (GMA), the state Shoreline Management Act (SMA), the State Hydraulic Code (Hydraulic Code), and the State Environmental Policy Act (SEPA).

One tool for protecting wetlands, streams, and habitat areas is a requirement that development projects compensate, or "mitigate", impacts to these important resources. Unfortunately, some past approaches to mitigation have had high costs yet have also had high rates of failure and have struggled to achieve the goal of wise land use. Alternative approaches offer Bellingham the opportunity to improve the success rate, increase efficiency, and coordinate efforts to better reflect community values.

Bellingham is uniquely positioned to pursue one of the most promising alternative approaches to mitigation - a mitigation program. Bellingham is positioned for a mitigation program partially because Bellingham is fortunate to still have natural systems within its urban confines. In addition, unlike many jurisdictions, Bellingham is in the process of inventorying and prioritizing its land resources as documented in the Shoreline Characterization and Inventory, the Shoreline Restoration Plan, the Water Resource Inventory Area (WRIA) 1 Nearshore Needs Assessment Restoration and Prioritization, and the Habitat Restoration Master Plan. This step is a critical precursor to a mitigation program and puts Bellingham in prime position to consider this alternative approach.

1.2 Purpose of this Document

The purpose of this document is to present a strategy for implementing a mitigation program in

the City of Bellingham with the following goals:

1) improving the success rate of mitigation projects,
2) reducing costs associated with mitigation,
3) coordinating mitigation efforts, and
4) streamlining the mitigation process.

The first two sections of this document provide background on compensatory mitigation and a summary of mitigation options in use throughout the Puget Sound region. The third section recommends a specific mitigation program for the City of Bellingham. Finally, the last section of this report is a step-by-step implementation plan with estimated costs and schedule.

2.0 BACKGROUND

2.1 What is Mitigation?

The term "mitigation" means to lessen the severity of an action. When development projects propose impacts to regulated wetlands, streams, and habitat areas; jurisdictional agencies require a sequence of steps to lessen their impacts. This sequence of steps is called "mitigation sequencing." Table 1 outlines the steps as defined in the SEPA implementing rules (Chapter 197-11-768 Washington Administrative Code [WAC]) and City of Bellingham CAO (Bellingham Municipal Code [BMC] 16.55.250). Federal agencies have a similar, yet abbreviated process described in a Memorandum of Agreement between the U.S. Army Corps of Engineers (Corps) and Environmental Protection Agency (EPA) (Corps, 1990). The federal process generally conforms to steps 1, 2, and 5 in Table 1.

Table 1. Mitigation Sequencing

Sequence No.	
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.

Development projects must first avoid and minimize impacts as much as practicable. If a project has unavoidable impacts, federal, state, and local agencies can require actions to compensate for these impacts as shown in step 5, Table 1. These actions are typically referred to as "compensatory mitigation." The goal of compensatory mitigation is to achieve no overall net loss of values and functions (Corps, 1990; BMC 16.55.240, 33 CFR Parts 325 and 332).

2.2 Mitigation Options

Mitigation Options

Compensatory mitigation for wetland, stream, and habitat impacts can be accomplished using one of three federal and state recognized options: permittee-responsible mitigation, mitigation banks, and in-lieu fee programs. Several local communities are exploring a fourth option, "local-only programs," for impacts to buffers and locally protected habitat areas. Table 2 provides a summary of the four options. Permittee-responsible mitigation is described in more detail below. Detailed descriptions of the other three options are included in Section 3.0, Mitigation Programs, below.

Table 2. Summary of Mitigation Options

Option	Description	Responsible for Implementing Mitigation
Permittee-Responsible Mitigation	Permittee-responsible mitigation is an individual project constructed by a permit recipient to provide compensatory mitigation for impacts to natural resources (wetlands, streams, and habitat). Permittee-responsible mitigation also includes "advanced mitigation" where mitigation is done prior to the impact.	Permit Recipient
Mitigation Bank	A mitigation bank is a program by which a permit recipient can pay a fee to a bank sponsor to satisfy their compensatory mitigation requirements. Once the fee is paid, the permit recipient has met their mitigation obligations and is no longer involved with the mitigation actions. In mitigation banks, the sponsor accepts fees after implementing mitigation (i.e. mitigation occurs prior to the impact).	Bank Sponsor
In-Lieu Fee Program	An in-lieu fee program is a program by which a permit recipient can pay a fee to a program sponsor to satisfy their compensatory mitigation requirements. Once the fee is paid, the permit recipient has met their mitigation obligations and is no longer involved with the mitigation actions. In in-lieu fee programs, the sponsor often accepts fees before implementing mitigation (i.e. mitigation occurs after the impact).	In-Lieu Fee Program Sponsor
Local-only Program	A local-only program is a program that helps address local watershed goals. A permit recipient can voluntarily take part in the local program to resolve their local permitting needs. The program does not receive prior approval by state and federal agencies for use in fulfilling state or federal permit obligations. Local-only programs vary widely in their purpose and design.	Varies

Non-Program Options: Permittee-Responsible Mitigation and Advanced Mitigation

Compensatory mitigation has traditionally been completed through permittee-responsible mitigation. In Bellingham, currently *all* mitigation is completed through permittee-responsible mitigation. With permittee-responsible mitigation, the permit recipient is required to implement, maintain, and ensure long-term protection of compensatory mitigation. Permittee- responsible mitigation is most often done *concurrently or shortly after* the authorized impact.

Occasionally, permit recipients have decided to complete the mitigation *prior* to the impact to reduce the mitigation to impact ratio and "prep" the site for future development. This type of permittee-responsible mitigation is called "advanced mitigation." Local examples of advanced mitigation include:

- Port of Bellingham: The Port of Bellingham chose to pursue advanced mitigation to help support economic development in and around the Bellingham International Airport (Goodwin, pers. comm., 2012). The property is outside the Bellingham city limits and within the Bellingham Urban Growth Area (UGA). The advanced mitigation was coupled with a master plan and associated permitting to help streamline the permitting process for future projects. First, the Port of Bellingham completed a 20-year master plan to identify anticipated development opportunities and associated wetland impacts. They then obtained federal approval for the 8.9 acres of wetland fill required for the 20-year build-out. Whatcom County approved the master plan through a binding site plan. Although the federal and local approvals establish the framework for wetland fill, individual projects must also receive project-specific approval prior to filling wetlands.

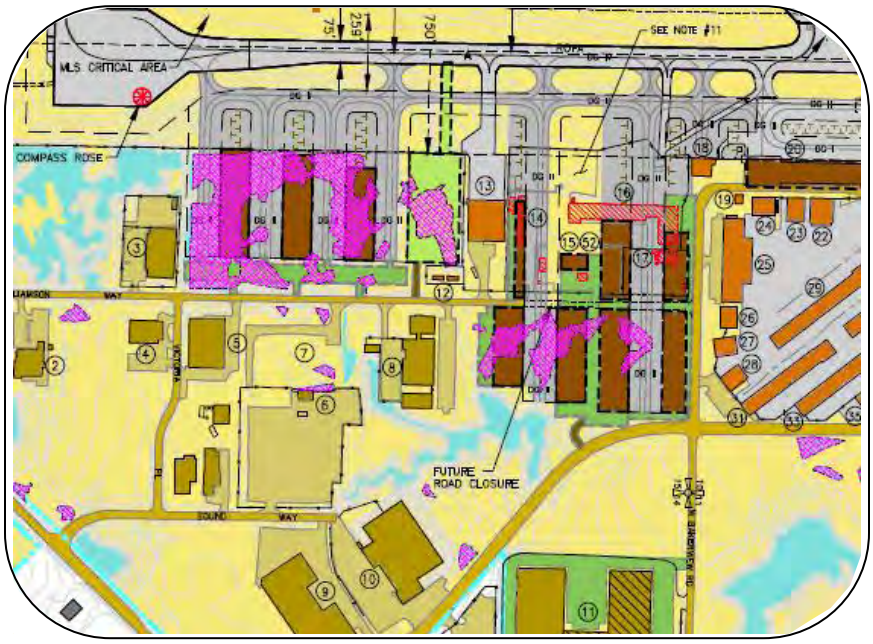

Figure 1. Port of Bellingham Land Use

Airport Layout Plan, Port of Bellingham Master Plan Update (URS, 2010)

Mitigation for the 8.9 acres of wetland fill is designed off-site at a single large tract of land in the vicinity of the Nooksack River where mitigation will significantly improve watershed processes in the Nooksack. Much of the mitigation will be completed by the Port prior to the impacts, yet the agreement allows the Port to phase the mitigation according to available funds and development needs.

- Port of Skagit: The Port of Skagit wished to encourage economic development and secure use of sites critical for airport services at the Port's Bayview Business and Industrial Park (BBIP) located in the vicinity of the Skagit Regional Airport (Young, pers. comm., 2012). Through a collaborative process, termed the Skagit Wetlands and Industrial Negotiations (Skagit WIN), the Port developed a 20-year wetland protection and development plan to allow development on 254 acres of BBIP land. They then obtained state and federal permit approval through the Advance Mitigation Agreement, Skagit WIN Phase III (1998). This Advance Mitigation Agreement authorized 9.7 acres of wetland fill required for the 20-year build-out.

  Mitigation for the 9.7 acres of wetland fill was designed on property surrounding the BBIP. Mitigation included both wetland restoration and enhancement. The Port also agreed to preserve 250 acres of the highest functioning wetlands and their buffers. The mitigation was completed prior to development.

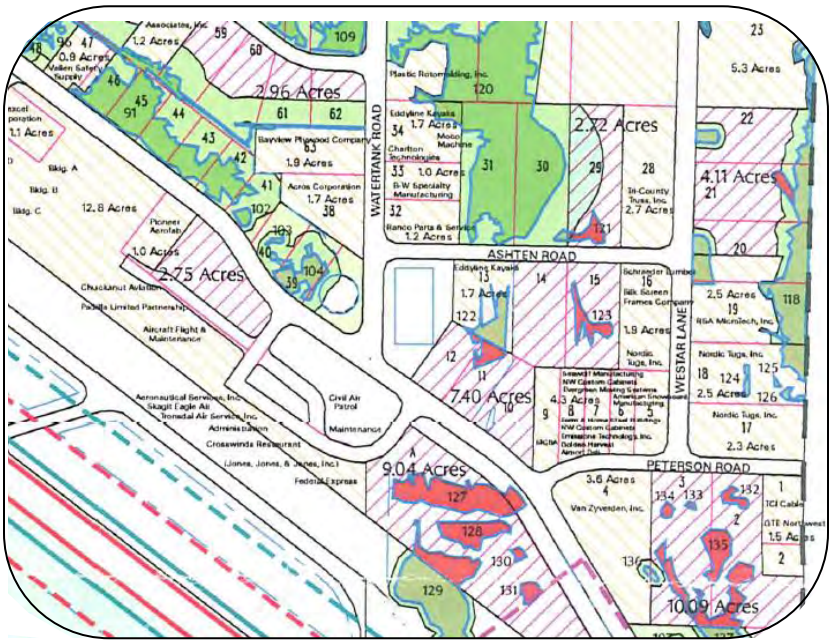

Figure 2. Skagit WIN Phase III, Wetland Management Plan

Wetland Management Plan, Skagit WIN Phase III (Port of Skagit, 1998)

2.3 Recent Changes

In the past decade agencies shifted their concept of mitigation to help improve mitigation success. Agencies recognized a need to look at the broader landscape when selecting mitigation, not just at the project site. In addition, they understood some projects needed an alternative to permittee-responsible mitigation to achieve effective implementation and long-term protection.

Studies have shown natural resource management, including mitigation, is more successful if decisions are based on the larger watershed context and the relationship between processes, structure, and function (Stanley et al., 2011). In 2008 the Corps and EPA finalized *Compensatory Mitigation for Losses of Aquatic Resources*, also known as the 2008 Federal Rule (33 CFR Parts 325 and 332). In 2009, the Washington State Department of Ecology (Ecology) published *Selecting Mitigation Sites Using a Watershed Approach* (Hruby et al., 2009). Both documents emphasize selecting mitigation sites using a "watershed approach." Traditionally, mitigation has focused on mitigation at the development site with features that provide similar functions as the impact site (on-site, in-kind). Instead, the watershed approach requires looking at the entire drainage basin and understanding the ecological processes that drive the functions (geological changes, water cycles, mineral cycle, energy flow, and community dynamics). The watershed approach helps identify sites that are appropriately located within the landscape, restore the underlying watershed processes, are sustainable, and have a high likelihood of ecological success.

Federal and state agencies are also encouraging alternatives to permittee-responsible mitigation. While they believe permittee-responsible mitigation should remain one of the tools in the mitigation toolbox, federal and state agencies now prefer the use of mitigation programs (mitigation banks and in-lieu fee programs) for many projects (33 CFR Parts 325 and 332; and Ecology, 2012a). Mitigation banks and in-lieu fee programs are generally more consistent with the watershed approach. They also have a higher potential for success because they consolidate resources, utilize more rigorous scientific information, and have long-range financial management. Currently, there are very few mitigation banks or in-lieu fee programs approved for use in Washington State; however, they are widely used in the midwestern and eastern United States.

2.4 Benefits of a Mitigation Program

Mitigation programs offer another tool for accomplishing compensatory mitigation. In many cases, this tool might be the most effective way of achieving no net loss and providing better support for the community's long-term economic stability, health, and quality of life. Mitigation programs involve a mitigation bank, in-lieu fee program, or similar system. The program is established by a "sponsor" and uses a watershed approach and long-range planning to strategically manage mitigation within the local region.

A mitigation program can strategically balance watershed processes, land use practices, and community goals to achieve a plan that coordinates mitigation actions for the highest ecological value for the least expense.

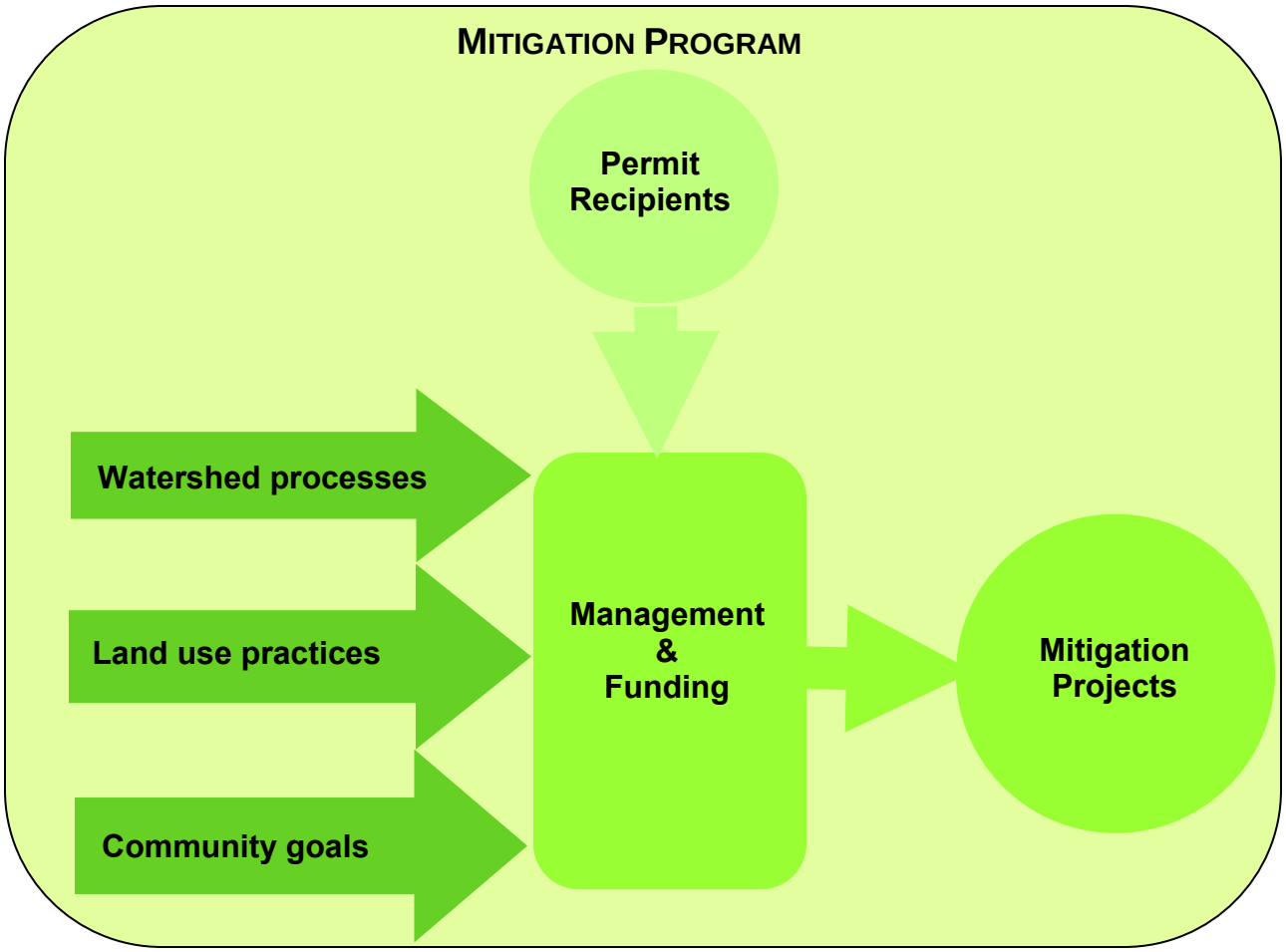

Figure 3. Mitigation Program

A mitigation program can offer the following benefits:

- Increase the success rate and ecological value of mitigation projects by providing consistent, experienced maintenance and protection;
- Make better use of existing dollars and efforts by coordinating mitigation actions already occurring within the region;
- Reduce staff time spent on environmental permit violations;
- Address the goals and needs of the local community by prioritizing mitigation actions;
- Provide funding for projects that have been identified as necessary to restore critical water quality, flow control, and/or adequate habitat functions;

- Streamline the permit process by pre-authorizing mitigation activities;
- Facilitate economic growth and stability by establishing a predictable system with multi-agency buy-in;
- Facilitate capital improvement projects by minimizing time delays associated with mitigation; and
- Distinguish the jurisdiction as supportive of thoughtful development.

3.0 MITIGATION PROGRAMS

The City of Bellingham has several options for developing a mitigation program:

1) mitigation bank,
2) in-lieu fee program, or
3) local-only program.

Mitigation programs, especially mitigation banks, have been widely used throughout the midwestern and eastern United States. Although mitigation programs are relatively new in Washington State, there are several examples of each in the Puget Sound region. The three options and regional examples are discussed below. The descriptions are based on document research, site visits, and interviews. A comparison of the primary attributes of each of the three program options is provided in Table 3 at the end of this section.

3.1 Mitigation Bank

Overview

A mitigation bank is a program by which a permit recipient can pay a fee to a bank sponsor to satisfy their compensatory mitigation requirements. Once the fee is paid, the permit recipient has met their mitigation obligations and is no longer involved with the mitigation actions. The responsibility for mitigation implementation and success is transferred to the mitigation bank sponsor. A bank sponsor can be an agency, non-profit entity, or for-profit business.

The utility of mitigation banks is fairly broad. Mitigation banks can be approved for a variety of impacts. Banks most commonly provide compensation for one or a combination of the following: wetland, stream, riparian, shoreline, fish, wildlife, and buffer impacts. A conservation bank is a similar concept but specific to impacts fish and wildlife species. In addition to being able to address a broad range of natural resources, a mitigation bank can also be approved to meet permit obligations for all three levels of government: local, state, and federal.

"If given a choice, we would pursue a mitigation bank again. A bank is more successful, more efficient, and has revenue benefits."

– Ron Straka, Surface Water Utility Supervisor, City of Renton

The approved permit uses are specific to each bank, but the list below includes the most common laws and regulations addressed by bank credits:

Federal:

- CWA Section 404;
- CWA Section 401;
- ESA;

State:

- State Hydraulic Code;

Local:

- CAO for wetlands, streams, and habitat conservation areas; and
- SMP.

The mitigation bank is comprised of an area (and sometimes multiple areas). Mitigation banks generally consolidate several smaller projects into a larger site with higher ecological significance. The bank area is typically 100 acres or greater in size and selected using a watershed approach. Consequently, most banks in Washington State are located in rural areas.

The bank sponsor restores, creates, enhances, and/or preserves natural resource functions and protects the bank in perpetuity in accordance with a pre-approved mitigation plan and "banking instrument". Once the bank sponsor has shown they have completed the mitigation activities in accordance with the bank's banking instrument, the bank is authorized to sell "credits" according to the schedule identified in the banking instrument. To purchase banking credits, permit recipients must demonstrate to the jurisdictional agencies that the project 1) is within the pre-approved bank service area and 2) credits purchased from the bank adequately compensate for the functional impacts of the specific project.

The long-term responsibilities of a bank sponsor generally include periodic reporting to the agencies that oversee the bank (Interagency Review Team or IRT), maintenance and protection of the bank land, administrative management of the bank, and financial stability the banking entity. The bank sponsor does not need agency approval for bank expenditures or establishing credit prices. Because a bank conducts the mitigation project(s) prior to releasing credits, the bank can have higher risks and require more significant upfront capital compared to in-lieu fee programs. However, for the same reason, the bank can often have a lower mitigation to impact ratio and lower administrative costs. Mitigation banks are often for-profit ventures. Of the approximately 1,000 banks nationwide, over 75 percent are run by for-profit businesses.

Use in the Puget Sound Region

As of the date of this report, Ecology lists 11 state/federally approved and five pending mitigation banks in Washington State. Only one bank is approved for use in Whatcom County, the Lummi Nation Wetland and Habitat Bank, and two banks are approved for use in Skagit County (Nookachamps Wetland Mitigation Bank and the Skagit Environmental Bank).

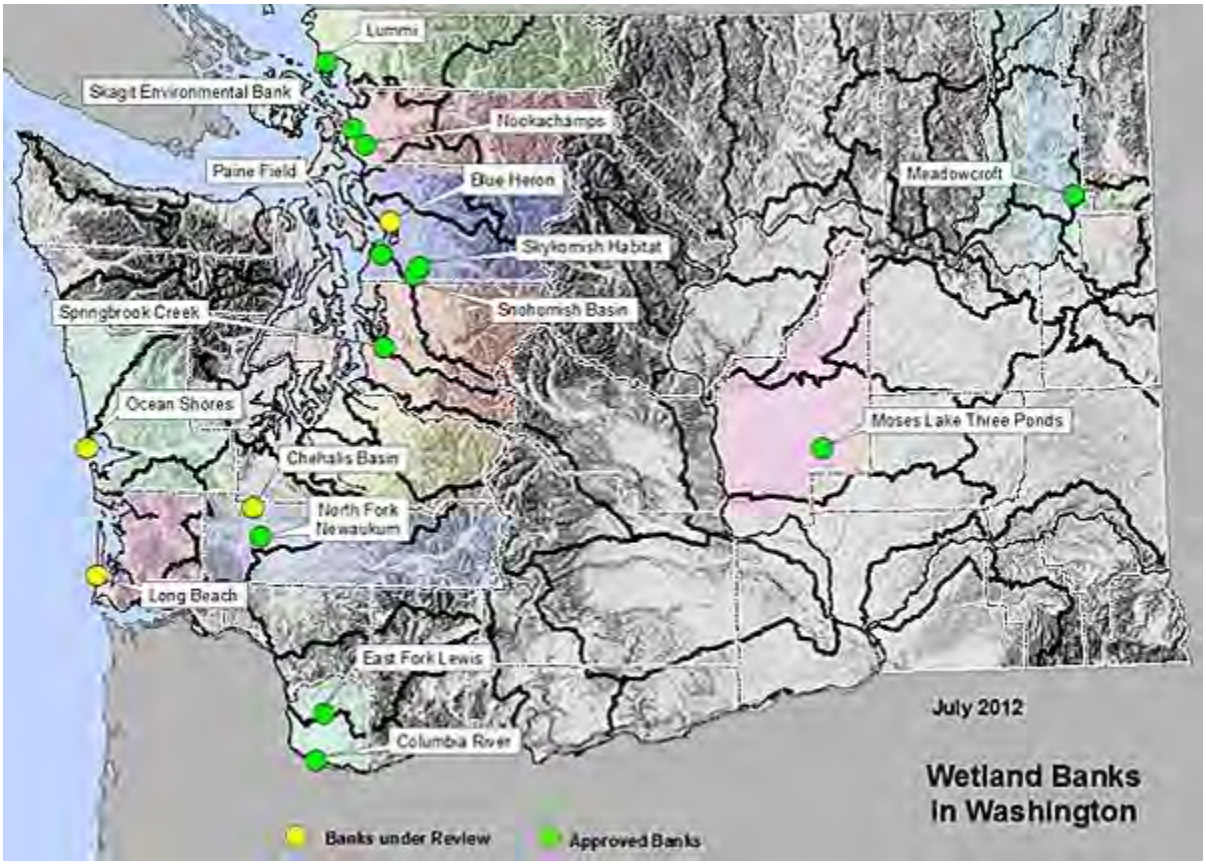

Figure 4. Wetland Mitigation Banks in Washington State

Ecology, Shorelands & Environmental Assistance Program (Ecology, 2012b)

Below is a summary of the Lummi Nation Wetland and Habitat Bank, the only bank with a service area that encompasses the City of Bellingham:

- The program is intended to serve public and private developments both on and off the Lummi Indian Reservation.
- The program goals are to improve watershed processes, increase mitigation success rates, improve salmonid and shellfish habitat, and streamline environmental permitting.
- The service area for the Bank includes the Nooksack River watershed and other coastal drainages in WRIA 1 located downstream from the confluence of the North Fork, Middle Fork, and South Fork of the Nooksack River (Figure 1, Appendix B). This includes Bellingham and its UGA.

- The Bank includes three separate mitigation sites known as the Nooksack Delta Site, the Blockhouse Site, and the Lummi Delta Site, for a total area of over approximately 1,900 acres.
- The Bank is being developed in phases.
- Credits will be released on a pre-determined schedule. The bank has the potential to release 720 credits, with approximately 20 credits released on the first phase (Phase 1A).

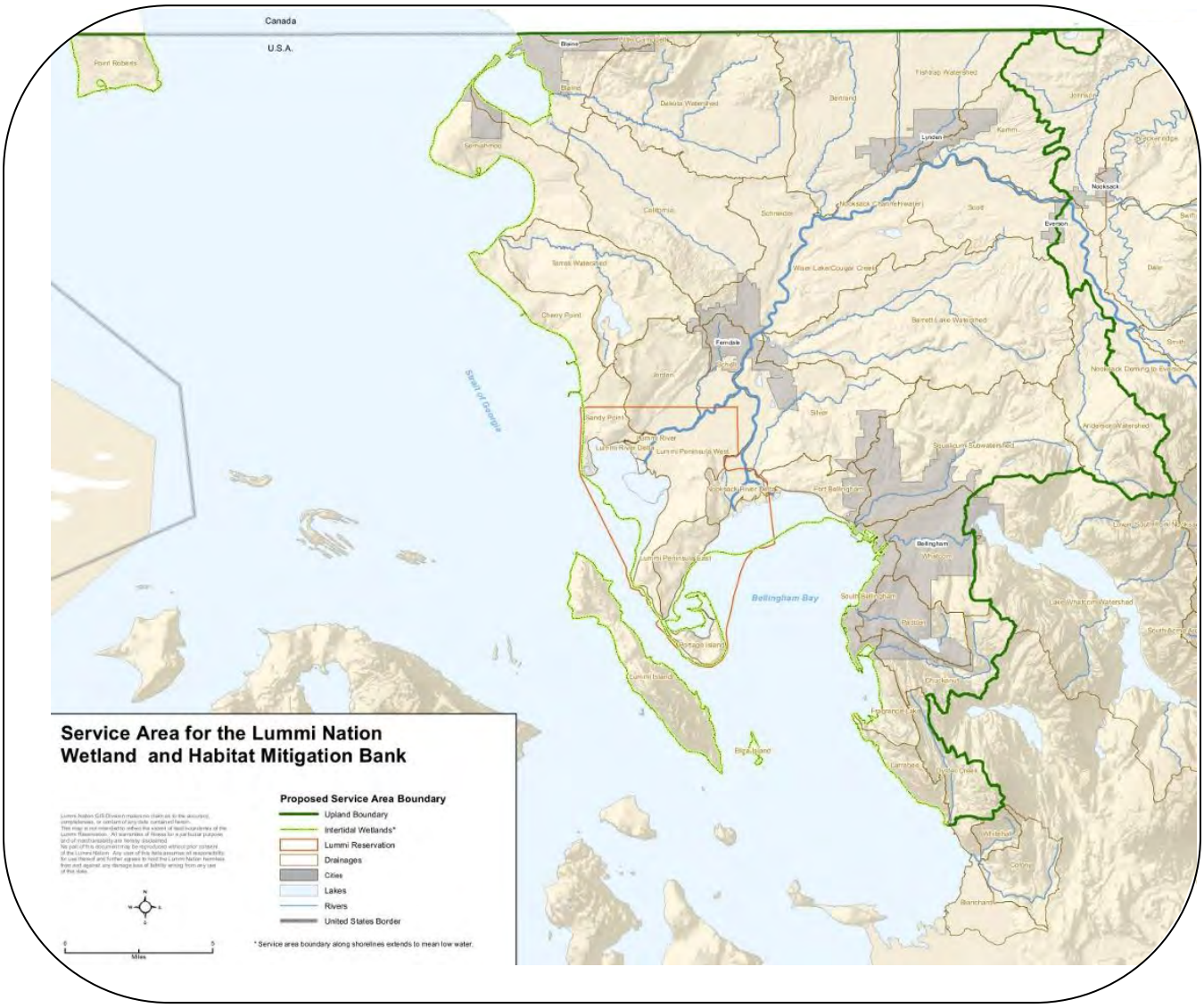

Figure 5. Service Area for the Lummi Nation Wetland and Habitat Mitigation Bank

(Lummi Nation, 2012)

3.2 In-Lieu Fee Program

Overview

An in-lieu fee program is a program by which a permit recipient can pay a fee to a program sponsor to satisfy their compensatory mitigation requirements. Once the fee is paid, the permit recipient has met their mitigation obligations and is no longer involved with the mitigation actions. The sponsor then assumes the responsibility of the compensatory mitigation.

The utility of in-lieu fee programs is as broad as banks and encompasses the same suite of resources: wetland, stream, riparian, shoreline, fish, and wildlife impacts. Like banks, an in-lieu fee program can also be approved to meet permit obligations for all three levels of government: local, state, and federal. The approved permit uses are specific to each program, but the list below includes the most common laws and regulations addressed by in-lieu fee credits:

> **"With [the King County in-lieu fee program] proposal, we couple greater predictability for builders to greater certainty that we will successfully protect and restore streams and wetlands"**
>
> - Dow Constantine, King County Executive

<u>Federal:</u>

- CWA Section 404;
- CWA Section 401;
- ESA;

<u>State:</u>

- State Hydraulic Code;

<u>Local:</u>

- CAO for wetlands, streams, and habitat conservation areas; and
- SMP.

In-lieu fee programs are similar to mitigation banks in many ways. Like a bank, an in-lieu fee program restores, creates, enhances, and/or preserves natural resource functions and protects the in-lieu fee area in perpetuity in accordance with a pre-approved "in-lieu fee program instrument." An in-lieu fee program sponsor sells "credits" to permit applicants for use as their compensatory mitigation. The sponsor then uses the funds from the credit sale to finance a mitigation project(s).

Similar to banks, the in-lieu fee program sponsor is responsible for the success of the mitigation project. Also consistent with banks, projects using an in-lieu fee program must demonstrate to the jurisdictional agencies that the project 1) is within the pre-approved program service area and 2) the program adequately compensates for the functional impacts of the specific project.

The significant differences between in-lieu fee programs and banks are summarized below:

- Rather than implementing mitigation actions prior to selling credits, in-lieu fee programs typically implement mitigation actions after collecting funds from permit recipients.

Implementation occurs on a pre-determined schedule (typically three years between the time an impact occurs and mitigation land acquisition/ground-breaking).

- In-lieu fee programs cannot be sponsored by a private entity; instead, they must be sponsored by a government or non-profit natural resources management entity. In Washington State, in-lieu fee programs have not been used as for-profit ventures.
- Unlike banks, in-lieu fee programs require agency approval for expenditures and credit pricing.
- Instead of one large geographic area, in-lieu fee programs are often comprised of several smaller mitigation projects spread over a larger geographic area. Consequently, in-lieu fee programs can be more suited to urban areas and/or areas with several smaller drainage basins. Like banks, the in-lieu fee program sites are selected for their ecological significance as determined using a watershed approach. Unlike banks, in-lieu fee programs involve *several* mitigation sites. Consequently, a jurisdiction often must inventory and prioritize their resources prior to selecting mitigation sites for the in-lieu fee program. Bellingham is in the process of completing this difficult hurdle, and is therefore better positioned than many jurisdictions in considering an in-lieu fee program.
- Mitigation sites *may* be identified and pre-approved during the program approval process. This allows the flexibility to identify mitigation sites later in time as part of a separate review and approval process.
- In-lieu fee programs are much less common; only 17 in-lieu fee programs nationwide vs 1,000 banks.

As with banks, the long-term responsibilities of an in-lieu fee program sponsor generally include periodic reporting to the agencies that oversee the program, maintenance and protection of the program land, administrative management of the program, and financial stability of the program. Because in-lieu fee programs often conduct mitigation actions after collecting funds, they usually have a lower start-up cost but higher management costs compared to banks. In-lieu fee programs avoid the upfront costs of purchasing land and completing mitigation required of banks, but instead have to manage these actions over the life of the program. As a result, the program administration is more complicated and more costly. Agencies require that credit prices be based on "full cost accounting" and agencies are involved in approving program expenditures. These additional administrative responsibilities typically contribute to a more expensive credit price compared to banks. In addition, the more expensive credit price may also reflect an in-lieu fee program's higher mitigation to impact ratio due to the temporal loss of function, i.e. mitigation is implemented after impacts are complete.

Use in the Puget Sound Region

As of the date of this report, the Corps lists only one federally approved in-lieu fee program, the King County Mitigation Credit Program (approved March 2012). As the first in-lieu fee program approved in Washington State under the 2008 Federal Rule, King County's program is being used as a template for future programs (Murphy, pers. comm., 2012; Warner, pers. comm., 2012;

Terzi, pers. comm., 2012). In addition to King County's program, there are four pending in-lieu fee applications. Tulalip Tribe's in-lieu fee program is the closest in proximity to Bellingham.

Below is a summary of the King County Mitigation Credit Program:

- The program is intended to serve public and private developments throughout King County.
- The program goals are to increase consistency, equality, and success in the mitigation process.
- The program includes seven service areas (drainage basins). Mitigation needs to occur within the same service area as the impact area. Impacts in one service area need to be mitigated in the same service area.
- When the program has collected sufficient funds, the Mitigation Reserve Program chooses a mitigation site from an existing roster of mitigation sites. Roster sites may be publicly or privately owned.
- Implementation of a mitigation project requires review and approval from the IRT.
- Land acquisition and initial ground-breaking for a mitigation project must occur in a Service Area within three growing seasons after an approved impact occurs within the same Service Area.

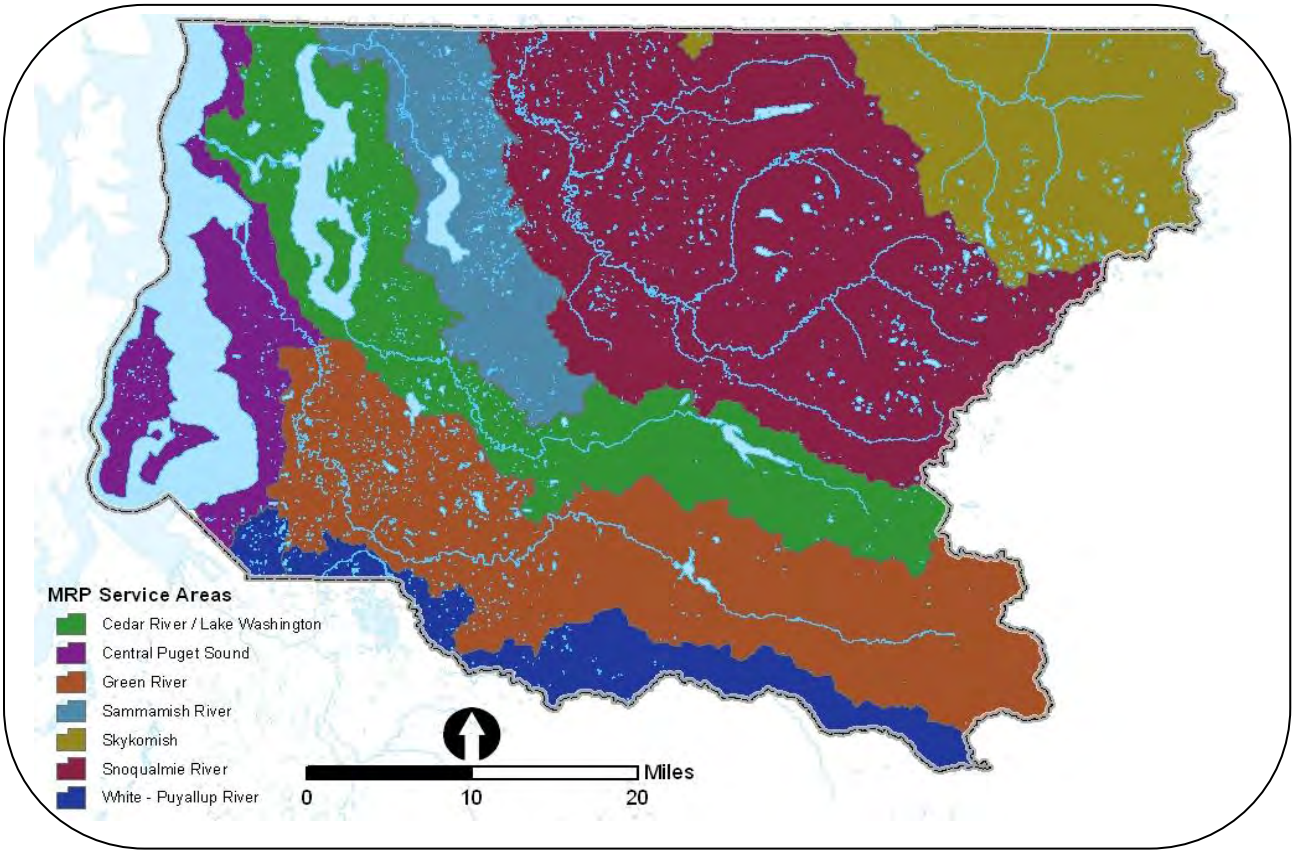

Figure 6. Service Areas for the King County Mitigation Reserves Program

(King County, 2012)

3.3 Local-Only Program

Overview

A local-only program involves mitigation only within the regulatory authority of the local jurisdiction. The program does not receive prior approval by state and federal agencies for use in fulfilling state or federal permit obligations. Local-only programs are not uniform, but typically, the programs are voluntary and encourage permit applicants to use the program by offering incentives. Incentives can include streamlined permitting, cost savings, and/or flexible development standards.

> **"Our program has two goals: facilitate development and point mitigation in the area that best benefits Mukilteo."**
>
> - Patricia Love, Assistant Director of Planning and Community Development, City of Mukilteo

Because a local-only program does not involve state or federal agency approval, the program is limited to the following:

- Managing buffer impacts through a bank or in-lieu fee program AND/OR
- Prioritizing wetland, stream, or buffer mitigation actions as "off-the-shelf" mitigation options to be completed by permit applicants through permittee-responsible mitigation.

Many jurisdictions choose to implement their local-only program utilizing the watershed approach. If a local-only program involves several mitigation sites, the program has the same challenge as an in-lieu fee program: a jurisdiction often must inventory and prioritize their resources prior to selecting the mitigation sites. Bellingham is in the process of completing this difficult hurdle, and is therefore better positioned than many jurisdictions in developing a local-only program.

Use in the Puget Sound Region

We reviewed three local-only programs in Puget Sound. They vary widely and only Mount Vernon's program is fully implemented. The Birch Bay program is the only program in Whatcom County.

- Mount Vernon
  The City of Mount Vernon adopted an optional program for buffer impacts called the Managed Ecosystem Alternative Program (Mount Vernon Municipal Code [MVMC] 15.40.090). The program is part of their CAO. The purpose of the program is to offer flexibility to developers and improve watershed processes within the City of Mount Vernon.

  An applicant is eligible for the program if the project is located within specific drainage basins identified using a watershed approach. Under the Managed Ecosystem Alternative Program, an applicant may be allowed a narrower buffer than typically allowed under the CAO in exchange for

restoration and/or enhancement of remaining degraded wetlands/streams/buffers, upgrading stormwater facilities, monetary contributions to the City's CAO Management Fund, and a commitment to long term monitoring and maintenance. The City uses its CAO Management Fund to accomplish "restoration" projects. All restoration projects are currently on City-owned property, are pre-identified, pre-designed, and pre-permitted (Hansen, pers. comm., 2011). The City only implements a mitigation project when they have collected sufficient funds. Between 2007 and 2011 they collected approximately $150,000.

- Mukilteo
  The City of Mukilteo is in the process of adopting an optional program called the Critical Areas Mitigation Program (CAMP). The program is proposed as part of their CAO. The purpose of CAMP is to streamline the review and approval of compensatory wetland, stream, or buffer mitigation (Love, pers. comm., 2012).

  The program has two parts:
  1) Off-the-Shelf Mitigation: The program provides a list of pre-selected mitigation sites in several sub-basins that were selected using the watershed approach. Several of these sites are City-owned. The City offers the use of these sites to permit recipients. In addition, the City provides detailed descriptions that assist the permit recipient in obtaining state and federal permits, including general site information, actions that will improve the resource, and the watershed-based site selection criteria. The applicant is responsible for mitigation design, permitting, maintenance, and monitoring.
  2) In-Lieu Fee for Buffers: The CAMP also offers an in-lieu fee option for buffer impacts. Applicants with unavoidable buffer impacts that adequately address water quality and hydrology functions on the site can pay into the Mukilteo Habitat Reserve (MHR) for habitat impacts. The City will use the HHR to offset costs of preserving the MHR incurred through purchasing of conservation easements and/or land.

- Birch Bay
  Whatcom County is considering an optional pilot program called the Birch Bay Watershed-Based Management Plan. The program is proposed as part of the CAO and is specific to the Birch Bay watershed. The program uses a watershed-based approach to encourage responsible development while implementing buffer mitigation "in a way that creates greater wildlife habitat benefits to the Birch Bay watershed than could be achieved through on-site, permittee-responsible mitigation."

  Under the Management Plan, an applicant may be allowed a narrower buffer than typically allowed under the CAO in exchange for restoration and/or enhancement of remaining degraded wetlands/streams/buffers and monetary contributions to the County's Habitat Mitigation Fund (HMF) (Gill, pers. comm., 2012). Eligible projects are limited to

residential and commercial development, short and long subdivisions, and binding site plans that are located within the Birch Bay watershed and that meet the minimum criteria for enrollment in the Birch Bay Low Impact Development (LID) program. The County will use the HMF to fund future County-implemented mitigation projects. These future projects will be located at priority sites identified through a watershed approach as having the greatest mitigation value for the Birch Bay watershed. Like state-approved in-lieu fee programs, the HMF would have a required time limit to implement projects after collecting the fee.

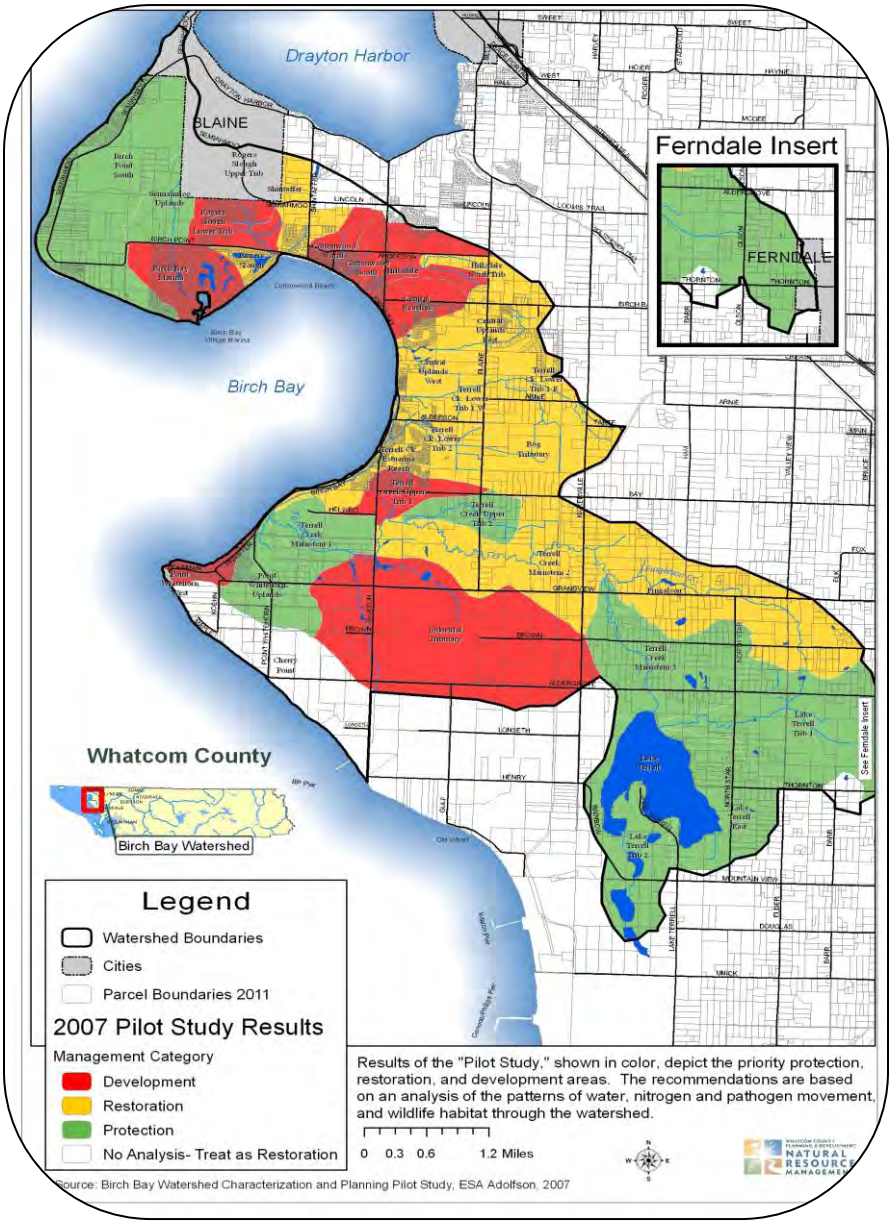

Figure 7. Watershed Characterization Management Categories

Birch Bay Watershed Characterization & Watershed Planning Pilot Study (ESA Adolfson, 2007)

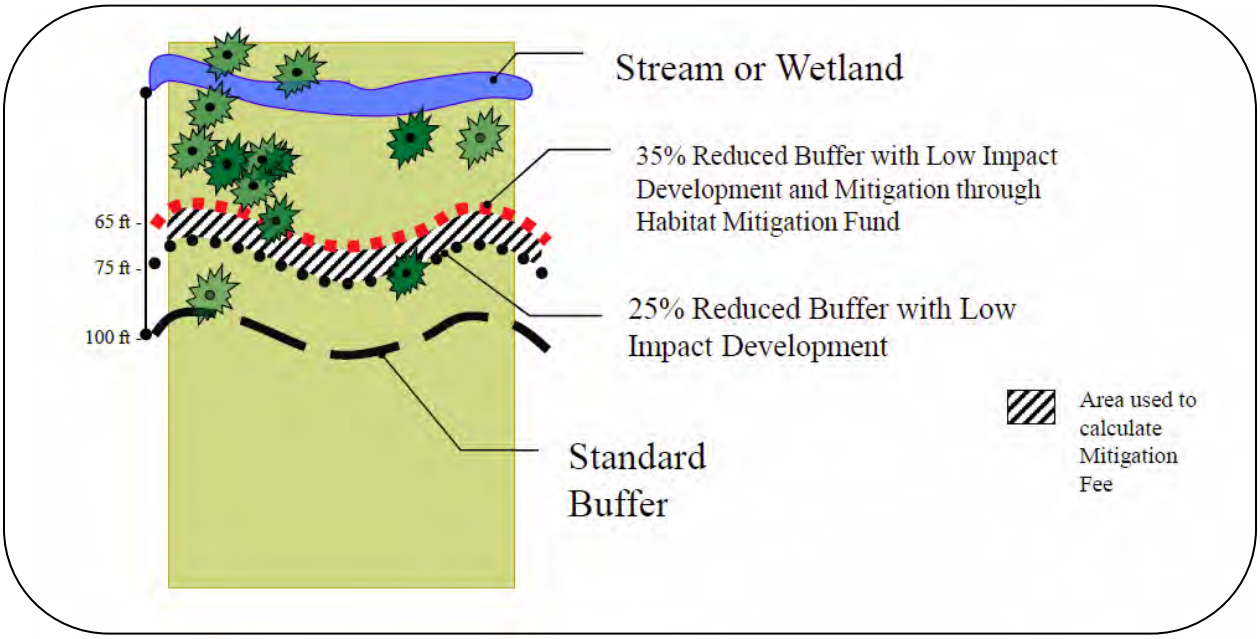

Figure 8. Sample Scenario of Reduced Buffer Widths Using the Birch Bay Habitat Mitigation Fund

Birch Bay Habitat Mitigation Fund, draft 2011 (ESA Adolfson, 2011)

4.0 EVALUATING THE PROGRAMS

4.1 Approval Process

The approval process for mitigation banks and in-lieu fee programs are similar and differ substantially from the approval process for local-only programs. The primary difference is local-only programs do not require state or federal approval. A description of the different approval processes is provided below.

Mitigation Banks and In-Lieu Fee Programs

The approval processes for mitigation banks and in-lieu fee programs are very similar and much more complex than local-only programs. Unlike local-only programs, most banks and in-lieu fee programs are designed to fulfill local, state, and federal compensatory mitigation obligations. Approval is required from each applicable regulatory agency. Typically, these agencies consist of the local agency, Ecology, and the Corps. Often, the approval process involves coordination with local tribes and WDFW as well. If the program addresses ESA-related mitigation, the program also needs approval from USFWS and/or NOAA Fisheries.

For banks, the Corps requires the bank be consistent with the 2008 Federal Rule and Ecology requires it be consistent with the state's Wetland Mitigation Bank Rule (Chapter 173-700 WAC). For in-lieu fee programs, the state does not have a rule, so both the Corps and Ecology require the program be consistent with the 2008 Federal Rule. If a bank or in-lieu fee program sponsor

wishes the credits be approved for compensatory mitigation for ESA obligations, then the USFWS and/or NOAA Fisheries require it be consistent with related federal guidance including *Guidance for the Establishment, Use, and Operation of Conservation Banks* (USFWS, 2003).

The approval process begins when a mitigation bank or in-lieu fee program sponsor submits a prospectus to the applicable agencies. The prospectus is reviewed and negotiated by the Interagency Review Team (IRT). Standing members of the IRT in Washington include staff from Ecology, the Corps, and the EPA. Invited members include staff from local governments, appropriate tribes, the WDFW, Washington State Department of Natural Resources (WDNR), USFWS, and NOAA Fisheries.

The purpose of the IRT is to work with the sponsor to develop the final document: the "instrument." The instrument outlines the terms and conditions of program approval or certification. For in-lieu fee programs, development of the instrument involves agency approval for credit pricing and accounting procedures. Based on discussions with several sponsors, approval of the bank or in-lieu fee instrument is currently estimated to take five to seven years from submittal of a prospectus. Incorporating ESA-related mitigation could potentially extend the approval process by several months to a year (estimated).

Once the mitigation bank or in-lieu fee program is established, some IRT members oversee the establishment, use, and operation of the program. Sponsors are responsible for periodic reporting to the IRT. In-lieu fee programs have an additional requirement. Unlike banks, in-lieu fee programs implement mitigation projects after collecting fees; therefore, when the sponsor wishes to implement a mitigation project, project approval must be obtained through additional coordination with the IRT.

Local-Only Programs

A local-only program involves mitigation only within the regulatory authority of the local jurisdiction. Therefore, a local-only program would only need approval through the local approval process. This would likely include code changes and development of internal policies and/or guidance. Public outreach early in the process can be very helpful in gaining support from both the environmental and development communities. Based on discussions with several sponsors, approval of a local-only program is currently estimated to take two to five years.

4.2 Cost-Benefit Analysis

All three options (mitigation banks, in-lieu programs, and local-only programs) can support watershed health while reducing unnecessary barriers to economic development. The options; however, differ in the degree to which they provide these benefits. They also differ in their level of risk to the sponsor and suitability for urban landscapes. The cost and benefits for the different options are discussed below and summarized in Table 3.

Benefits to Economic Development

Both mitigation banks and in-lieu fee programs can support economic development by streamlining the local, state, and federal permitting process, increasing predictability in the permit review process, and reducing the duration of a permit recipient's mitigation obligations. With both banks and in-lieu fee programs, once a permit recipient receives agency approval to use the program and pays the credit fee, their compensatory mitigation obligations are finished. They do not need to find a mitigation site, construct mitigation, or maintain/monitor the mitigation site. The cost of credits may be higher than the cost of implementing the mitigation project themselves using permittee-responsible mitigation, but often a developer finds the price premium is worth the reduced obligations. In-lieu fee programs may have a higher credit price than a bank because, unlike in-lieu fee programs, state and federal agencies are not involved in setting credit prices for banks and the credit price can be as low as the sponsor feels is advantageous. In addition, in-lieu fee programs have additional administrative responsibilities, but depending upon the project, a permit recipient may choose an in-lieu fee program for a variety of reasons discussed under Competing Programs, below. In general, banks are designed as for-profit programs and in-lieu fee programs are not designed to generate profit.

A local-only program can support economic development, but to a lesser degree than mitigation banks and in-lieu fee programs. A local-only program can only streamline and increase predictability for the local permitting process. Applicants would still need to receive agency approval for direct (non-buffer) impacts to streams, wetlands, shorelines, and/or lakes. Depending upon the program's design, the applicant may or may not be responsible for the design, construction, maintenance, and monitoring of mitigation sites. In addition, a local-only fund may not receive as much capital as a fund that allows for direct stream, wetland, and lake impacts. Existing local-only programs are not designed to generate profit beyond the needs of the program itself.

Improving Watershed Health

Mitigation banks, in-lieu fee programs, and local-only programs can all improve watershed health by implementing more meaningful and successful actions. Although in-lieu fee program mitigation sites are often smaller than mitigation bank sites, both banks and in-lieu fee programs consolidates several small mitigation actions into larger, centralized areas that are more ecologically significant than separate, isolated mitigation projects. Unlike banks, an in-lieu fee program allows impacts to occur prior to implementing mitigation actions. Despite this temporal loss, an in-lieu fee program can improve mitigation success over permittee-responsible mitigation because it is managed with long-term financial assurances. Furthermore, in contrast to permittee-responsible mitigation which is implemented by an entity whose primary expertise and purpose is development, both banks and in-lieu fee programs are managed by individuals whose primary expertise and purpose is the construction, maintenance, monitoring, and long-term protection of the mitigation area. Local-only programs may have some or all of these same attributes, depending upon the design of the program.

Risks to the Sponsor

A local-only program is relatively easy and economical to implement because it does not require state or federal approval and is not dictated by specific methodologies. A local jurisdiction can design the program according to how much responsibility they want for program implementation and management. However, if a local-only program includes several mitigation sites, the jurisdiction may need to inventory and prioritize their resources before they are able to identify the most appropriate mitigation sites. Bellingham is in the process of completing these tasks.

Mitigation banks and in-lieu fee programs have greater risk for the sponsor compared to local-only programs. A bank requires significant upfront capital. Banks sites are identified during the bank approval process. The program requires securing the mitigation land and installing at least a portion of the mitigation elements prior to selling credits. The risk for in-lieu fee programs is less than for mitigation banks. An in-lieu fee program is able to collect funds to finance the mitigation projects prior to their implementation. Both banks and in-lieu fee program sponsors are responsible for the long-term administration of the program, success of the mitigation projects, and maintenance of the on-the-ground projects. The intent is for both banks and in-lieu fee programs to be financially self-sustaining; however, the over-riding obligation for the sponsor is to meet the permit obligations they assumed when they sold the mitigation credits. As with any mitigation project, unforeseen challenges may result in unexpected costs to meet the permit obligations. If done correctly, this risk should be incorporated into the program design with legal limitations, a contingency plan, and a contingency fund.

Another source of risk is future profitability. Due to the capital required at the out-set of the project, this risk is highest for banks, moderate for in-lieu fee programs, and lowest for local-only programs. The demand for credits is dependent upon market conditions and competing mitigation options. The unique risk of an in-lieu fee program is that the sponsor has taken the responsibility of the mitigation obligations with the assumption that they will receive a critical mass of fees to fund a complete project within the required time limit (typically three years from an impact to breaking ground on mitigation). Competing programs is discussed in more detail, below.

The risks for any of the options (mitigation banks, in-lieu fee programs, and local-only programs) could either be born entirely by the City or shared in partnership with another entity. We did not review any in-lieu fee programs that have shared risk; however, it appears possible. Unlike mitigation banks, the risk for in-lieu fee programs cannot be shared with a for-profit company. Instead, the partners must both be government agencies or non-profit natural resources management entities. It is likely one entity might take responsibility for the administrative management while the other entity might be more suited for the project implementation and on-the-ground work. In the case of banks, a different scenario is more common. Other municipalities in Washington have shared banking responsibilities with the Washington State Department of Transportation (WSDOT) and for-profit banking companies. In return for use of a municipality's land, the partner provides the municipality with the ability to use the bank for its own projects and a percentage of the bank profits.

Suitability for Urban Land Use

Local-only programs can be tailored to fit unique local land uses. We reviewed programs ranging from the more rural setting of Birch Bay to the highly urbanized setting of Mukilteo. As long as the development rate was predicted to be sufficient for funding the program, it appears possible to design a program that improves watershed processes.

Mitigation Banks and in-lieu fee programs are more standardized in their land use settings. An in-lieu fee program may be more suited to the City of Bellingham's land use than a mitigation bank. Because the City has a high level of urbanization, the City may not have an area within the City limits large enough to meet the minimum viable bank size and/or an area capable of supporting the watershed processes necessary for a bank. The City could; however, purchase land outside the City limits for a bank. In contrast, an in-lieu fee program can accommodate several smaller sized projects in different drainage basins. This scenario may work within the City limits and avoid the need for purchasing a site outside the City limits and the associated an inter-local agreement with another local jurisdiction. In addition, Bellingham is in the process of completing an inventory and prioritization of its natural resources which will facilitate selection of in-lieu fee mitigation sites within the City limits.

Table 3. Mitigation Program Comparison

Program	Upfront Capital	Who does mitigation project?	Ability to Streamline Permitting	Program Approval Process	Land* Area Required	Ability to Improve Watershed Processes	Program Admin.	Suitability for Urban Land Use	For Profit?
Mitigation Bank	High	Sponsor	Fed/ State/ Local	~5 yrs	80-100+ ac (~single site)	High	Mod.	Mod.	Yes
In-Lieu Fee Program	Med.	Sponsor	Fed/ State/ Local	~5 yrs	<100 ac (multiple sites)	Mod.-High	High	High	No
Local-only Program	Low	Sponsor or Permit Recipient	Local	~3 yrs	<100 ac (multiple sites)	Moderate	Mod.	Mod.	No

* actual acreage and number of sites can vary, numbers given represent typical scenario

4.3 Competing Programs

Regardless of the program option, the program's success is partially dependent upon how many credits the program can sell. In other words, the success is dependent upon a program's popularity. A program's success rests largely on its ability to compete in three areas:

- Ease of use (quick response, predictable process);
- Ability to streamline the mitigation process (how many permits/agencies does it satisfy)? how much responsibility is transferred from the developer to the program?;
- The target users (which ecological functions? where is the service area?); and
- The cost of the credits.

Currently, there are very few programs that have the potential to complete with any program Bellingham chooses to implement. The Lummi Wetland and Habitat Mitigation Bank is the only pending program with a service area that encompasses the City of Bellingham. Although the

current number of competing programs is small, mitigation programs are a relatively new concept and we recommend Bellingham assume there will be additional competing programs in the future.

A few other entities are already exploring options for future programs. As mentioned under Local-Only Programs, above, Whatcom County is in the process of requesting Council approval for implementing the local-only pilot program for Birch Bay. In addition, Whatcom Farm Friends has been collaborating with local and state agencies since 2008 to explore the idea of a Natural Resources Marketplace. The Natural Resources Marketplace is focused on the rural and agricultural lands within Whatcom County. The goal of the Natural Resources Marketplace is to have a structure that allows credits to be purchased and sold across separate "markets" (mitigation credits, water contracts, development rights).

The City can exert some control over which mitigation options are available to applicants with impacts within the City limits and UGA. These applicants would need City permit approval and the City can require these applicants prioritize use of a Bellingham program over a program in a different drainage basin. However, even this permit control does not guarantee applicants will purchase credits in a Bellingham program. The program must still be carefully designed with the program goals and end users in mind. The more unique and focused a Bellingham program, the less conflict it will have with other mitigation programs.

4.4 Opportunities for Collaboration

The City of Bellingham may have the opportunity to collaborate with other agencies or organizations to implement a mitigation program and share risk. Whatcom County, WSDOT, Whatcom Farm Friends, the Whatcom Conservation District, and the Port of Bellingham, have all expressed interest in pursuing a more comprehensive mitigation approach. In addition, other entities such as the Nooksack Salmon Enhancement Association (NSEA), City of Ferndale, and the Sudden Valley Community Association, may have expertise or a land base that would benefit a City of Bellingham mitigation program.

5.0 RECOMMENDATIONS

5.1 Recommended Mitigation Program: In-Lieu Fee

Based on current City of Bellingham needs and constraints, an in-lieu fee program appears be the best approach for the City. Although an in-lieu fee program would require a serious financial and strategic commitment on the part of City government and its citizens, the program has the potential to have significant economic and ecological benefits with only moderate risk. Specifically, an in-lieu fee program is recommended because the program:

- Streamlines permitting for all three levels of government (local, state, federal);
- Allows use by public and private developers;
- Offers a significant advantage to developers by assuming responsibility for all mitigation activities;
- Can substantially improve mitigation success;

- Requires only moderate up-front capital;
- Can be implemented entirely within the City's jurisdiction thereby eliminating the need for an inter-local agreement with another local jurisdiction;
- Is suited to several small watersheds such as present in the City of Bellingham;
- Allows flexibility in locating future mitigation sites;
- Can capitalize on the City's on-going inventory and prioritization efforts;
- Minimizes competition with other regional mitigation programs by focusing within the city limits; and
- Is phased according to the popularity of the program.

5.2 Implementation Plan

Launching a successful in-lieu fee program is anticipated to take approximately five to seven years and cost between $390,000 and $475,000. Below is an outline of general steps and estimated timeline. Approximate costs are listed with each step.

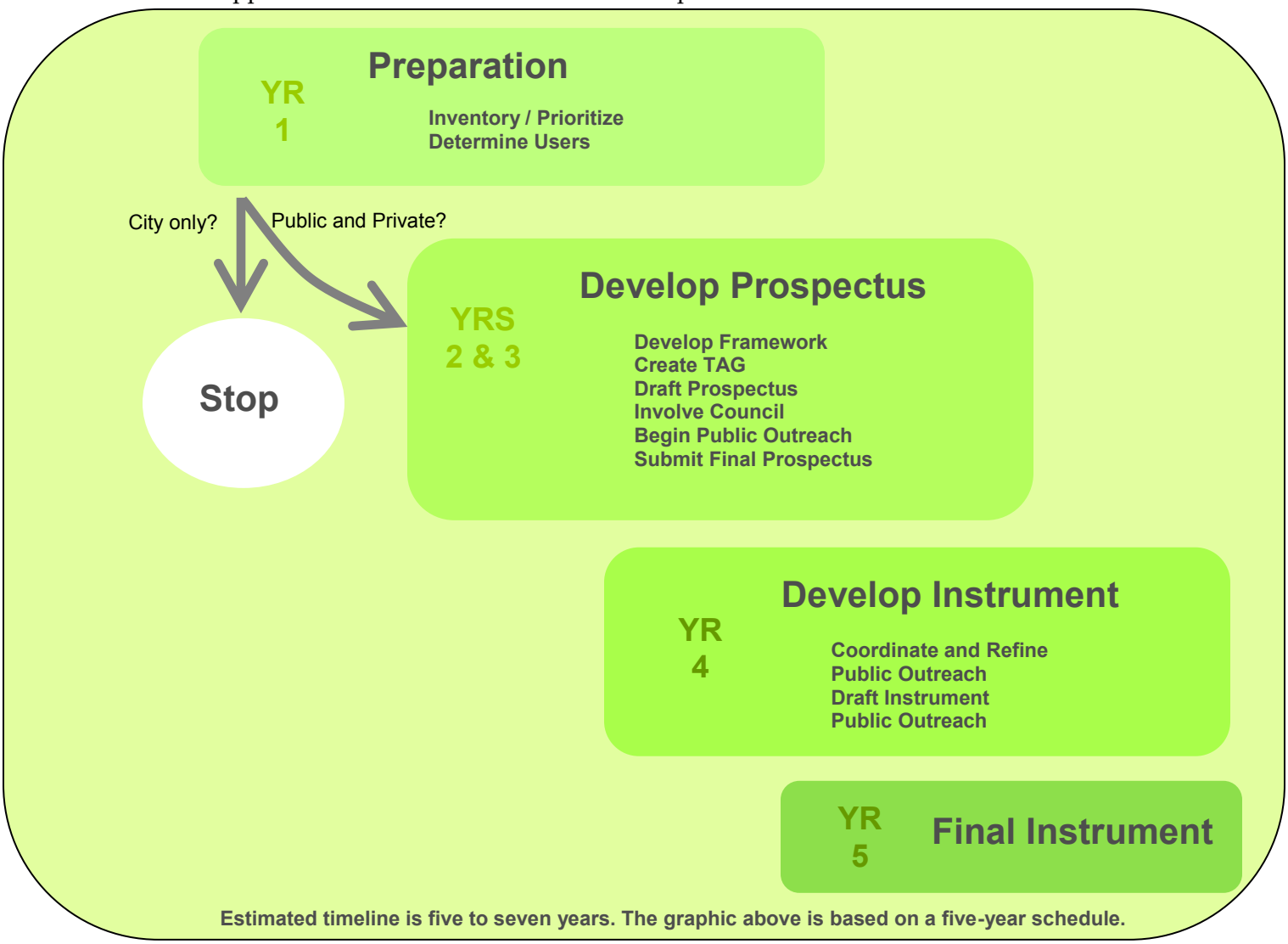

Figure 9. Implementation Steps and Estimated Schedule

STEP 1. PREPARATION

(Approximate cost $200,000; however, Bellingham is in the process of completing this step)

Inventory and Prioritize Mitigation Sites

The City of Bellingham is in the process of completing an inventory of natural resources and prioritizing restoration/mitigation actions.

Determine the Users

Who will be the end users of the program?

IF the program will only be used by the City of Bellingham, then **STOP** here. Consider proceeding with standard permittee-responsible mitigation. The City of Bellingham could develop a prioritized list of mitigation sites and receive pre-approval by Ecology and the Corps. Another option is using Advanced Mitigation. Through Advanced Mitigation, the City of Bellingham could identify future impacts and pre-authorize and implement mitigation in a single, more consolidated mitigation project.

IF the program will be used by public and private developers, **PROCEED** to Step 3.

STEP 2. DEVELOP PROSPECTUS

(Approximate cost $75,000 to $100,000)

Develop Initial Framework

Create a conceptual framework for program type, management, funding, resources, etc.

Create a Technical Advisory Group

Create a group with representatives from a wide variety of sectors (citizens, industry, port, real estate, engineering, fisheries, environmental, tribes, etc.) to advise program development and provide support at the time of implementation.

Create Draft Prospectus

Create a draft prospectus consistent with the 2008 Federal Rule and agency guidance.

Involve City Council

Give a presentation to City Council on the program goals, objectives, and timeline. Incorporate Council input.

Begin Public Outreach

Allow for public and TAG input to help refine and finalize the prospectus.

Finalize and Submit Prospectus

Submit the Prospectus to Ecology, Corps, and any other jurisdictional agency.

STEP 3. DEVELOP INSTRUMENT

(Approximate cost $100,000 to $150,000)

Agency Coordination & Refinements

Document agency comments for use in producing the draft instrument.

Public Outreach

Update the public and TAG on the progress of the program and gather input on development of the instrument.

Draft Instrument

Create the draft instrument based on agency comments, public outreach, TAG guidance, and staff recommendations.

Public Outreach

Update the public and TAG on the anticipated schedule and gather input on development of the final instrument.

FINAL INSTRUMENT

Submit and receive multi-agency approval for a final in-lieu fee instrument. Begin promotion campaign and program management.
(Approximate cost $15,000 to $25,000)

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