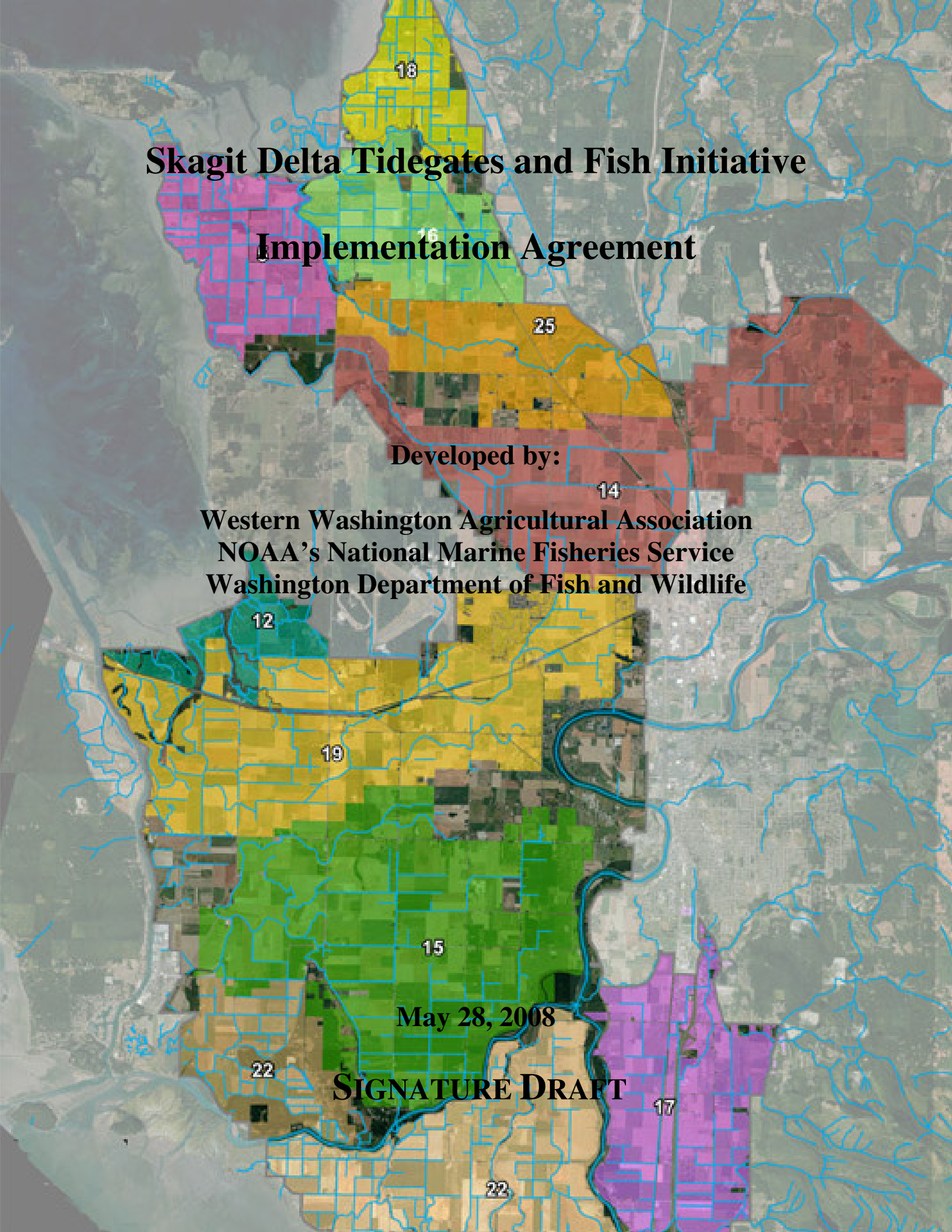

Skagit Delta Tidegates and Fish Initiative

Implementation Agreement

Developed by:

Western Washington Agricultural Association
NOAA's National Marine Fisheries Service
Washington Department of Fish and Wildlife

May 28, 2008

SIGNATURE DRAFT

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

EXECUTIVE SUMMARY

The Skagit Delta Tidegates and Fish Initiative is a collaborative, multi-stakeholder process convened by the Western Washington Agricultural Association in March 2006 for the purpose of identifying pathways and protocols for federal, state and local permitting of tidegate and floodgate repair and replacement activities within the Skagit and Samish River deltas. This Agreement will address actions at tidegate and floodgate sites that are under the ownership or control of Drainage, Diking, and/or Irrigation Districts that are Parties to this Agreement.

This Implementation Agreement represents a formal commitment by the **Western Washington Agricultural Association** (WWAA), representing the collective interests of the participating Drainage, Irrigation and Diking Districts within the Skagit and Samish River deltas; the **NOAA's National Marine Fisheries Service** (NMFS); **United States Fish and Wildlife Service** (USFWS); and the **Washington Department of Fish and Wildlife** (WDFW) to develop a delta-wide landscape approach to address tidegate and floodgate maintenance needs within the Skagit delta area, in conjunction with estuarine habitat restoration goals for recovery of Endangered Species Act (ESA) listed Chinook salmon in the Skagit River system. In addition to the above-named principals, key staff members representing the U.S. Army Corps of Engineers (Corps), the Washington Department of Ecology (WDOE), and the Governor's Office of Regulatory Assistance have also provided input and support throughout this process.

A Memorandum of Understanding (MOU) has been developed between WWAA, NMFS and WDFW (Appendix E), hereafter referred to collectively as the Parties, to support the development of this Implementation Agreement. This Agreement will facilitate the achievement of functional estuarine habitat restoration within the Skagit delta area in a manner that will result in the least possible impact to established agricultural lands in the Skagit Delta, and their related drainage infrastructure. The Implementation Agreement stipulates that up to 2,700 acres of delta agricultural lands may be converted to estuarine habitat, and that such conversion, when and where appropriate, will be undertaken in a manner consistent with the objectives of the Skagit Chinook Recovery Plan, as approved and adopted by NMFS in December 2006. In addition, the Implementation Agreement will facilitate the regulatory review process required to conduct maintenance activities on tidegate and floodgates under the ownership or control of the participating Drainage, Irrigation and Diking Districts.

The success of the Implementation Agreement is predicated on the explicit support and cooperation of the Skagit agricultural community as landowners within the Skagit delta area, and by each participating Drainage, Irrigation and Diking District within the Skagit delta area. The Parties acknowledge and agree that securing funding for restoration projects will be the responsibility of the restoration community, with the support of the agricultural partners.

As a means to facilitate linkage between the permitting of tidegate and floodgate maintenance activities and the achievement of estuarine habitat restoration and smolt production goals, a clearly defined *credit banking process* will provide a system of checks

and balances to assure that mutually supportive actions will occur in a timely and cooperative manner throughout the 25-year duration of this Agreement.

In addition to providing pathways for the Districts to seek compliance with federal permitting requirements under the Rivers and Harbors Acts, the Endangered Species Act and provisions of the Clean Water Act, this Agreement also provides clearly defined steps for acquiring pertinent state and local permits including Hydraulic Project Approvals, the State Environmental Policy Act, and the Shoreline Management Act.

This initiative is not intended or designed in any way to deny, ignore or abridge any legal right, privilege or opportunity extended to any Tribe either by Treaty or through Federal, State or local laws, rules and regulations. Tribal interests, needs and treaty rights pertinent to federal and/or state permitting of tidegate and floodgate maintenance and the recovery of ESA-listed Chinook salmon addressed through provisions of this Agreement shall be exercised through government-to-government protocols with involved federal agencies, as well as through any other formal and informal channels available to the Tribes as they deem appropriate, including opportunities for future dialogue involving this Implementation Agreement through means such as the Skagit Tribal and Agricultural Accord.

For purposes of coordinating implementation and providing management an Oversight Committee has been designated. The Oversight Committee shall be composed of a representative from each of the following entities: WDFW, NMFS, District Commissioners (two Commissioners) to be selected by the duly elected Commissioners of all Districts signatory to this Agreement), WWAA, and other invited parties, such as tribal representatives. Responsibilities of the Oversight Committee will consist of: determining eligibility of restoration projects for credits to this Agreement, approving deposit and allocation of project habitat credits, reviewing and approving reports prepared by the Credit Administrator, and meeting as needed to discuss necessary changes to the Implementation Agreement.

To satisfy the requirement for credit administration, the Parties have designated the Western Washington Agricultural Association, reporting to the Oversight Committee, to administer the terms and conditions of this Implementation Agreement relating to the accrual, distribution and tracking of project credits.

PART 1: PURPOSE AND INTENT

1.1 Purpose and Intent

It is the intent of the Skagit Delta Tidegates and Fish Initiative that the impairment of fish passage associated with the presence and maintenance (segregated into three categories: minor repair, major repair and replacement) of tidegates and floodgates within the geographic scope of this Implementation Agreement (hereafter referred to as the Agreement) will be sufficiently addressed, both individually and collectively, through the adoption of and adherence to a delta-wide landscape approach for estuarine habitat restoration. For purposes of implementing the Tidegates and Fish Initiative Memorandum Of Understanding (MOU, Appendix E), the attainment of smolt production goals (determine through empirical calculation of smolts produced as a result of restored estuarine habitat, and not by direct population census) identified within the Skagit Chinook Recovery Plan 2005[1] *or* the conversion and restoration of a maximum of 2,700 acres of agricultural land within the Restoration Area (See Part 2.2 and Figure 2-1A), whichever is achieved first, will be the determining factors in fulfilling the obligations of each Party, subject to the provisions contained within this Agreement.

The low-lying land in the Skagit delta requires tidegates and floodgates to provide adequate drainage. Tidegates (Figure 1-1) are one-way check valves at the end of the drainage system that allow drainage water to flow to a marine natural[2] watercourse (i.e. Skagit Bay, Swinomish Channel, Padilla Bay, and Samish Bay) during a low tide cycle and then close to prevent saltwater from entering a drainage system when the tide rises.

Floodgate operation is similar to that of tidegates, except that they allow water to flow outward from the drainage system into a freshwater natural watercourse (i.e. Skagit River, Samish River) while preventing water in a natural watercourse from back-flooding into a drainage system when the water elevation in the natural watercourse is higher than the floodgate (Figure 1-2 and 1-3).

[1] **The Skagit Chinook Recovery Plan** (SRSC and WDFW 2005) prepared by the Skagit River System Cooperative and the Washington State Department of Fish and Wildlife was incorporated into the Puget Sound Salmon Recovery Plan (Shared Strategy 2007) and adapted by the National Marine Fisheries Service (72FR2493 19 January 2007).

[2] **Natural Watercourses** *(Color Code: Blue)***:** Watercourses with headwaters that follow and/or replace a historic natural watercourse that has been altered, channelized, relocated, and/or constrained by dikes and that do not have flow control structures (tide gates, pump stations) at their confluence with marine waters. (Examples: Skagit River, Samish River, Skagit Bay, Swinomish Channel, Padilla Bay, Samish Bay).

Figure 1-1. Tidegates on Edison Slough, various top-hinged gates and a Self Regulating Tidegate (center left). County maintained tidegate complex.

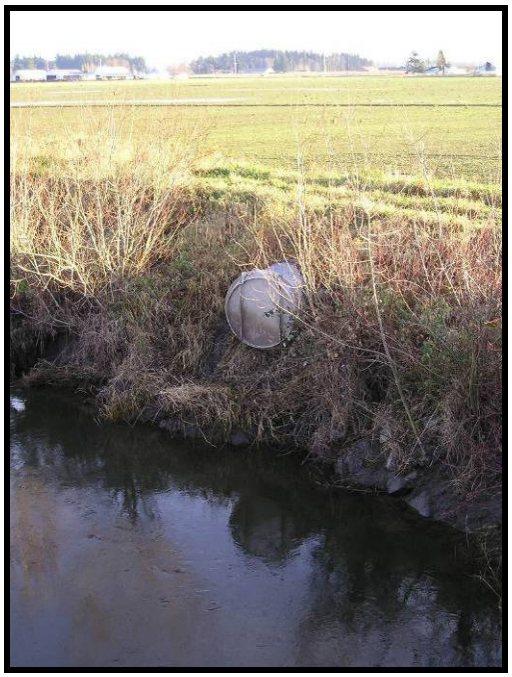


Figure 1-2. Floodgate, Drainage District 25 – Samish River system.

Figure 1-3. Floodgate, Drainage District 25 – Samish River system.

Maintenance actions, defined in this Agreement as including both *repair and replacement* activities, are very similar for tidegates and floodgates. It is the intent of this Agreement to include maintenance actions at 38 tidegate sites with 89 tidegates (Table 2-1) and 19 floodgate sites that contain 32 individual floodgates (Table 2-2) that are under the ownership or control of Drainage, Diking, and/or Irrigation Districts that are Parties to this Agreement.

The Skagit Delta Tidegates and Fish Initiative is a collaborative effort by the participating parties to support estuarine restoration projects within the Restoration Area that are consistent with and provide a direct contribution to achieving the goals and objectives of the Skagit Chinook Recovery Plan. This Agreement is specifically designed to provide a mechanism to implement a delta-wide landscape approach for both tidegate and floodgate maintenance and estuarine habitat restoration. Its foundation and guiding principle is to facilitate achieving the delta estuarine habitat restoration and smolt production goals identified for the Skagit River system in a manner that will result in the least possible impact on established and functioning delta agricultural lands and drainage infrastructure.

For purposes of implementing the Agreement, the Parties acknowledge and agree that a maximum of 2,700 acres of delta agricultural lands may be converted to estuarine habitat, consistent with the stated goals and objectives of the Skagit Chinook Recovery Plan (SRSC and WDFW 2005) submitted to and approved by the NMFS. The Parties also acknowledge and understand that the support of agricultural interests for the Implementation Agreement is critical to Chinook recovery and that by supporting this agreement, agricultural interests are accepting the potential for risks that could undermine the critical mass of farmland in the Skagit Valley.

The 2,700 acre restoration target is supported by Table 7.1 from Appendix D of the Skagit Chinook Recovery Plan (Table 1-1). The total potential estuarine area of 1114.64 hectares presented in column one is equal to 2,694 acres.

Table 1-1. Table 7.1 from Appendix D of the Skagit Chinook Recovery Plan.

Table 7.1. *Summary of potential habitat area, connectivity, and annual smolt benefit after restoration.*

Project Area	Potential estuarine area (ha)	Potential channel or openwater area (ha)	Connectivity index	Smolt capacity
Cross Fir Island Connector	191.175	14.628	0.026	264,486
Deepwater Slough Phase 2	108.515	4.516	0.045	95,516
Dodge Valley	34.201	1.039	0.060	30,036
Fisher Slough	27.503	0.810	0.042	16,431
Milltown Island	68.789	3.145	0.038	57,179
North Fork Setback	266.215	12.196	0.092	625,032
South Fork Setback	16.305	0.374	0.081	14,588
Sullivan Slough Setback	79.616	2.012	0.038	36,517
Swinomish Channel East[1]	196.926	14.918	0.016	113,145
Swinomish Channel West[1]	60.397	2.594	0.017	20,471
Wiley Slough	65.000	2.000	0.040	38,492
Swinomish Channel Causeway (change in existing habitat due to connectivity)	NA	NA	NA	40,898
Total	**1,114.642**	**58.232**		**1,352,791**

[1] These projects assume that the Swinomish Channel Causeway project will be constructed to increase connectivity from the North Fork to Swinomish Channel.

The 2,700 acre restoration target is also supported by sorting the restoration projects identified in the Skagit Chinook Recovery Plan by the smolts produced per acre, which demonstrates that the minimum area necessary to achieve the Skagit Chinook Recovery Plan estuary smolt production goal (1,350,000 smolts) is 2,689 acres (Table 1-2).

Table 1-2. Restoration Projects Identified in the Skagit Chinook Recovery Plan Sorted by the Smolts Produced Per Acre.

Water Body	Restored Area (acres)	Restored Channel Area (acres)	Smolts Produced	Smolts per Acre
NORTH FORK SETBACK	658	30	625,032	950
CROSS ISLAND CONNECTOR	472	36.1	264,486	560
RAWLINS ROAD	178	9.8	95,000	533
S. FORK DIKE SETBACK	39.5	0.92	14,588	508
DEEPWATER #2	268	11	95,516	356
THEIN FARM	84.5	2.5	30,000	355
SMOKEHOUSE/FORNSBY 1	62	6.4	20,471	344
MILL TOWN	212	14.8	57,179	330
FISHER SLOUGH	68	2	16,431	269
WILEY SLOUGH	160	7	54,989	241
TELEGRAPH #2	487	37	113,145	232
SMOLT PRODUCTION GOAL MET	**2689**	**157.52**	**1,386,837**	
TELEGRAPH SLOUGH #1	222	17.3	50,000	225
SULLIVAN HACIENDA	196.7	5.8	36,517	185
SMOKEHOUSE/FORNSBY 2	93	3.5	10,890	171
DAVIS/DRY SLOUGH	119	4.7	20,297	117
BLAKES BOTTLENECK	18.5	0.2	1,780	96
MCGLINN CAUSEWAY	No Data	No Data	40,898	0
ADDITIONAL SMOLT PRODUCTION	**649.2**	**31.5**	**119,484**	**794**
Yellow = completed estuary restoration projects				
Green = estuary restoration projects in progress				
Pink = smolt recovery goal achieved per Skagit Chinook Recovery Plan = 1,350,000				

The conversion and restoration of agricultural land within the Restoration Area (See Part 2.2 and Figure 2.1A) is intended to compensate for the blockage of fish passage that occurs at the tidegates and tier 1 floodgates (See Part 2.3 for floodgate tier classification) covered under this Agreement. The parties to this agreement acknowledge that 2,700 acres is sufficient to fully compensate for the lost habitat associated with the 121 tide and flood gates identified in this agreement. Therefore, conversion and restoration of agricultural land exceeding 2,700 acres is beyond the scope of the agreement.

A key objective of this Agreement is to facilitate a streamlined regulatory process. It is hoped that by coordinating the regulatory review processes up-front that individual Districts and the reviewing agencies will benefit from reduced workload and the process will be expedited. To that end, the participating agencies have reviewed their regulatory authorities and processes and have provided guidance to address their respective regulatory requirements (See Part 3). The greatest streamlining measure will be the preparation of this document to serve the purpose of a Programmatic Biological Assessment, and the resulting advanced consultation that will occur between the Corps, NMFS and the USFWS to address Endangered Species Act (ESA) issues. With an advanced programmatic consultation completed, the Corps will be able to provide approval for projects, as long as such projects meet the terms and conditions of the Implementation Agreement, without requiring further programmatic consultation with NMFS and/or USFWS.

1.2 Duration of Agreement

This Agreement shall be in affect for 25-years from the date of signature by each District, and upon signature by the WWAA, NMFS, USFWS and WDFW.

PART 2: FRAMEWORK FOR DEVELOPMENT AND IMPLEMENTATION

2.1 Coverage Area for Tidegate and Floodgate Actions

The Coverage Area for tidegate or floodgate repair and maintenance actions, as defined under this Agreement, is comprised of approximately 53,322 acres of farmland in the Skagit and Samish River deltas located in the western portion of Skagit County, Washington and a limited area in northwest Snohomish County, Washington, including the tidal delta areas of Skagit Bay, Padilla Bay, Samish Bay and the Swinomish Channel (Figure 2-1). This area is inclusive of the jurisdictional boundaries and jurisdictional responsibilities of Drainage and Irrigation Districts 5, 14, 15, 16, 17, 18, 19, 22, 25; Consolidated Diking District 22; and Diking, Drainage and Irrigation District 12, all of which control lands historically subject to tidal influence within the Skagit and Samish River deltas, as well as Diking District 3, which has drainage interests within tidally influenced zones that lay within the same geographic area. Hereafter, the aforementioned Diking, Drainage, and Irrigation Districts are referred to either individually as "District" or collectively as "Districts". The Coverage Area is bounded by the towns of Sedro-Woolley, Burlington and Mount Vernon on the east and Samish and Padilla Bays and the Swinomish Chanel on the west.

2.2 Restoration Area

The Restoration Area for projects proposed to achieve the 2,700 acre estuarine restoration target will be consistent with the geographic area identified in Figure 7.1 of the Skagit Chinook Recovery Plan which includes the tidal delta areas of Skagit Bay, the Swinomish Channel and Padilla Bay (Figure 2-1A). Additionally, selected projects identified by the Washington State House Bill 1418 (House Bill 1418) Taskforce Report will also be considered as potential candidate projects for contributing to the 2,700 acre goal, as presented in Section 4.4.2 of this Agreement. All of the selected House Bill 1418 projects are located within the Skagit Bay delta area.

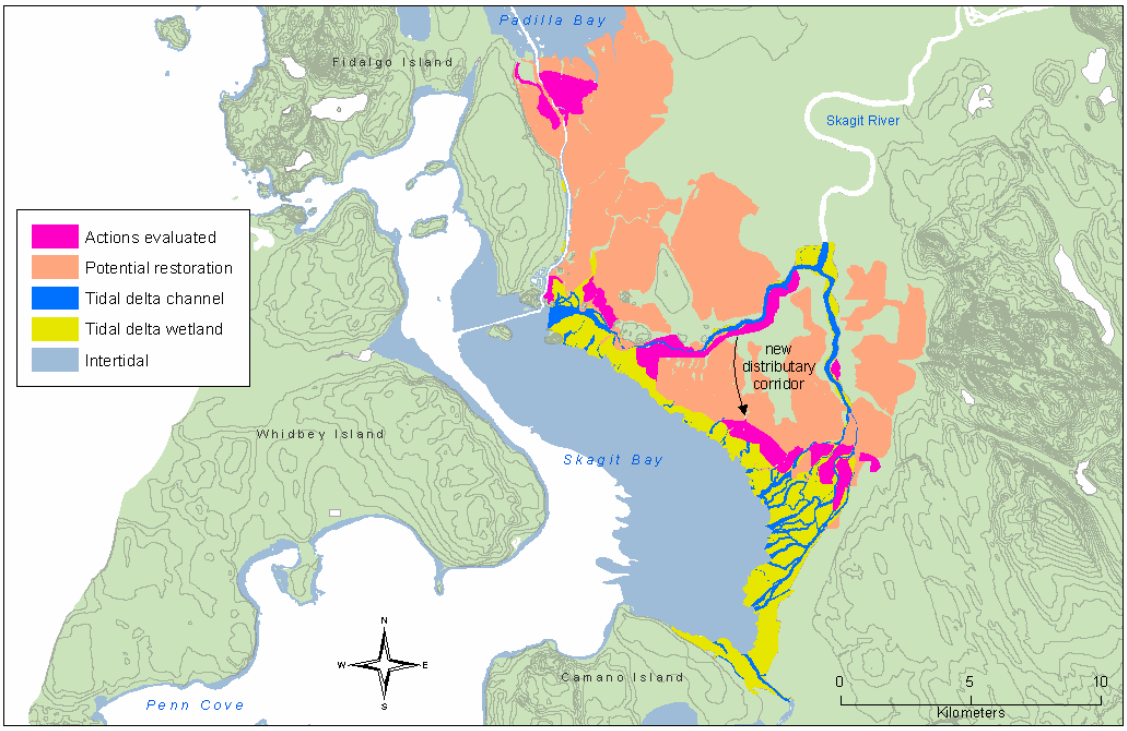


Figure 2-1A. Implementation Agreement Restoration Area as depicted in Beamer et al. 2005; Appendix D Skagit Chinook Recovery Plan: *Figure 7.1. Potential tidal delta restoration. Location of existing delta habitats that are easily accessible to delta rearing Chinook salmon (yellow and blue polygons) and the location of delta restoration actions evaluated in this document (pink polygons). Polygons shown as "potential restoration" are areas where is it geomorphically possible to restore to tidal delta habitat (based on the historic limit of tidal delta habitat from Collins 2000).*

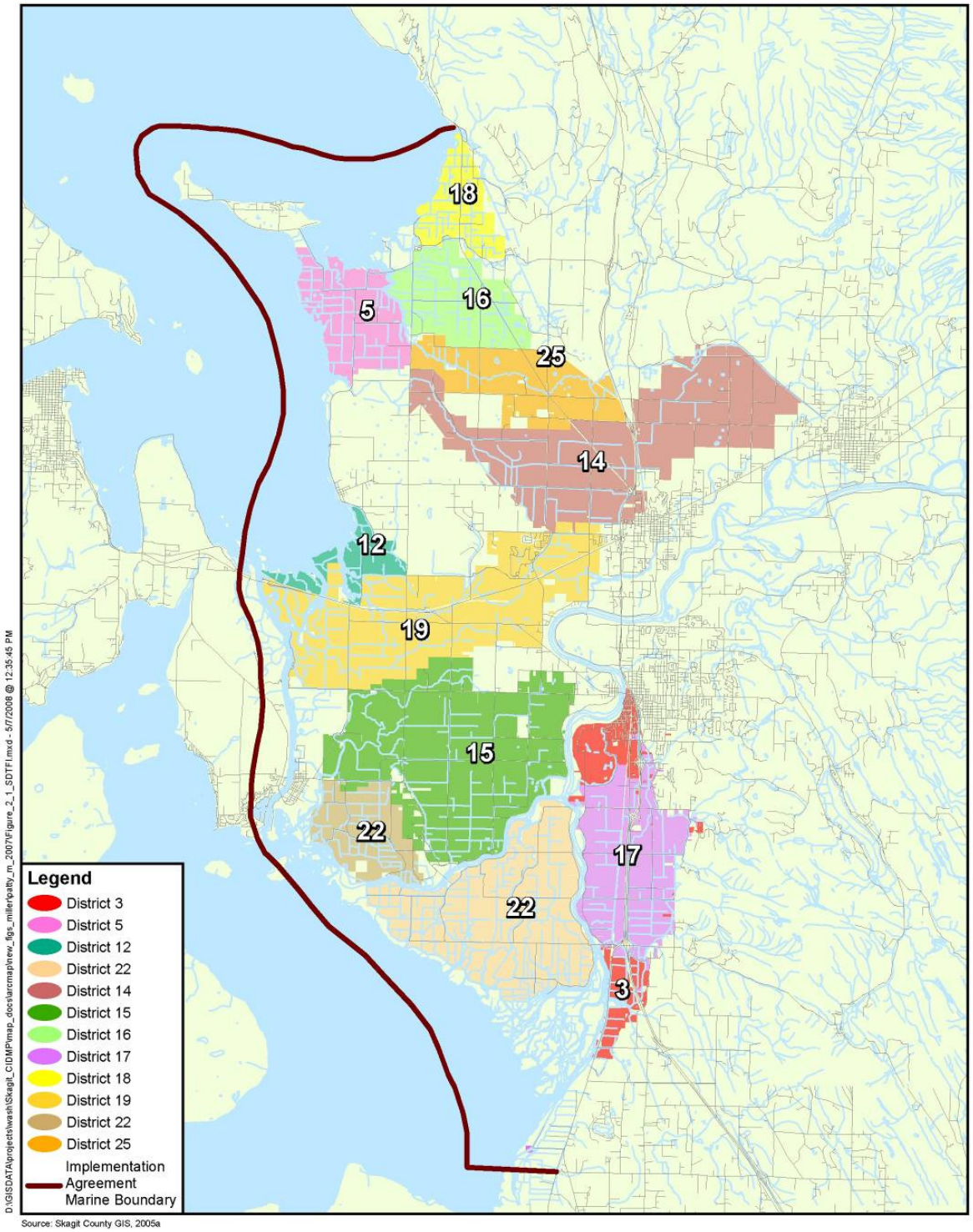


Figure 2-1
Implementation Agreement Coverage Area

Skagit Delta Tidegates and Fish Initiative - Implementation Agreement May 2008

[Source: adapted from House Bill 1418 Report: Tidegates and Intertidal Salmon Habitat in the Skagit Basin (Smith and Manary 2005) and HDR 2006. Skagit Basin Comprehensive Irrigation District Management Plan].

2.2 Classification of Watercourses

The following definitions apply to those watercourses occurring within Coverage Area (Figure 2-2)**,** consistent with the aforementioned MOU and as further identified within this Skagit Delta Tidegates and Fish Initiative Implementation Agreement:

Natural Watercourses *(Color Code: Blue)***:** Watercourses with headwaters that follow and/or replace a historic natural watercourse that has been altered, channelized, relocated, and/or constrained by dikes and that do not have flow control structures (tide gates, pump stations) at their confluence with marine waters. Also includes the marine waters. (Examples: Skagit River, Samish River, Skagit Bay, Swinomish Channel, Padilla Bay, Samish Bay)

Managed Watercourses with Headwaters *(Color Code: Green)***:** Watercourses with headwaters that follow and/or replace a historic natural watercourse that has been significantly channelized, relocated, and/or constrained by dikes and that have flow control structures (tidegates, pump stations) at their confluence with marine waters. *(Examples: Edison Slough, No Name Slough, Big Indian Slough, Big Ditch, Hill Ditch)*

Managed Watercourses without Headwaters *(Color Code: Magenta)***:** Watercourses without headwaters that follow and/or replace a historic natural watercourse that has been significantly channelized, relocated and/or constrained by dikes and that have flow control structures (tidegates, pump stations) at their confluence with marine waters. *(Examples: Wiley Slough, Dry Slough, Brown Slough, Hall Slough, Dodge Slough, Sullivan Slough, Joe Leary Slough)*

Artificial Watercourses *(Color Code: Yellow)***:** Watercourses without headwaters that are wholly built by humans and that do not follow or replace a historic natural watercourse, and are designed to convey water from local surface areas or subsurface drains for the purpose of removing excess water in order to improve conditions for agriculture.

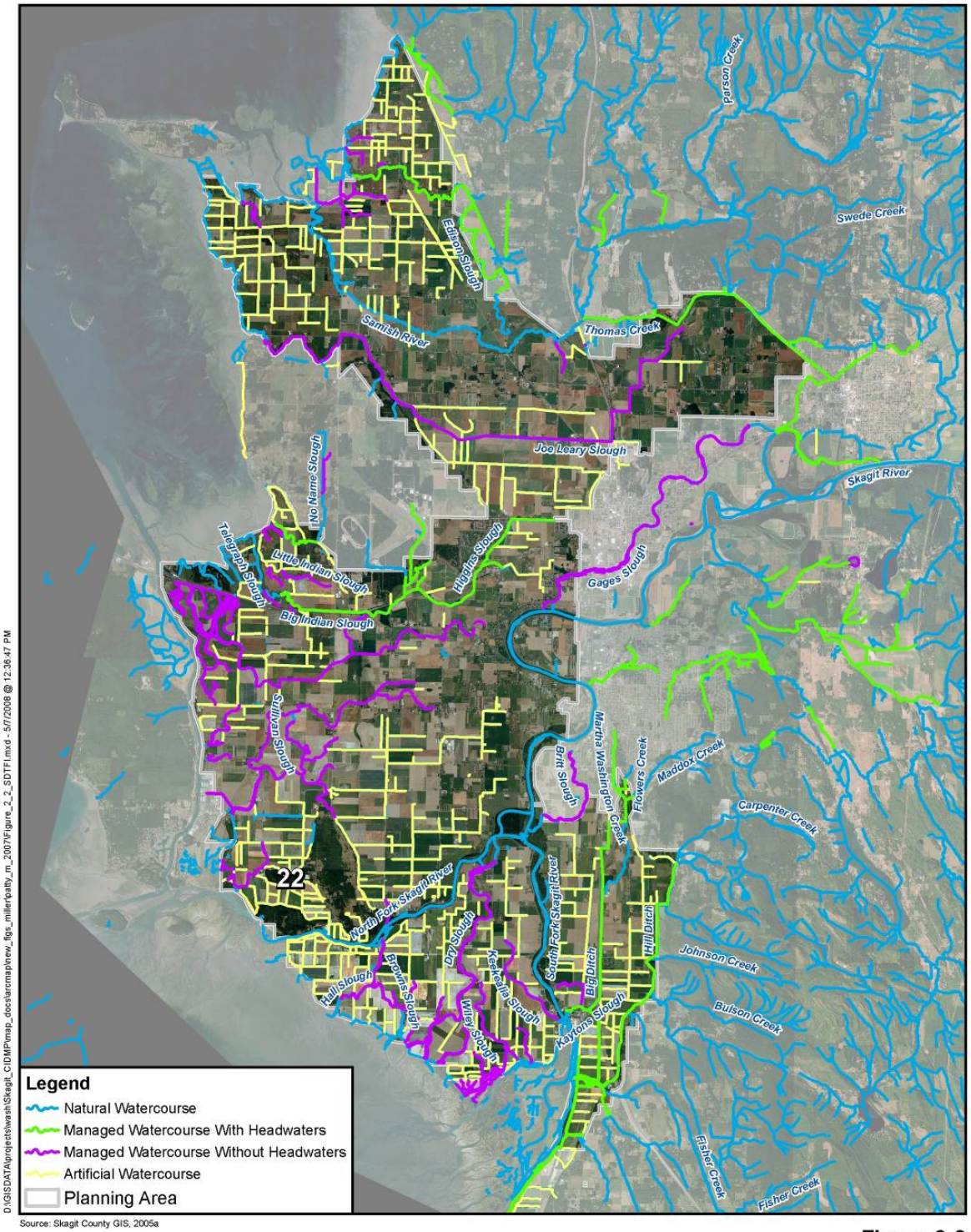


Figure 2-2
Watercourses in the Coverage Area by Classification

Skagit Delta Tidegates and Fish Initiative - Implementation Agreement May 2008

2.3. Infrastructure Inventory

This Agreement addresses the maintenance of tidegates owned, operated or managed by a participating District located within the Coverage Area as defined above in Part 2.1. The Agreement also addresses maintenance of floodgates owned, operated or managed by a participating District within the Coverage Area that interface with a natural watercourse as defined herein. Maintenance of floodgates that do not interface with a natural watercourse is addressed by individual District Drainage Maintenance Agreements and Drainage Maintenance Plans developed through provisions of the Skagit Drainage and Fish Initiative, which is separate and apart from this Agreement.

Many of the tidegates are sited in a facility complex that is composed of multiple gates. This Agreement addresses 38 tidegate complexes composed of 89 individual tidegates (Table 2-1), and 19 floodgate complexes composed of 32 individual floodgates (Table 2-2). The floodgates have been categorized into habitat tiers. Tier 1 includes floodgates with a marine and fresh water connection and fish occurrence. Tier 2 includes floodgates with fresh water to fresh water connection, with fish occurrence and operated to improve water quality in fish bearing waters. Tier 3 includes floodgates located on non-fish bearing waters. Locations of these complexes are depicted on Figures 2-3A, B and C.

Maintenance actions at each tidegate location have been prioritized based on 1) an identified need for immediate or imminent maintenance and 2) the composition of materials at each individual site. Priority 1 locations are those sites known to need immediate or short-term maintenance while Priority 2 locations are sites with steel components that typically have a shorter lifespan than fiberglass or aluminum. Priority 3 locations are sites with a mixture of materials, such as steel and/or aluminum and/or fiberglass, while Priority 4 locations are sites constructed exclusively with longer lasting components such as fiberglass, aluminum or plastic. This prioritization is intended to provide a generalized analysis of maintenance needs and locations across the landscape.

2.3.1 TIDEGATES BY DISTRICT

Table 2-1. Tidegates by Dike or Drainage District and by Priority, 2008.

District	Site Id.	Name/Location	Size	Pipe	Lid	Maintenance
Priority 1 - Replacement anticipated in 2008						
18	31	NORTH EDISON	48"	PVC	FIBERGLASS	REPAIRED 1994/1998
18	31	NORTH EDISON	42"	PVC	FIBERGLASS	REPAIRED 1994/1998
22	7	RAWLINS ROAD	48''	PLASTIC	ALUMINUM	1988/NEEDS REPAIR
Priority 2 - Steel gates and steel or corrugated pipes						
5	40	JOE LEARY SLOUGH (LAND N. SIDE)	36''	STEEL PIPE	GALV STEEL	NEEDS REPAIR
19	46	BOAT BASIN TIDEGATE	36''	CORR	CAST	NEEDS NEW TUBE
22	17	WILEY SLOUGH	48"	CORR/PLASTIC	STEEL/ALUM.	NEEDS REPAIR
22	17	WILEY SLOUGH	48"	CORR/PLASTIC	STEEL/ALUM.	NEEDS REPAIR
22	17	WILEY SLOUGH	48"	CORR/PLASTIC	STEEL/ALUM.	NEEDS REPAIR
22	17	WILEY SLOUGH	48"	CORR/PLASTIC	STEEL/ALUM.	NEEDS REPAIR
22	17	WILEY SLOUGH	48"	CORR/PLASTIC	STEEL/ALUM.	NEEDS REPAIR
22	17	WILEY SLOUGH	48"	CORR/PLASTIC	STEEL/ALUM.	NEEDS REPAIR
Priority 3 - Fiberglass or aluminum gates and steel or concrete pipes						
5	37	ALICE BAY	48''	CORR/FIBERGLASS	FIBERGLASS	1983 FIBERGLASS ENDS
5	37	ALICE BAY	48''	CORR/FIBERGLASS	FIBERGLASS	1983 FIBERGLASS ENDS
5	37	ALICE BAY	48''	CORR/FIBERGLASS	FIBERGLASS	1983 FIBERGLASS ENDS
5	37	ALICE BAY	48''	CORR/FIBERGLASS	FIBERGLASS	1983 FIBERGLASS ENDS
5	42	JOE LEARY/D'ARCY ROAD	12''	CORR	FIBERGLASS	
12	45	NO NAME SLOUGH	36"	CORR	FIBERGLASS	
12	103	NO NAME SLOUGH	30"	WOOD	FIBER/ALUM.	
12	103	NO NAME SLOUGH	30"	WOOD	FIBER/ALUM.	
14	43	JOE LEARY SLOUGH	48”	CORR/PLASTIC	FIBERGLASS	UPGRADE 1970's & 80's
14	43	JOE LEARY SLOUGH	48”	CORR/PLASTIC	FIBERGLASS	UPGRADE 1970's & 80's
14	43	JOE LEARY SLOUGH	48”	CORR/PLASTIC	FIBERGLASS	UPGRADE 1970's & 80's
14	43	JOE LEARY SLOUGH	48”	CORR/PLASTIC	FIBERGLASS	UPGRADE 1970's & 80's
14	43	JOE LEARY SLOUGH	48”	CORR/PLASTIC	FIBERGLASS	UPGRADE 1970's & 80's
14	43	JOE LEARY SLOUGH	48”	CORR/PLASTIC	FIBERGLASS	UPGRADE 1970's & 80's
14	43	JOE LEARY SLOUGH	48”	CORR/PLASTIC	FIBERGLASS	UPGRADE 1970's & 80's
14	43	JOE LEARY SLOUGH	48”	CORR/PLASTIC	FIBERGLASS	UPGRADE 1970's & 80's
14	43	JOE LEARY SLOUGH	48”	CORR/PLASTIC	FIBERGLASS	UPGRADE 1970's & 80's
14	43	JOE LEARY SLOUGH	48”	CORR/PLASTIC	FIBERGLASS	UPGRADE 1970's & 80's
14	43	JOE LEARY SLOUGH	48”	CORR/PLASTIC	FIBERGLASS	UPGRADE 1970's & 80's
15	3	SULLIVAN SLOUGH BY-PASS	72”	CORR	ALUMINUM	
15	3	SULLIVAN SLOUGH BY-PASS	72”	CORR	ALUMINUM	
15	3	SULLIVAN SLOUGH BY-PASS	72”	CORR	ALUMINUM	
15	3	SULLIVAN SLOUGH BY-PASS	72”	CORR	ALUMINUM	
17	201	BIG DITCH	72”	STEEL	FIBERGLASS	REPAIRED 1989
17	201	BIG DITCH	72”	STEEL	FIBERGLASS	REPAIRED 1989
17	201	BIG DITCH	72”	STEEL	FIBERGLASS	REPAIRED 1989
17	201	BIG DITCH	72”	STEEL	FIBERGLASS	REPAIRED 1989
17	201	BIG DITCH	72”	STEEL	FIBERGLASS	REPAIRED 1989
17	201	BIG DITCH	72”	STEEL	FIBERGLASS	REPAIRED 1989
19	53	HIGGINS SLOUGH/SWINOMISH	48"	CORR	ALUMINUM	REPAIRED 1989
19	54	C. KNUTSEN/SWINOMISH CHANNEL	24''	CORR	ALUMINUM	

District	Site Id.	Name/Location	Size	Pipe	Lid	Maintenance
19	76	HIGGINS SLOUGH/SWINOMISH	60''	CORR/FIBERGLASS	FIBERGLASS	
19	76	HIGGINS SLOUGH/SWINOMISH	60''	CORR/FIBERGLASS	FIBERGLASS	
19	76	HIGGINS SLOUGH/SWINOMISH	60''	CORR/FIBERGLASS	FIBERGLASS	
19	76	HIGGINS SLOUGH/SWINOMISH	60''	CORR/FIBERGLASS	FIBERGLASS	
19	76	HIGGINS SLOUGH/SWINOMISH	60''	CORR/FIBERGLASS	FIBERGLASS	
19	82	LITTLE INDIAN SLOUGH	48''	CORR/FIBERGLASS	FIBERGLASS	
19	82	LITTLE INDIAN SLOUGH	48''	CORR/FIBERGLASS	FIBERGLASS	
22	9	HALL SLOUGH	36''	CORR	ALUMINUM	SILTED IN
22	11	GENE KING/BROWN SLOUGH	36''	STEEL	ALUMINUM	NEEDS REPLACEMENT
22	12	BROWN SLOUGH/SKAGIT BAY	48''	STEEL	ALUMINUM	
22	12	BROWN SLOUGH/SKAGIT BAY	48''	STEEL	ALUMINUM	
22	12	BROWN SLOUGH/SKAGIT BAY	48"::	STEEL	ALUMINUM	w/SCREW GATE
22	13	BROWN SLOUGH/FIR ISLAND RD	48"	CORR	FIBERGLASS	
22	14	DAVIS SLOUGH	48''	CORR	FIBERGLASS	
22	14	DAVIS SLOUGH	48''	CORR	FIBERGLASS	
Priority 4 - All components fiberglass, plastic or aluminum						
5	36	SHROEDER PLACE	48"	FIBERGLASS	FIBERGLASS	
12	77	TELEGRAPH SLOUGH/BALL PLACE	36""	CONCRETE	ALUMINUM	SILTED IN
12	77	TELEGRAPH SLOUGH/BALL PLACE	36""	CONCRETE	ALUMINUM	SILTED IN
12	79	INDIAN SLOUGH @ BEN WELTON	30"	PLASTIC	ALUMINUM	REPAIRED 1999
12	79	INDIAN SLOUGH @ BEN WELTON	30"	PLASTIC	ALUMINUM	REPAIRED 1999
12	80	LITTLE INDIAN SLOUGH/SISSON W	24"	CORR	ALUMINUM	NEED REPAIR
12	81	LITTLE INDIAN SLOUGH/SISSON E	24"	CORR	ALUMINUM	NEED REPAIR
12	95	NO NAME SLOUGH	48"	PLASTIC	ALUMINUM	REPAIRED 2003
12	101	LITTLE INDIAN SLOUGH/ERICKSON	24"	FIBERGLASS	FIBERGLASS	REPAIRED 1985
15	4	SWANSON SLOUGH	36"	PLASTIC	FIBERGLASS	REPAIRED 2003
15	5	WHITE SLOUGH	36"	PLASTIC	ALUMINUM	REPAIRED 2002
16	25	SOUTH EDISON	36""	FIBERGLASS	FIBERGLASS	REPAIRED 1982
16	25	SOUTH EDISON	36""	FIBERGLASS	FIBERGLASS	REPAIRED 1982
16	25	SOUTH EDISON	36""	FIBERGLASS	FIBERGLASS	REPAIRED 1982
16	35	HENRY FARM/EDISON SLOUGH	48"	PLASTIC	FIBERGLASS	REPAIRED 1999
16	35	HENRY FARM/EDISON SLOUGH	48"	PLASTIC	FIBERGLASS	REPAIRED 1999
16	35	HENRY FARM/EDISON SLOUGH	48"	PLASTIC	FIBERGLASS	REPAIRED 1999
16	35	HENRY FARM/EDISON SLOUGH	48"	PLASTIC	FIBERGLASS	REPAIRED 1999
18	33	KNUTZEN FARM	48"	FIBERGLASS	FIBERGLASS	REPAIRED 1992
18	19	MCELROY SLOUGH	48"	CORR	FIBERGLASS	NEW GATE 1998
19	60	INDIAN SLOUGH DAM	48"	CONCRETE	ALUMINUM	
19	60	INDIAN SLOUGH DAM	48"	CONCRETE	ALUMINUM	
19	60	INDIAN SLOUGH DAM	48"	CONCRETE	ALUMINUM	
19	60	INDIAN SLOUGH DAM	48"	CONCRETE	ALUMINUM	
19	60	INDIAN SLOUGH DAM	48"	CONCRETE	ALUMINUM	
19	60	INDIAN SLOUGH DAM	48"	CONCRETE	ALUMINUM	
19	60	INDIAN SLOUGH DAM	48"	CONCRETE	ALUMINUM	
22	10	GENE KING/SKAGIT BAY	30"	PLASTIC	FIBERGLASS	
22	15	DRY SLOUGH	48"	GALV/PLASTIC	FIBERGLASS	REPAIRED 2002
22	15	DRY SLOUGH	48"	GALV/PLASTIC	FIBERGLASS	REPAIRED 2002
22	16	WILEY SLOUGH	36''	PLASTIC	PLASTIC	
TOTAL			**89**			

2.2.2 FLOODGATES BY DISTRICT

Table 2-2. Floodgates by Dike or Drainage District and by Habitat Tier.

District	Site Id.	Name	Size	Pipe	Lid	Maintenance
Tier 1 – Marine/fresh water connection, fish present (habitat credit required)						
3	26	FISHER SLOUGH/SKAGIT RIVER	10'X15'	STEEL	WOOD	
3	26	FISHER SLOUGH/SKAGIT RIVER	10'X15'	STEEL	WOOD	
3	26	FISHER SLOUGH/SKAGIT RIVER	10'X15'	STEEL	WOOD	
Tier 2 – Fresh water to fresh water connection, fish present, operated to improve water quality in fish bearing water (no credit required for maintenance, operation for water quality improvement fulfills conservation measures)						
17	92	KAYTON'S SLOUGH (CONWAY)	36"	CORR	CAST IRON	MANUAL SCREW
Tier 3 – Non-fish bearing waters (no credit required for maintenance)						
3	100	FISHER SLOUGH	5'X6'	CONCRETE	ALUMINUM	
3	100	FISHER SLOUGH	5'X6'	CONCRETE	ALUMINUM	
3	100	FISHER SLOUGH	5'X6'	CONCRETE	ALUMINUM	
3	100	FISHER SLOUGH	5'X6'	CONCRETE	ALUMINUM	
3	100	FISHER SLOUGH	5'X6'	CONCRETE	ALUMINUM	
3	100	FISHER SLOUGH	5'X6'	CONCRETE	ALUMINUM	
5	38	SAMISH RIVER (WEST OF BRIDGE)	48"	PLASTIC	FIBERGLASS	
5	38	SAMISH RIVER (WEST OF BRIDGE)	48"	PLASTIC	FIBERGLASS	
5	38	SAMISH RIVER (WEST OF BRIDGE)	48"	PLASTIC	FIBERGLASS	
5	38	SAMISH RIVER (WEST OF BRIDGE)	48"	PLASTIC	FIBERGLASS	
15	90	REXVILLE - NF	24"	CORR	STEEL	NEEDS REPAIR
15	90	REXVILLE - NF	48"	CORR	STEEL	NEEDS REPAIR
17	86	BRITT SLOUGH				
17	87	BRITT SLOUGH				
19	52	HIGGENS SLOUGH/JENSEN	24"			
19	55	INDIAN SLOUGH/SCALE	30"			
19	55	INDIAN SLOUGH/SCALE	30"			
19	56	INDIAN SLOUGH/SR20	36"			
19	56	INDIAN SLOUGH/SR20	36"			
19	59	INDIAN SLOUGH/DAHLSTEDT	24"			
19	78	INDIAN SLOUGH/JONES 3	30"	CORR/ALUM	ALUMINUM	
19	102	INDIAN SLOUGH				
25	70	SAMISH RIVER	12"	CORR/STEEL	STEEL	
25	72	SAMISH RIVER	48"	CORR/STEEL	STEEL	
25	113	EGBERT/SC DITCH/E THOMAS RD	48"	CORR/STEEL	STEEL	
25	123	SAMISH RIVER/LAUTENBACH	36"	CORR/STEEL	ALUMINUM	
25	121	SAMISH RIVER/OMDAL LANE	48"	CORR/STEEL	ALUMINUM	
25	115	SAMISH RIVER/FARM TO MARKET RD	48"	CORR/STEEL	ALUMINUM	
TOTAL			**32**			

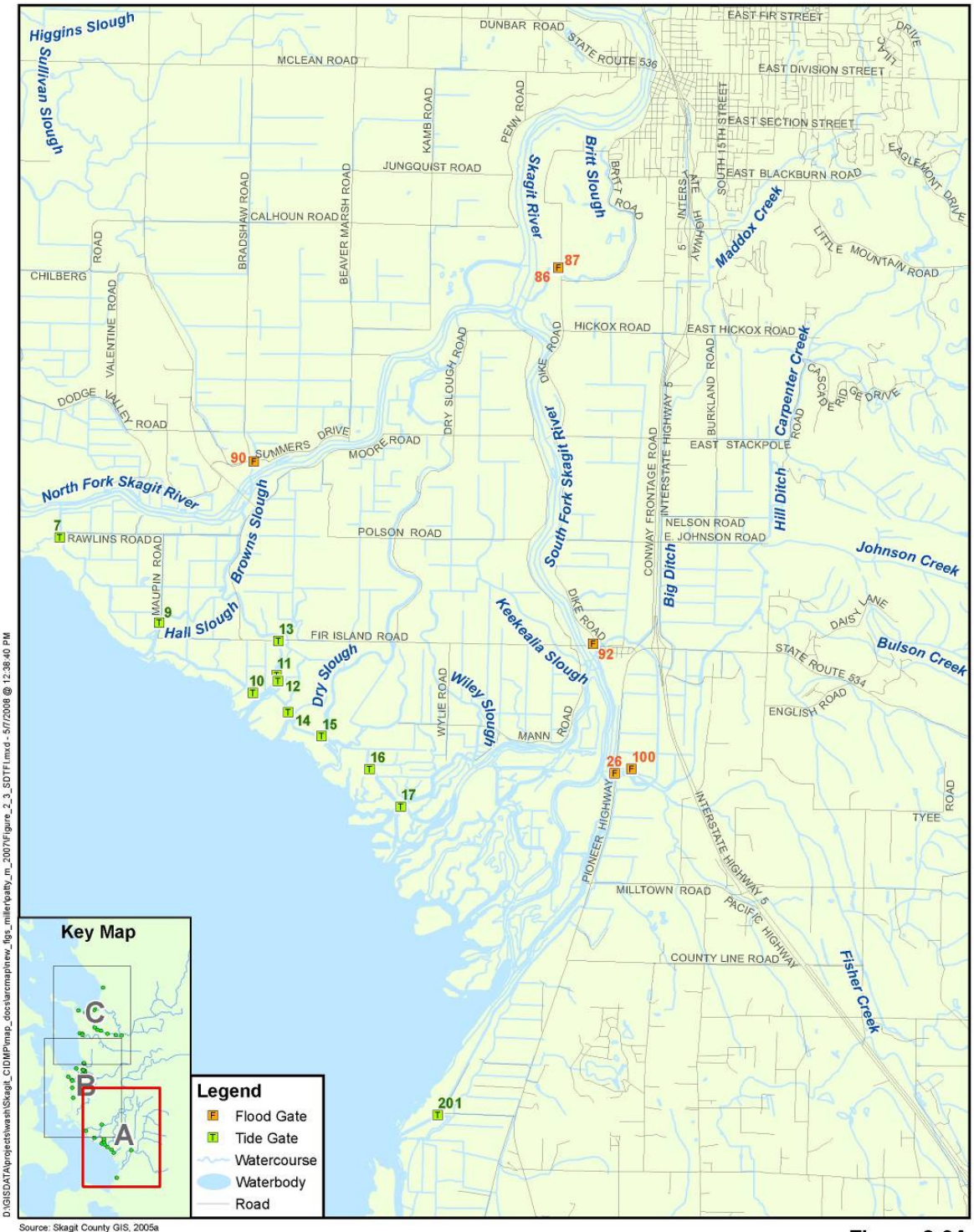


Figure 2-3A
Tidegates and Floodgates within the Coverage Area, By Site ID. Number

May 2008

HDR

Skagit Delta Tidegates and Fish Initiative - Implementation Agreement May 2008

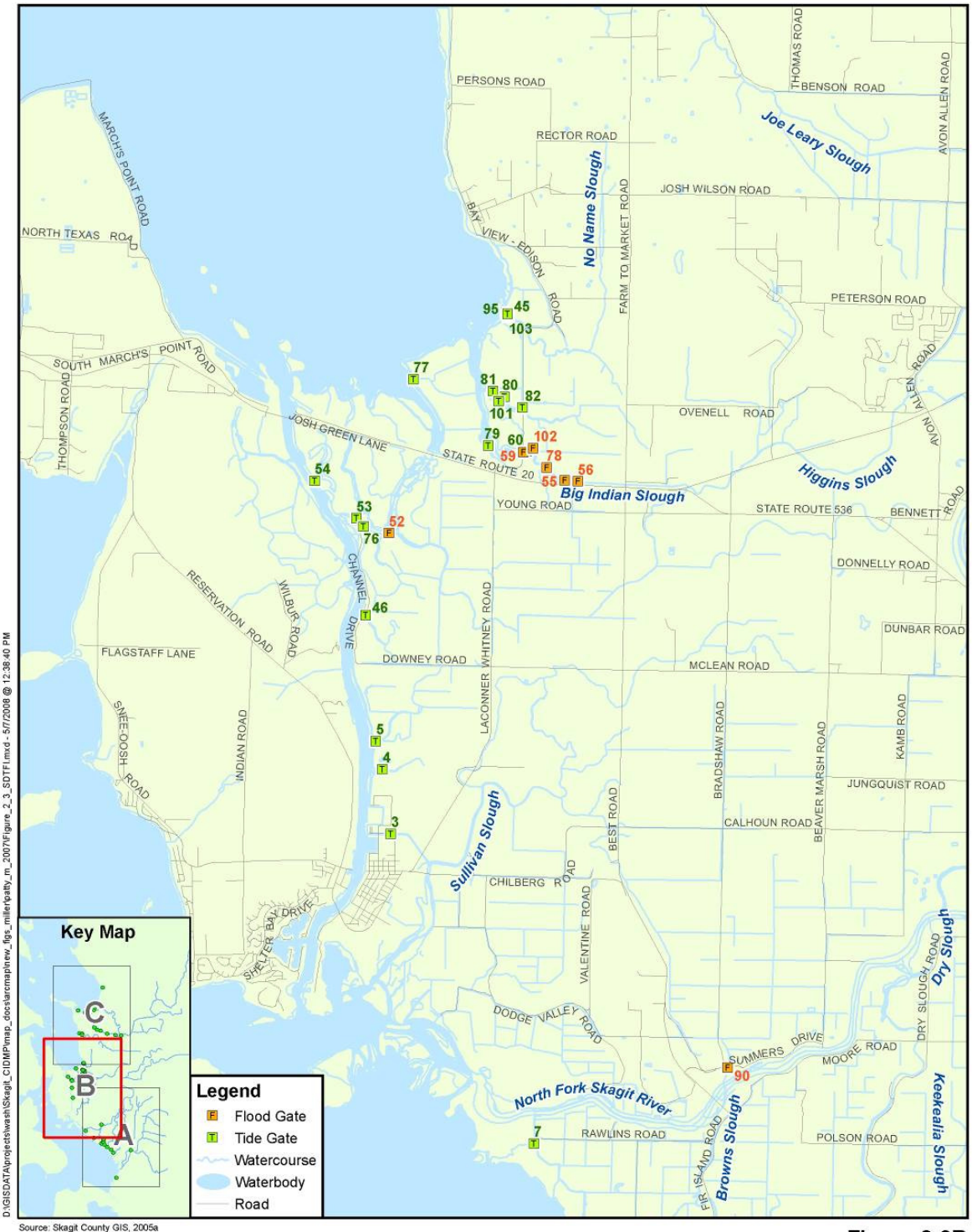


Figure 2-3B
Tidegates and Floodgates within the Coverage Area, By Site ID. Number

Skagit Delta Tidegates and Fish Initiative - Implementation Agreement May 2008

May 2008

HDR

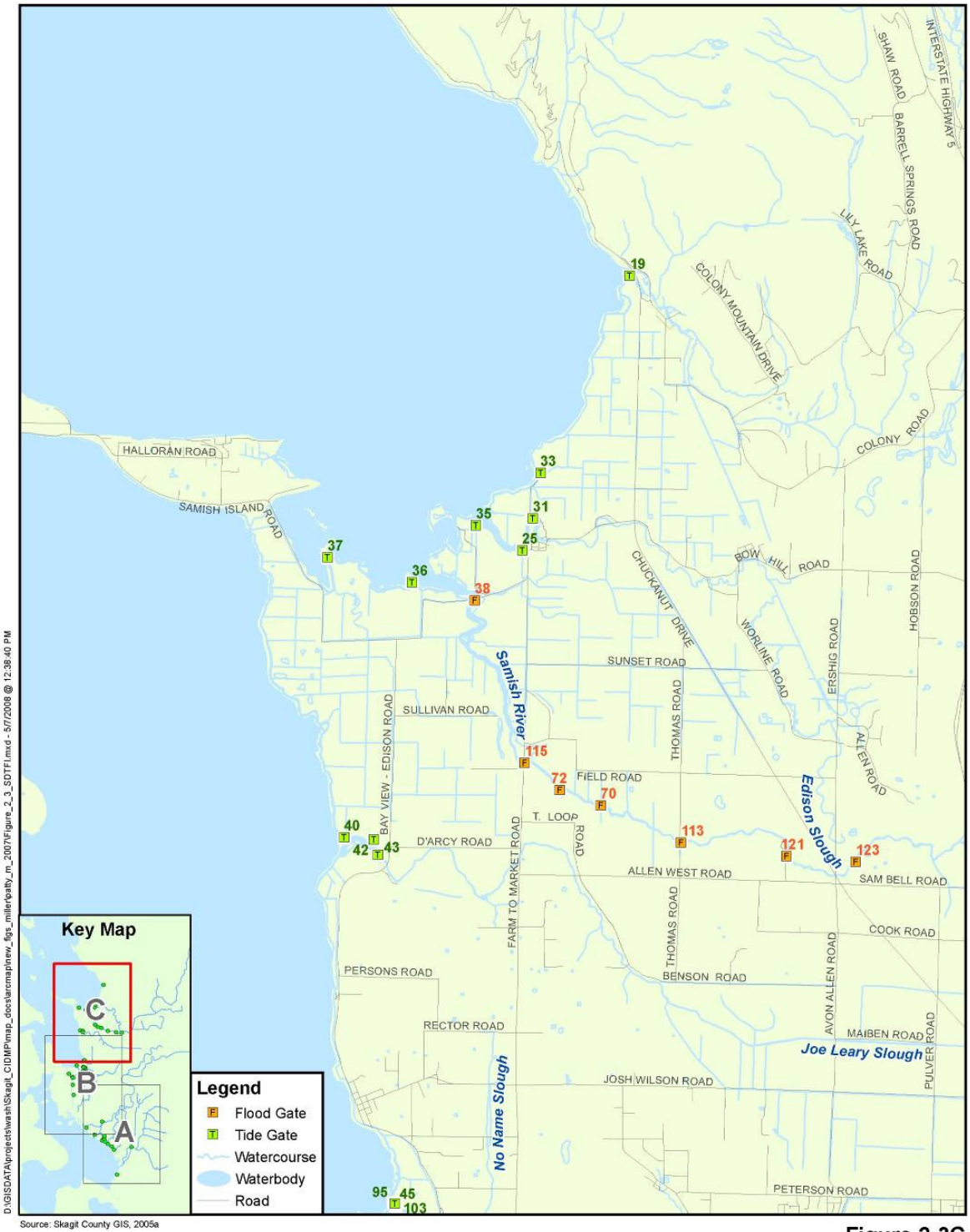


Figure 2-3C
Tidegates and Floodgates within the Coverage Area, By Site ID. Number

Skagit Delta Tidegates and Fish Initiative - Implementation Agreement May 2008

May 2008

HDR

PART 3: PERMITTING – TIDEGATE AND FLOODGATE REPAIR AND REPLACEMENT

3.1. Regulatory Jurisdiction

3.1.1 U.S. ARMY CORPS OF ENGINEERS

The Corps has been responsible for regulating certain activities in the nation's waters since 1890, through federal statutes such as the Rivers and Harbors Acts of 1890 and 1899. The most frequently exercised authority by the Corps is contained in Section 10 (33 U.S.C. 403), which covers construction, excavation, or deposition of materials in, over, or under such waters, or any work which would affect the course, location, condition, or capacity of those waters. In 1972, amendments to the Federal Water Pollution Control Act, thereafter referred to as the "Clean Water Act" (CWA), added what is commonly called Section 404 authority (33 U.S.C. 1344) to the program. The Corps is authorized to issue permits for activities involving the discharges of dredged or fill materials into the waters of the United States. These discharges include return water from dredged material disposed of on the upland and generally, any fill material (e.g., rock, sand, dirt) used to construct fast land for site development, roadways, erosion protection, etc.

Section 10 - Rivers and Harbors Act

Navigable waters of the United States are waters that are subject to the ebb and flow of a tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. A determination of navigability, once made, applies laterally over the entire surface of the waterbody, and is not extinguished by later actions or events that impede or destroy navigable capacity.

Federal regulatory jurisdiction extends to the entire surface and bed of all waterbodies subject to tidal action. Jurisdiction thus extends to the edge of all such waterbodies, even though portions of the waterbody may be extremely shallow, or obstructed by shoals, vegetation, or other barriers. The Section 10 jurisdictional line is mean high water (MHW) for tidal waterbodies and ordinary high water (OHW) for non-tidal waterbodies.

There are no exemptions under Section 10 regulations for activities conducted in navigable waters.

Section 404 - Clean Water Act

Section 404 jurisdiction covers waters of the United States, which is defined as encompassing Section 10 waters plus their tributaries and adjacent wetlands and isolated waters where the use, degradation or destruction of such waters could affect interstate or foreign commerce. The Section 404 jurisdictional line is mean higher high water (MHHW) for tidal waterbodies and OHW for non-tidal waterbodies.

Pursuant to Section 404 of the CWA (33 USC 1344) and Federal Regulations (33 CFR 323.4), certain discharges for the maintenance of currently serviceable structures have been exempted from requiring a Section 404 permit. Included in the exemption is maintenance, including emergency reconstruction of recently damaged parts, of currently serviceable structures such as dikes, dams, levees, groins, riprap, breakwaters, causeways, bridge abutments or approaches, and transportation structures. Maintenance does not include any modification that changes the character, scope, or size of the original fill design. Emergency reconstruction of unserviceable structures should occur within a reasonable period of time after damage occurs in order to qualify for this exemption. Any additional discharge of dredged or fill material into waters of the United States incidental to the above activities must have a permit.

3.1.2 WASHINGTON DEPARTMENT OF ECOLOGY

All projects that fall within Corps jurisdiction require review by the Washington State Department of Ecology (WDOE) to determine the State's response under Section 401 of the CWA and the Coastal Zone Management (CZM) Act.

Section 401 of the Clean Water Act

The purpose of the CWA is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." The CWA is administered by the U.S. Environmental Protection Agency (EPA). In Washington State, the EPA has delegated some of its CWA authority to WDOE. WDOE regulates water quality under Chapter 90.48 of the Revised Code of Washington (RCW), the Water Pollution Control Act, and Chapter 173-201A of the Washington Administrative Code (WAC), the Water Quality Standards for Surface Waters of the State of Washington.

Applicants receiving an individual permit under Section 404 from the Corps are required to obtain an individual Section 401 Water Quality Certification (401 Certification) from WDOE. Issuance of a 401 Certification means that WDOE has reasonable assurance that the applicant's project will comply with state water quality standards and other aquatic resource protection requirements under WDOE's authority. The 401 Certification can cover both the construction and operation of the proposed project. Conditions of the 401 Certification become conditions of the Federal permit or license.

Coastal Zone Management Act

Projects located in coastal counties that obtain an individual permit from the Corps, under Section 10 or Section 404 or both, must obtain a CZM consistency determination from WDOE. Washington's CZM Program designates Skagit and Snohomish Counties in the coastal zone.

3.1.3 WASHINGTON DEPARTMENT OF FISH AND WILDLIFE

Hydraulic Project Approval

The Washington State Legislature gave WDFW the responsibility of preserving, protecting, and perpetuating all fish and shellfish resources of the state. To assist in achieving that goal, the state Legislature in 1949 passed a state law now known as the "Hydraulic Code" (Chapter 77.55 RCW). Provisions of this law require that any person, organization, or government agency wishing to conduct any construction activity that will use, divert, obstruct, or change the bed or flow of state waters must do so under the terms of a HPA issued by WDFW. State waters include all marine waters and fresh waters of the state, except those watercourses that are entirely artificial, such as irrigation ditches, canals and storm water run-off devices.

State Environmental Policy Act

The State Environmental Policy Act (SEPA) provides a manner to identify possible environmental impacts that may result from governmental decisions. These decisions may be related to issuing permits for private projects, constructing public facilities, or, adopting regulations, policies or plans.

SEPA applies to decisions by every state and local agency within Washington State, including state agencies, counties, cities, ports, and special districts (such as a school or water district). One distinct agency is usually identified as the "lead agency" for a specific proposal. The lead agency is responsible for identifying and evaluating the potential adverse environmental impacts of a proposal. This evaluation is documented and is provided to other agencies and the public for review and comment. The lead agency for most private projects will be the city or county where the project is located. For actions covered under this Agreement, the lead agency will be WDFW, as they will have regulatory review and will be responsible for issuing a state permit for maintenance actions.

3.1.4 SKAGIT/SNOHOMISH COUNTIES

Shoreline Management Act

Washington's Shoreline Management Act (SMA) was adopted by public referendum in 1972. The SMA applies to all marine waters of the state *below* the OHW mark, as well as to submerged lands underlying all marine waters. This jurisdiction extends outward to the western-most Washington state boundary in the Pacific Ocean (the three-mile limit). In water, local shoreline jurisdiction applies to those areas waterward of the OHW mark out to the local government's legal in-water jurisdictional boundary. On land, shoreline jurisdiction extends 200 feet landward as measured from the OHW mark.

The SMA applies to streams over 20 cubic feet per second (cfs) mean annual flow**.** Mean annual flow is the average (the actual arithmetic "mean") of the annual mean flows over a period of many years. The SMA applies to the submerged lands underlying these areas, as

well as those areas 200 feet landward of the OHW mark. Within the Coverage Area, Carpenter Creek, Skagit River, Joe Leary Creek, and the Samish River are designated Shorelines of the State meeting the 20 cfs criteria (WAC 173-18-330).

3.2 Permitting Pathways

One of the objectives of this Agreement is to facilitate a streamlined regulatory process. It is hoped that by coordinating the regulatory review processes up-front that individual Districts and the reviewing agencies will have less workload and the process will be expedited. To that end, the participating agencies (WDFW, WDOE, Corps, and NMFS) have reviewed their regulatory authorities and processes and have provided the following guidance. The greatest streamlining measure will be the preparation of this document to serve the purpose of a Programmatic Biological Assessment, and the resulting advanced consultation between the Corps, NMFS and the USFWS, to address ESA issues. With an advanced programmatic consultation completed, the Corps will be able to provide approval for projects, as long as the projects meet the permit requirements and the terms and conditions of the Implementation Agreement without further programmatic consultation with the NMFS and/or USFWS. A permitting pathway matrix is presented in Appendix G. This pathway shows the regulatory process under the supposition that a programmatic ESA consultation will be completed.

3.2.1 U.S. ARMY CORPS OF ENGINEERS PERMITTING PROCESS

Nationwide Permits and tidegate replacement activities

A nationwide permit (NWP) is a form of general permit that authorizes a category of activities throughout the nation. NWP 3, *Maintenance*, authorizes the repair, rehabilitation, or replacement of any previously authorized, currently serviceable, structure, or fill, or of any currently serviceable structure or fill authorized by 33 Code of Federal Regulations (CFR) 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards that are necessary to make the repair, rehabilitation, or replacement are authorized under NWP 3.

The Corps reviews projects and verifies that the proposed work meets all the terms and conditions of the existing Nationwide permit. NWP verifications are valid for a period of 2 years from the date of issuance or until the current (2007) NWPs are revoked, modified, or re-issued.

The Nationwide permits also need 401 Certification from WDOE. WDOE has already approved, denied or partially denied specific Nationwide permits. If approved, no further 401 Certification review by WDOE is required. If certified subject to conditions, an individual certification or Letter of Verification from WDOE is required. If denied without prejudice, an individual certification is required for all activities under that nationwide permit.

For NWPs, compliance with National Environmental Policy Act (NEPA) is undertaken by completing reviews and Environmental Assessment (EA) documentation for the NWPs prior to their issuance every 5 years.

Individual Permits

Individual Permits are project specific authorizations for activities that cannot be authorized by NWPs. Individual Permits require a 30 day public notice and comment period and an alternatives analysis that ensures the project is designed to be the least environmentally harmful while accomplishing the project purpose.

The project will be reviewed to determine that the proposed work is not contrary to public interest and is in compliance with all applicable federal/state laws and treaty provisions.

Individual Permits are issued for 3 year periods, but can be issued for a period up to 10 years for long-term maintenance work (typically dredging projects).

The need for a Section 404 permit constitutes a federal action under the NEPA. During the review of an Individual Permit request for a proposed project an EA is prepared according to NEPA guidelines. The EA is usually incorporated into the Corps' permit decision document. For larger, complex projects, a separate EA document may be prepared. If the impacts of the proposed activity are determined to be significant according to NEPA, an Environmental Impact Statement (EIS) must be prepared and reviewed according to all NEPA requirements.

Additional Regulatory Requirements

Under federal law, any project permitted by the Corps must be in compliance with the National Historic Preservation Act (NHPA), ESA and the Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended by the Sustainable Fisheries Act of 1996. For Nationwide Permits, General Condition 17, *Endangered Species* states that applicants "shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized," and that "the district engineer may add species specific regional endangered species conditions to the NWPs."

No activity that the Corps regulates and authorizes or its operation may impair reserved tribal rights. Any project permitted by the Corps must be in compliance with all applicable tribal trust responsibilities (i.e. protection of cultural, archeological, natural resources and fishing rights). For Nationwide Permits, General Condition 16, *Tribal Rights,* states that "No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights."

Endangered Species Act and Magnuson-Stevens Fishery Conservation and Management Act – Programmatic Consultation

Under the Corps' Federal permit program, permit applications must be reviewed for the potential impact on threatened and endangered species pursuant to Section 7 of the ESA.

The Corps, through informal and formal consultation procedures with the NMFS and USFWS, must evaluate information on the presence of threatened and endangered species (including timing and life stages), habitat for such species and their prey sources, and other parameters. The consultation process involves review and negotiations to identify potential impacts of the proposed work and conservation measures that can help protect threatened and endangered species and their habitat.

In addition, the MSA, as amended by the Sustainable Fisheries Act of 1996, established procedures designed to identify, conserve, and enhance Essential Fish Habitat (EFH) for those species regulated under a Federal fisheries management plan. The MSA requires Federal agencies to consult with NMFS on all actions, or proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect EFH.

A programmatic consultation covers a range of actions proposed to be authorized by a federal agency, such as categories of activities subject to the Corps' regulatory jurisdiction. Completion of a programmatic consultation eliminates the need for individual ESA and EFH consultations on permit applications submitted to the Seattle District for activities covered under this Agreement which comply with the terms and conditions of the biological opinions issued by NMFS and USFWS. This will reduce the time required for evaluation of, and determinations for, the permit applications. The consultation with NMFS covers species and critical habitat listed under ESA within the Coverage Area of this Agreement, including Chinook salmon and steelhead, and EFH for Pacific salmon, coastal pelagic species and groundfish species. The consultation with USFWS will address species and critical habitat within the Coverage Area which are under their jurisdiction including bull trout and marbled murrelet.

If a participating District submits an application for a project that does not meet the terms and conditions of the Implementation Agreement, the applicant will be required to apply for an individual permit from the Corps and the Corps will complete an individual consultation to address ESA and EFH compliance.

Skagit Delta Tidegates and Fish Initiative Project Specific Information Form

For those activities meeting the provisions of this Agreement, the Corps will need information, prior to construction, that verifies that the proposed work is consistent with NWP 3 terms and conditions, that it complies with an ESA/EFH programmatic consultation and NHPA requirements, and that it does not impair reserved tribal rights. To assure these requirements are achieved, the Corps has developed a Skagit Delta Tidegates and Fish Initiative Project Specific Information Form (SPIF) (Appendix H). A completed SPIF will contain information on the location and details of the proposed work, methods and materials used, and best management practices utilized to minimize impacts.

Upon receiving a completed SPIF, the Corps will verify that the proposed work is consistent with the permit regulations and the provisions of this Agreement and the related ESA/EFH and tribal consultations. The Corps will then issue a verification letter stating that the project meets the requirements and work is authorized.

For activities that do not meet all of the provisions of this Agreement, the Corps will determine whether the proposed work may be authorized by a NWP or whether an Individual Permit will be required. The Corps will then process the permit request accordingly and conduct appropriate consultations. No work may be conducted until the Corps completes all consultations and issues an authorization, either in the form of a NWP verification letter or an individual Permit.

3.2.2 WASHINGTON DEPARTMENT OF ECOLOGY PERMITTING PROCESS

Section 401 CWA – Water Quality Certification

Water Quality Certification (401 Certification) review under Section 401 of the CWA is triggered by issuance of a Corps permit. WDOE's response to actions taken by the Corps is as follows:

For projects exempt from Section 404 for maintenance activities: 401 Certification is not required for projects meeting the provisions of Section 404 maintenance exemption. It is anticipated that most tidegate repair and replacements will receive maintenance exemptions from the Corps.

For Nationwide Permits: Projects that obtain a Nationwide permit under Section 404 from the Corps will be reviewed by WDOE to determine if a 401 Certification is required or if it is certified subject to conditions.

For Individual Permits: All projects that require a Section 404 individual permit from the Corps are required to obtain a 401 Certification from WDOE. The Corps issues the public notice of application. Once issued, the 401 Certification becomes part of the Federal permit.

Please note that under the CWA, additional separate actions may be needed to protect or improve water quality. For example, if a stream reach or slough is listed under Section 303(d) of the CWA, a water cleanup plan may be required in the future.

Coastal Zone Management Act –- Consistency Determination

To be consistent with Washington's Coastal Zone Management (CZM) Program, projects must comply with several state and federal laws, including SEPA, the SMA, and the CWA. WDOE's response to actions taken by the Corps is as follows:

For Nationwide Permits: Projects that obtain a Nationwide permit from the Corps that do not trigger the need for a Water Quality Certification usually will not require a CZM consistency determination.

For Individual Permits: All projects that require an individual permit from the Corps are required to obtain a CZM consistency determination. The consistency determination is made at the same time as the 401 Certification decision.

3.2.3 WASHINGTON DEPARTMENT OF FISH AND WILDLIFE PERMITTING PROCESS

Hydraulic Project Approvals

WDFW will be responsible for issuing a five-year Consolidated HPA to each participating signatory District covered under this Agreement for maintenance activities associated with tidegates and floodgates located within the jurisdictional boundaries of each District, subject to the provisions of RCW 77.55, as amended by House Bill 1418 (2003). A Consolidated Five-Year HPA will be issued, upon proper application, to each District pursuant to this agreement. Each Consolidated Five-Year HPA will be subject to renewal at the end of the 5-year life of the HPA.

Any District covered under this Agreement is legally obligated to comply with the provisions and conditions of any HPA issued to them pursuant to RCW 77.20.100 and other applicable rules and regulations administered by WDFW. Failure to do so may result in penalties as provided by state law. In the event a Consolidated Five-Year HPA issued in conjunction with this Agreement is denied or otherwise legally terminated, the District in question will henceforth be required to secure an individual site and/or project specific HPA for each maintenance action occurring below the ordinary high water (OHW) line in designated watercourses (other than those that are wholly artificial) that occur within the legally established boundaries of the District. Unavoidable impacts to fish and fish habitat resulting from these individually permitted activities will be addressed on a case-by-case basis.

State Environmental Policy Act

WDFW will be the lead agency for SEPA. An environmental checklist will be completed to address each participating District's maintenance actions. This checklist will provide information about the proposal and its potential impacts on the environment. After the checklist has been completed, WDFW, acting as the lead agency, will review the checklist and other information involving the proposed action. When WDFW has sufficient information to determine that the proposed action is unlikely to have a significant adverse environmental impact, it will issue a determination of non-significance (DNS). The DNS may have a public and agency comment period. If it is determined through review of the checklist that significant environmental impacts will occur, WDFW will request that the District complete an EIS.

3.2.4 SKAGIT/SNOHOMISH COUNTIES

Shoreline Management Act

WDOE's rules for administration of the SMA (WAC 173-27-040) identify developments exempt from shoreline substantial development permit requirements. The following developments shall not require substantial development permits:

> (b) Normal maintenance or repair of existing structures or developments, including damage by accident, fire or elements. "Normal maintenance" includes those usual acts to prevent a decline, lapse, or cessation from a lawfully established condition. "Normal repair" means to restore a development to a state comparable to its original condition, including but not limited to its size, shape, configuration, location and external appearance, within a reasonable period after decay or partial destruction, except where repair causes substantial adverse effects to shoreline resource or environment. Replacement of a structure or development may be authorized as repair where such replacement is the common method of repair for the type of structure or development and the replacement structure or development is comparable to the original structure or development including but not limited to its size, shape, configuration, location and external appearance and the replacement does not cause substantial adverse effects to shoreline resources or environment;
> (e) Construction and practices normal or necessary for farming, irrigation, and ranching activities, including … construction and maintenance of irrigation structures including but not limited to head gates, pumping facilities, and irrigation channels.
> (k) Operation and maintenance of any system of dikes, ditches, drains, or other facilities existing on September 8, 1975, which were created, developed or utilized primarily as a part of an agricultural drainage or diking system.

Skagit and Snohomish Counties administer shoreline permit exemptions within the Coverage Area. A Skagit County Shoreline Exemption Application (Pursuant to Skagit County Code 14.26, SCSMMP), and any required supporting documentation, will be filed with the County for the maintenance activities covered by this Agreement. A Shorelines Exemption will be requested from Snohomish County for activities on agricultural infrastructure (tidegates and trash rack) in the segment of Big Ditch that occurs within the county's jurisdiction.

3.2.5 JOINT AQUATIC RESOURCE PERMITS APPLICATION (JARPA)

To streamline the environmental permitting process, multiple regulatory agencies joined forces to create one application that can be used to apply for more than one permit at a time, the "Joint Aquatic Resources Permit Application (JARPA)".

The JARPA may be used to apply for any or all of the following permits:

- Corps: Section 10 and 404 permits
- WDOE: 401 Water Quality Certifications
- WDFW: Hydraulic Project Approvals
- Skagit and Snohomish Counties: Shoreline Exemption

A separate copy of the completed and signed JARPA should be sent to each agency with jurisdiction on the proposed project.

3.2.6 TRIBAL PARTIES

This Agreement is not intended or designed in any way to deny, ignore or abridge any legal right, privilege or opportunity extended to any Tribe either by Treaty or through federal, state or local laws, rules and regulations. Tribal interests, needs and treaty rights pertinent to federal and/or state permitting of tidegate and floodgate maintenance and the recovery of ESA-listed Chinook salmon addressed through provisions of this Agreement shall be exercised through government-to-government protocols with involved federal agencies, as well as through any other formal and informal channels available to the Tribes as they deem appropriate, including opportunities for future dialogue involving this Initiative, MOU and Agreement through means such as the Skagit Tribal and Agricultural Accord.

3.3. Emergency Tidegate and Floodgate Repair/Replacement

Emergency repairs and/or replacement may be required during or immediately following a storm or other high water event, when damage to drainage infrastructure or equipment has occurred that would pose an imminent threat to agricultural lands or structures.

3.3.1 FEDERAL EMERGENCY PROTOCOLS

A Corps designated "emergency" is a situation which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if corrective action requiring a permit is not undertaken within a time period less than the normal time needed to process the application under standard procedures. The Corps may not view an action as an "emergency" if the applicant has known of the deficient condition of the failing structure and has not made reasonable attempts to secure appropriate permits and conduct timely repairs. Emergency authorization decisions are made on a case-by-case basis.

The Corps will need the following information to authorize an emergency action; either by speaking with someone directly, leaving as much of the following information on voice mail and following up with more details as soon as possible:

- Where the work is located (highway, river mile, nearest waterbody, nearest city, etc.)
- What work is being performed (replacement of tidegate, wingwalls, etc.)
- Include a discussion (amounts, location, etc.) of any temporary excavation/fill work and when the material will be removed and how the area will be restored.
- How the work is being performed (clean excavation with backhoe, pushing of material with bulldozer, blasting out the culvert with water, etc.).
- If any of the proposed work is in wetlands or below the plane of ordinary high water (freshwater) or below the plane of mean higher high or mean high water (tidal).
- Details of any sediment/erosion control measures and fish exclusion measures utilized.
- Relationship of the proposed work to previously existing structures (replacing what previously existed or adding different structures, etc).
- Photos, if available, can often be very helpful

- Anything else that could help us to determine what is being proposed (reference previously issued permits for work at the site)
- Include what coordination with the NMFS/USFWS (Services) for ESA/EFH has occurred.

Based on the information provided, the Corps will determine:

a. If the work can be authorized by a NWP –The Corps will review for consistency with this Agreement and the related ESA/EFH and Tribal consultations. The Corps will provide authorization for the work. The applicant must fax or e-mail a SPIF to the Corps as soon as possible.

If the proposed work does not meet the terms and conditions of this Agreement but may be authorized by a NWP (or combination of NWPs), the Corps will verify that coordination with State Historic Preservation Office (SHPO), the Federal Services (NMFS/USFWS), and Tribes is completed or they, in writing, have agreed to after-the-fact consultation. The Corps will then proceed to process the request for an after-the-fact authorization.

b. If the work would require an individual permit **-** The Corps must follow the emergency procedures in 325.2(e) (4) including required coordination prior to work being performed in water of the U.S., with Northwest Division at Portland.

- Division engineers are authorized to approve special processing procedures in emergency situations. In emergency situations, the district engineer will explain the circumstances and recommend special procedures to the division engineer who will instruct the district engineer as to further processing of the application.
- Also, notice of any special procedures authorized and their rationale is to be appropriately published as soon as practicable.
- The Corps will need to make sure that coordination with SHPO, the Services, Tribes, etc. is completed or they, in writing, have agreed to after-the-fact consultation.
- Contact information can be found at: http://www.nws.usace.army.mil/index.cfm (Regulatory/Permits - Contact Us - List of emergency contacts).

3.3.2 WASHINGTON DEPARTMENT OF FISH AND WILDLIFE - EMERGENCY PROTOCOLS

RCW 77.55.100 states “In the case of an emergency arising from weather or stream flow conditions or other natural conditions, the department, through its authorized representatives, shall issue immediately upon request oral approval for removing any obstructions, repairing existing structures, restoring stream banks, or to protect property threatened by the stream or a change in the stream flow without the necessity of obtaining a written approval prior to commencing work. Conditions of the oral approval shall be reduced to writing within thirty days and compiled with as provided for in this section. Oral approval shall be granted immediately upon request, for a stream crossing during an emergency situation.”

The Parties to this Agreement recognize and acknowledge that exigent circumstances will arise as a result of weather or other factors influencing stream flows and the need to convey water. Emergency repair or replacement activities may typically be the same as the routine repair and replacement activities identified elsewhere in this Agreement, but may need to occur outside of designated work periods and/or require the use of action steps that differ or deviate from the Best Management Practices (BMPs) prescribed in a Consolidated HPA issued for routine repair or replacement activities by the District. In the event of a repair or replacement emergency, the following protocols will apply:

- Emergency notification to WDFW is required only in those circumstances where emergency repair activities, in a "natural watercourse" as identified in this Agreement, deviate from the timing restrictions and provisions of a Consolidated HPA provided pursuant to said Agreement.
- A District Commissioner will contact one of the WDFW personnel listed below, in descending order of priority:

  Brian Williams - Area Habitat Biologist – (360) 466-4345 X 250
  Jeffrey Kamps – Area Habitat Biologist – fresh water – (360) 466-4343 X 271
  Brendan Brokes – District Habitat Program Manager (360) 466-3545 X 253
  David Brock – Regional Habitat Program Director – (425) 775-1311 X 114
  WDFW Emergency Hot Line – (360) 902-2537

- Upon receipt of emergency notification, WDFW agrees to issue a verbal emergency maintenance (including repair or replacement) approval, with the understanding that the proposed work is necessary to address emergency drainage conditions.
- The District agrees to have a representative arrange an on-site meeting with an Area Habitat Biologist designated within this Agreement as soon as possible, but not more than 30 days after work is completed. The purpose of this on-site meeting will be to determine if additional measures will be necessary to restore fish habitat that may have been damaged as a result of an emergency action undertaken by the District.

3.3.3 COUNTY EMERGENCY PROTOCOLS

A Shorelines Exemption can be issued by Skagit or Snohomish County for emergency construction necessary to protect property from damage by the elements. An "emergency" is an unanticipated and imminent threat to public health, safety, or the environment which requires immediate action within a time too short to allow full compliance with permitting processes. Emergency construction does not include development of new permanent protective structures where none previously existed. Where new protective structures are deemed by the county's shoreline administrator to be the appropriate means to address the emergency situation, upon abatement of the emergency situation the new structure shall be removed or any permit which would have been required, absent an emergency, shall be obtained. All emergency construction shall be consistent with the policies of chapter 90.58 RCW and the local master program. As a general matter, flooding or other seasonal events that can be anticipated and may occur but that are not imminent are not an emergency.

PART 4: RESOURCE PROTECTION AND CONSERVATION MEASURES

4.1 Tidegate/Floodgate Maintenance Actions – General Description and Construction Sequencing

The maintenance action types described in this section are considered typical of work necessary to routinely maintain the tidegate and floodgate drainage infrastructure within the watercourses of the Skagit and Samish River deltas. Many of these maintenance actions are anticipated and routinely performed as a part of regular operational inspections of the tidegates and floodgates by the District personnel or commissioners. Unanticipated maintenance actions required to restore the function of the tidegates and floodgates after storm events will be completed as soon as possible after the storm event. Maintenance actions described in this section that typically occur for tidegate and floodgate maintenance are segregated into the following categories: Minor Repair, Major Repair, and Replacement. The Parties to this Agreement recognize that maintenance actions or techniques different from those described below may arise and may, by mutual consent, be formally incorporated into this Agreement by amendment. The details for incorporating currently undefined maintenance actions are presented in Part 5.2.3.

4.1.1 MINOR REPAIR

Minor repair is defined as the replacement of damaged or worn hinge pins, nuts and bolts necessary to keep the tidegate or floodgate in good operating condition, and also includes removal of logs and debris to ensure gates are able to open and close properly. Maintenance for tidegates is conducted during a low tide cycle, once the drainage water has passed through the gate. Maintenance for floodgates is conducted once the drainage water has passed through the gate. Debris removal is performed as needed to ensure that the flow of water is not impeded and that blockages do not develop. Debris that collects in the gates and trash racks is typically composed of trash, leaves and branches, and is generally small and easily removed with hand tools. Occasionally, larger debris, such as logs, is removed using mechanical equipment, such as an excavator, which is positioned on the bank. Materials are deposited on the adjacent bank or disposed of as necessary. All debris removal with equipment staged on the bank is considered minor repair.

The majority of maintenance actions are categorized as minor repair and are completed manually. For tidegates and floodgates, these minor repair actions are addressed through District Drainage Maintenance Agreements and Plans developed through the Skagit Drainage and Fish Initiative.

4.1.2 MAJOR REPAIR

Major repair of tidegates and floodgates that discharge to natural watercourses are covered under this agreement. Major repair actions include all maintenance activities not

categorized as minor repair, with the exception of replacement and installation of liners (See Part 4.1.3), required to keep the tidegates and floodgates operational. These actions include, but are not limited to: the replacement of doors and collars; repair of discharge pipes and tubes; repair of rock armoring or thresholds; and, in rare instances, debris removal requiring the access of heavy equipment within the watercourse. Major repairs shall not include actions that require excavation of the dike or levee to accomplish the repair.

Replacement of doors may require the use of heavy equipment, such as a boom truck or excavator, depending on the type of door, size and material. Any heavy equipment used is staged and operated from the dike or bridge. The door is suspended over the dike, near the tube opening, and is manually connected to the collar. Work is conducted during a low tide cycle and no cofferdam is required.

Replacement of collars is rarely necessary, but in instances when a collar requires replacement, the work is performed manually during a low tide cycle and no cofferdam is required.

Discharge pipe or tube repair consists of patching holes or cracks in the protruding ends on either side of the dike. The damaged area is patched with cement or fiberglass, depending on the composition of the pipe or tube. Patches are typically used to repair small holes or cracks. If the damaged area is large enough that a patch will not work the protruding end of the pipe will be encased in cement. These are typically temporary repairs to prolong the life of the pipe or tube until it can be replaced. These repairs are completed manually during a low tide cycle and no cofferdam is required. If equipment is needed, such as a cement truck, it will be staged and operated from the supporting/associated dike or bridge.

Repair of rock armoring or thresholds is required when existing rock has shifted, or a storm event has caused erosion at the structure. Repair work typically involves the repositioning of existing rock that has shifted. In some circumstances, new rock may need to be imported to the repair site typically, 10 cubic yards or less, to restore the original footprint of the rock armoring. Equipment is staged from the associated dike or bridge.

The need to operate equipment within the watercourse for debris removal is very rare. Typically, all debris can be removed either manually or with equipment staged on the bank. Operation of equipment within the watercourse for the removal of debris shall only occur to prevent the loss of a tidegate or floodgate structure, including the dike or bridge supporting that structure. This action will be completed during one low tide cycle. If the equipment enters the channel then the site where the equipment enters the channel will be isolated from the rest of the channel and salmon removal implemented. If water is flowing in the channel, then the flow will need to be bypassed around the isolated area.

4.1.3 REPLACEMENT

Replacement of tidegates and floodgates that discharge to natural watercourses are covered under this agreement. Replacement of tidegates is occasionally necessary, and usually involves the replacement of tubes to extend the life of the gate facility or to restore impaired function. Tubes typically collapse due to corrosion. Replacement of tubes is

typically completed during the late summer to early fall months to coincide with the occurrence of extreme low tides during daylight hours.

The replacement of a tidegate tube requires the excavation of the dike to provide access to the tube. This action is completed during one low tide cycle, and must be completed quickly to prevent intrusion of saltwater into the work area. The locations of the majority of the floodgates are affected by tidal height such that replacement actions at floodgates will also be completed at low tidal cycles. To secure the work area, and to provide a dry work environment, the area upstream of the tube will be cofferdamed to prevent drainage water from entering (depending on drainage occurring at the time of the replacement) the work area. A downstream cofferdam will also be installed to isolate the work area from the watercourse. The existing tube(s) requiring replacement is then excavated with equipment staged on the dike or shoreline, above the OHW or MHW elevation. Excavated material is stockpiled upland for replacement in the dike once the new tube is in-place. Material is placed in a location where it will not enter the waters of the State, including wetlands. Once the new tube is placed, the excavated material is then replaced in kind, within the existing footprint. Additional new material may be required to replace some of the excavated material as 100% of the material can not be collected and replaced. The amount of new material required is less than 50 cubic yards. If the number of tubes has been modified, e.g. four tubes replaced with three, the soil quantities excavated and replaced will vary, but the overall footprint and function of the tidegate or floodgate structure will remain the same. Any spoils are disposed of at an upland location. No construction debris or deleterious materials will be disposed of or abandoned on-site.

The installation of liners requires that the dike be partially excavated, which requires that this activity be included within replacement actions. Lining of a tube consists of installing a liner to the inside section of the tube where corrosion typically occurs. To line an existing tube with new material, the work must be conducted during a low tide cycle when the tube can be easily accessed. Any debris in the existing tube is removed so that the liner will fit properly. The new lining material is installed within the existing tube by utilizing a boom truck or other equipment that can lift and suspend the new liner over the watercourse near that tube opening. The equipment is staged from the dike (or bridge) and does not enter below the OHW or MHW elevation. Once the liner is in position it is manually placed in alignment with the tube and then secured to the existing tube. The new liner is grouted into place to provide a seal between the tube and the liner. The dike is partially excavated to create access to the tube so that the liner can be grouted. The tube is then opened to provide access to the void between the tube and the liner. A grout material, such as concrete slurry, is then pumped into the void between the tube and the liner. This grout material seals the liner to the tube. Liner installation is completed during one low tide cycle, all equipment is stage from the dike and a cofferdam is not required.

4.2 Tidegate and Floodgate Maintenance Species Impact Analysis

The potential for fish to be impacted from tidegate and floodgate maintenance increases with the degree to which the watercourse or shoreline is disturbed, and the degree to which motorized equipment is used to complete the maintenance. Minor repairs have a very low

potential to impact fish, whereas major repairs or replacement tend to have increasingly greater potential to impact fish.

The potential for fish to be impacted by tidegate and floodgate maintenance is also related to the size of fish. Larger fish are stronger swimmers and therefore better able to escape and avoid the potential impacts of maintenance activities, whereas smaller fish are weaker swimmers and therefore at greater risk of being killed or injured.

The potential for fish to be impacted is greater in those habitats where small fish rear and seek refuge. The habitats typically associated with tidegates and floodgates in the Skagit delta and estuary provide optimal rearing and refuge habitat for smaller fish, whereas larger fish tend to seek optimal rearing and refuge conditions in deeper water and offshore habitats.

The potential for fish to be impacted is also dependent upon small fish being present at the tidegate or floodgate sites. For many fish species, dependence on delta and estuary habitats is seasonal. The time of the year when juvenile fish utilize the delta and estuary habitats for rearing and refuge is different for different fish species and life histories. For salmonid species, small juveniles typically depend on the Skagit delta and estuary habitats between February 1 and July 31 during which time they are at greatest risk of being impacted by tidegate and floodgate maintenance.

Tidegate and floodgate maintenance activities can result in direct and indirect impacts to fish. Direct impacts include physical and/or chemical trauma to the fish that can result in injury or death. Indirect impacts are temporary and do not directly kill or injure the fish. Indirect maintenance impacts disturb and/or alter the watercourse and shoreline habitats upon which fish depend for rearing and refuge thus compromising their rearing ability and their potential to survive.

The following conditions could result in direct maintenance impacts:

- Whenever a watercourse is excavated with motorized equipment, fish can be killed or injured. Fish can be physically removed from the watercourse in the bucket of the excavator and discarded on the shoreline. The excavator bucket can also physically injure fish.
- Fish can be chemically injured or killed through the inadvertent discharge of concrete leachate, or hydraulic fluid, gas, diesel oil into the watercourse from the motorized equipment used to conduct the maintenance.

The following conditions could result in indirect maintenance impacts:

- Excavation of the watercourse can result in the temporary loss of aquatic vegetation that provides fish refuge and cover habitat by physically removing the aquatic vegetation from the watercourse.
- Removing the aquatic vegetation from the watercourse can temporarily reduce the detritus input into the watercourse and reduces the production of important epibenthic and benthic invertebrates that are important fish prey.

- Excavating the watercourse or disturbing the shoreline can increase the suspended sediments in the watercourse and temporarily reduce the light available for photosynthesis thus reducing the production of aquatic vegetation.
- Excavating the watercourse can remove or bury epibenthic and benthic invertebrates that are important fish prey.
- Excavating the watercourse or disturbing the shoreline can increase the suspended sediments in the watercourse such the available oxygen in the watercourse is decreased to levels that can stress, displace or kill fish.
- Removing riparian vegetation that provides shade to a watercourse can elevate the water temperature and can stress, displace or kill fish.
- Removing riparian vegetation can reduce the detritus input into the watercourse and reduces the production of important epibenthic and benthic invertebrates that are important fish prey.
- Removing riparian vegetation can reduce the availability of terrestrial insects that are important fish prey.

Terrestrial species impacts may include disturbance from noise generating activities. Other direct or indirect impacts are not anticipated to occur to birds. Indirect impacts to killer whales may result if their prey base is affected by the proposed actions.

The following BMPs are a means to avoid and minimize impacts, as described above in Part 4.2, to fish and terrestrial species, and their habitats.

4.3 Maintenance - Repair and Replacement - BMPs

1. TIMING LIMITATIONS: Tidegate and floodgate maintenance activities that include excavation activities or equipment operation below OHW line shall only occur from August 1 through October 15 of any year. All other tidegate and floodgate repair or replacement activities are not restricted by a timing limitation.

2. NOTIFICATION REQUIREMENT: The permittee or contractor shall notify the WDFW Area Habitat Biologist (AHB) and the Corps of the tidegate/floodgate repair and/or replacement start date. Notification shall be received by the AHB prior to the start of tidegate/floodgate maintenance activities.

4.3.1 COFFERDAMS

3. Whenever water is present in the upstream watercourse, a temporary cofferdam shall be installed upstream of the damaged tidegate/floodgate prior to initiating any excavation activity below OHW line in order to isolate the project site from the upstream watercourse.

4. Whenever water is present in the downstream watercourse, a temporary cofferdam shall be installed immediately downstream of the damaged tidegate/floodgate prior to initiating any excavation activity below OHW line in order to isolate the project site from the downstream watercourse.

5. The cofferdams may be constructed from substrate materials imported to the site or from substrate materials excavated from the existing dike above OHW line. Under no circumstances shall substrate materials be excavated below OHW line from the watercourses for the purpose of constructing the cofferdams.

6. Waste water removed from within the cofferdam work area shall be discharged to a location landward of OHW line in a manner that allows removal of fine sediments prior to the discharged water returning to the watercourses.

7. If it is necessary to use a pump to divert water from the watercourse around the project area, the pump intake shall be enclosed with a screen material where the narrow dimension of the rectangular slots or mesh does not exceed 0.25 inch to prevent juvenile fish from entering the pump system. The screened area shall have enough surface area to ensure that the velocity through the screen does not trap fish on the screen surface. The screen shall remain in place whenever water is withdrawn from the watercourse through the pump intake.

8. Upon completion of the tidegate/floodgate repairs and/or replacement, all material used to construct the cofferdams shall be removed from the watercourses and the project site returned to pre-project or improved conditions.

4.3.2 SALMONID REMOVAL

9. Immediately prior to initiating any excavation activity below OHW line, the following fish removal protocols shall be implemented by a qualified biologist experienced and trained in the handling of fish; the qualified biologist shall supervise the capture and relocation of the fish at all times:

A. Whenever water is present in the upstream watercourse, a block net shall be installed immediately upstream of the proposed project area to prevent fish from migrating back into the project area during fish salvage and project activities.

B. Whenever water is present in the downstream watercourse, a block net shall be installed immediately downstream of the proposed project area to prevent fish from migrating back into the project area during fish salvage and project activities.

C. Fish shall be captured and safely moved from the project area using the best available methods and practices, including but not limited to dip netting, and seining. The preferred sequence of fish removal is to first install the upstream blocknet followed by a seine and/or dip netting efforts proceeding in the downstream direction. The downstream blocknet shall be moved, closely behind the seining crew. After establishing the downstream block net, additional sweeps of the project area with a seine is recommended. Fish handling techniques shall be implemented that result in the least amount of stress or damage to the captured fish.

D. Captured fish shall be immediately and safely transferred to the watercourse downstream of the project reach.

E. The task of capturing and immediately relocating fish for the purpose of excluding them from the project area shall not require a separate Scientific Collection Permit from WDFW.

4.3.3 GENERAL

10. Any excavation activity below OHW line shall be conducted to the maximum extent possible during low tide cycles or low flow cycles in the downstream watercourse.

11. Motorized equipment used to repair or replace a damaged tidegate or floodgate shall only be operated above OHW line.

12. Disturbance of vegetation in and along the watercourses at the project site shall be held to the absolute minimum necessary to repair or replace the damaged tidegate or floodgate.

13. Disturbed soils at the project site shall be protected from erosion using vegetation and/or other means.

14. With the exception of materials used to construct the cofferdams, substrate materials excavated for the purpose of repairing and/or replacing a tidegate or floodgate shall be stockpiled above OHW line. Under no circumstances shall excavated materials be stockpiled below OHW line.

15. Under no circumstances shall substrate materials below OHW line be recruited from the watercourses for project construction.

16. The damaged elements of the tidegate or floodgate shall be removed from the project area and deposited upland such that they do not enter the watercourse.

17. Under no circumstances shall the footprint of the existing damaged tidegate or floodgate be expanded below OHW line as a result of repair or replacement activities.

18. Under no circumstances shall the footprint of the existing dike be expanded below OHW line as a result of repair or replacement activities.

19. The existing trash rack associated with the tidegate or floodgate may be modified subject to WDFW and the Corps review and approval, as a result of the tidegate, floodgate repair or replacement activities.

20. All treated piling or lumber used to repair or replace a trash rack shall be professionally treated and completely cured prior to installation below OHW line to minimize leaching into the water or substrate. Under no circumstances shall creosote or pentchlorophenol treated piling or lumber be used for project construction.

21. A maximum of 10 cubic yards of new angular rock may be imported to the site to restore the original footprint of the rock armoring.

22. Trash, plant debris, sticks and other debris removed from the tidegate, floodgate or trash rack shall be deposited upland such that they do not enter the watercourse. Drift logs

with a stem diameter greater than 6 inches shall be relocated away from the tidegate, floodgate or trash rack but maintained below OHW line.

23. Wet concrete shall be prevented from entering waters of the state. Forms for any concrete structure shall be constructed to prevent leaching of wet concrete. Impervious materials shall be placed over any exposed concrete not lined with the forms that will come in contact with state waters. Forms and impervious materials shall remain in place until the concrete is cured.

24. If a fish kill occurs or fish are observed in distress, the project activity shall immediately cease and the WDFW Habitat Program shall be notified immediately.

4.4 Estuary Restoration

4.4.1 TARGET ACREAGE FOR ESTUARINE HABITAT RESTORATION

For purposes of fulfilling the provisions of this Agreement, WWAA and each participating District within the Skagit and Samish River deltas (which may include Drainage and Irrigation Districts 5, 14, 15, 16, 17, 18, 19, 22, 25; Consolidated Diking District 22; Diking, Drainage and Irrigation District 12, and Diking District 3) agree to support the conversion of up to 2,700 acres of delta agricultural lands as a means to achieve the estuarine habitat restoration and smolt production goals and objectives of the Federally approved Skagit Chinook Recovery Plan, and consistency with Chapter 85 RCW.

The signatory Districts' support will include:

- Assisting the restoration community to make the landowner contacts necessary to secure the permissions, easements or ownerships to implement the restoration projects
- Working with landowners to understand habitat restoration needs and identification of potential suitable lands
- Providing a central point of communication for agricultural participation with restoration projects
- Providing participation in the Agreement Oversight Committee
- Providing coordination and management of the Agreement
- Co-sponsor and advocate for restoration project grant and permit applications

These land conversion and restoration projects will be completed by outside entities, and not directly by the agricultural community. The programmatic ESA and EFH consultation associated with this Agreement does not include the restoration projects, and the restoration projects will be required to undergo independent ESA and EFH consultations.

The attainment of the smolt production goals identified within the Skagit Chinook Recovery Plan *or* the conversion and restoration of a maximum of 2,700 acres of agricultural land-base within the Restoration Area, whichever is achieved first, shall be the determinant factor in fulfilling the obligations of each Party to this Agreement. Regulatory review and permitting of tidegate and floodgate maintenance activities will continue to be the legal responsibility of each individual District after such goals have been

attained. Permitting procedures identified within this Agreement will continue for the 25-year duration of this Agreement, even if the habitat and/or smolt production goal is achieved before the end of the agreement period.

4.4.2 PRIORITY ESTUARY RESTORATION PROJECTS

Skagit Chinook Recovery Plan Projects

In the Skagit Chinook Recovery Plan 2005 the following projects have been identified as potential estuary restoration projects in the Skagit Delta. The authors of the plan identified factors potentially affecting implementation of these projects such as "*logistic complexities, scientific and engineering challenges, funding constraints and social barriers"*. In recognition of this, projects were placed into near-term or long-term categories.

Near-Term Projects

Wiley Slough

The proposed estuary restoration project will restore tidal and riverine flooding, native vegetation communities, anadromous and resident fish access, and channel habitat to approximately 158 acres of the 175-acre site through the removal of the existing perimeter dike and relocation of the existing tidegate complex. The site is located in the southeast corner of Fir Island adjacent to Freshwater Slough, a distributary of the South Fork Skagit River. The site includes 160 acres and is part of WDFW's Skagit Wildlife Area Headquarters Unit. The site is currently isolated from tidal and riverine flooding and managed for the agriculture production of cereal grains attractive to waterfowl, for public hunting and for wildlife viewing. WDFW is the sole owner of the site. The site was acquired by WDFW in 1959 as part of a land exchange with the USFWS. As recently as 1956, the dike system was expanded to isolate the site from tidal and riverine flooding, thereby altering hydrology, sediment transport and sediment storage. Isolation of the site has resulted in the direct loss of 16 acres of channel habitat and 160 acres of intertidal marsh habitat. An additional 20 acres of channel habitat has been lost seaward of the dikes due to sediment deposition. Vegetation at the site has been significantly altered from historic conditions. All native anadromous and resident fish species that historically used the site are currently excluded. Of particular concern is the exclusion of Skagit River native Chinook, which is listed under ESA.

South Fork levee setback

Acquisition and restoration of 37 acres of off-channel/wetland and riparian habitat adjacent to mainstem Skagit River near Conway. 2,500 feet of existing levee will be removed and re-graded down to the existing "bank top level" at the top end and the lower end will be graded for off-channel connectivity. The main river levee will be relocated and constructed approximately 700 feet maximum from the riverbank at the mid-point of the project. 1,800 feet of new levee will be built adjacent to the County road with the keyway located along the riverward toe slope of the levee.

Fisher Slough and Little Fisher Creek – levee setback
Levee setback, improve flood storage, increase juvenile fish habitat and restore tidal functions. This project will acquire 50-80 acres of farmland within the riverine tidal zone and restore agricultural land to channel, scrub-shrub, forested wetland, and tributary junction habitats. This project will also convert existing floodgates to Self Regulating Tidegates (SRTs).

Fornsby Creek SRT Project/Smokehouse Floodplain
Reconnect 5 miles of habitat to Swinomish Channel and restore riparian vegetation to 1.3 miles of habitat. Replace existing impassible tidegates on Fornsby Creek with SRTs. Tidegate replacement will restore tidal influence to the channels, enable fish passage, and increase the amount of available blind channel, distributary, and tributary habitat for all salmonid species. The project will also implement habitat restoration actions on 1.3 miles of the re-opened channel habitat. In total, the project will re-open more than five miles of channel to fish and improve over 50 acres of aquatic habitat.

Milltown Island Restoration
Milltown Island (212 diked acres) was sold to WDFW after farming was deemed impractical in this area. Project proposes to extensively breach dikes to restore tidal and riverine processes that will scour and maintain on-site tidal channels.

Telegraph Slough Phase 1
Dike setback project located at the north end of the Swinomish channel. This phase of the project would implement approximately 222.4 acres of marsh restoration.

Davis and Dry Sloughs
Levee setback project in the vicinity of Claude Davis and Dry Slough. The project as described here proposes to involve approximately 90 acres of WDFW lands and 30 acres of private land.

McGlinn Is Causeway
Improve hydraulic connection between the North Fork of the Skagit and Swinomish Channel north of McGlinn Island. This action is expected to improve access by juveniles to estuarine rearing habitat in Padilla Bay. The current access, Hole-in-the-Wall, is limited because flow is usually away from Swinomish Channel, and it is inaccessible at low tides.

Long-Term Projects

As described by the Skagit Chinook Recovery Plan authors, "*projects listed under the long-term restoration horizon are generally less well developed and have a host of uncertainties or complexities that must be addressed before implementation could be expected to proceed. All of these projects are socially complex and resource intensive so will need to include some elements of mutually understood benefits for most, if not all, interest groups involved"*.

Blake's Bottleneck Dike setback/ Rawlins Road Dike setbacks/ Thein Farm
This project encompasses several alternative actions that can be implemented in the vicinity of the terminus of Rawlins Road and Blake's marina complex. Each action seeks to

setback levees in such a way as to create additional emergent marsh and riverine wetlands. The project's footprint would vary substantially based on the willingness of private landowners to engage and the institutional incentives provided for their consideration. The alternatives evaluated include: Blake's Bottleneck, Rawlins Road Dike Setback, and Thein Farm.

Telegraph Phase 2

Following restoration actions described in Telegraph Phase 1 this project seeks to re-establish connectivity and estuarine marsh habitat through the historic footprint of the former Telegraph slough corridor. This project will necessitate concurrence from the WSDOT and local landowners. Isolation of this historic slough pathway was the direct result of State actions through the construction of the Highway 20 corridor. Therefore, restoration will require significant resources to address the barrier created by Highway 20.

Smokehouse Phase 2

Set back levees through key areas of the Smokehouse floodplain, allowing expression of larger emergent marsh communities and associated blind channel networks. Increase the availability of emergent marsh habitats in the Swinomish channel corridor once Chinook passage is improved through the McGlinn Island project.

Cross Island Connector

Re-establish connectivity between the North Fork of the Skagit and the central bay front along Fir Island. This is most likely through the development of a connecting corridor that follows one of two historic pathways (Browns Slough and/or Dry Slough) or through low-lying farmlands. Restore historic distributary connections that will improve connectivity for fish, water and sediments to underutilized, and eroding, emergent marsh habitats in central delta.

Sullivan's Hacienda

Setback levees to a pre-1956 footprint allowing for the reestablishment of emergent marsh and blind channel networks in the vicinity of Sullivan's Slough. Increase emergent marsh rearing habitat in tidal delta.

North Fork Levee Setback

Setback levees along the North Fork of the Skagit from the former inlet of Dry Slough to the Western terminus of the levee system near Rawlins Road. The proposed project could be phased in four distinct phases depending on its merit as a flood control project. Increase available floodplain for riverine tidal rearing habitats.

Deepwater Slough Phase 2

If recovery goals are still not being achieved after the ten-year time horizon, the WDFW will come under increasing pressure to restore the remaining habitat at the Deepwater Slough site. This would likely involve the complete removal of levees around each of the two lobes left after the first Deepwater project. Increase tidal delta rearing habitats in scrub-shrub zone.

House Bill 1418 Tidegate Taskforce Report – Estuary Projects

In addition to the estuary restoration projects identified in the Skagit Chinook Recovery Plan, the following additional projects were identified in the 1418 Tidegate Report.

Dodge Valley

Dodge Slough drains an approximately 2,200-acre watershed located south and east of Sullivan Slough. It is a small slough with a dike and pump station near its mouth. Restoration of tidal inundation could result in mostly tidal emergent vegetation (98%) with some tidal scrubshrub (2%). Juvenile salmon access is currently obstructed by tidegates. Restoration actions assumed: removal of approximately 3,400 feet of dike, construction of 6,000 feet of dike, and relocation of tidegates.

Hall Slough

Levees constrain the limited existing salt marsh habitat downstream of Maupin Road, and a tidegate prevents salmonid access beyond the road. The tidegate does not work, and much of the drainage goes through Brown's Slough. Upstream of Maupin Road, the slough is now a ditch that drains farmland and has no riparian vegetation. A small levee spur off of the main levee is thought to be unnecessary. Restoration actions assumed include removal of approximately 4,400 feet of dike, construction of 10,000 feet of dike, relocation of tidegates, and no reconnection of Hall's Slough to the North Fork Skagit River. Restoration of tidal flooding to the site could result in 90% coverage by tidal emergent vegetation and 10% tidal scrub-shrub vegetation.

Brown's Slough

Brown's Slough is joined to Hall Slough, and together, they formed a major distributary channel from the North Fork Skagit River to Skagit Bay, branching off from each other midway to the bay. The upper end was closed off by dikes between 1940 and 1956, and further disconnections downstream occurred from 1940 to 1991. Restoration of tidal flooding to the site would result in mostly tidal emergent vegetation (96%) and some tidal scrub-shrub vegetation (4%).

South Fork Skagit Log yard

Part of the area is currently owned by the Port of Skagit County and is used as a pole yard. Private ownership within study area includes 36 acres west of Pioneer Highway and 20 acres east of the highway. Currently a there is tributary channel on private land that amounts to 1 acre or 0.2 miles. The former tributary is not currently connected to the South Fork Skagit River. The tributary could be moved south of Conway to reconnect it to the Skagit River at the South Pole Yard via a culvert under the railroad and Pioneer Highway. This would also allow potential for greater restoration further eastwards. Juvenile salmon site access (landward of dikes) is currently obstructed by tidegates. Restoration actions assumed: removal of approximately 2,240 feet of dike, construction of 8,000 feet of dike, placement of a group of culverts under the railroad and Pioneer Highway and excavation of a channel.

New Projects

Though the projects presented above are the result of extensive planning efforts it is likely that new or additional projects will be proposed to achieve the Skagit Chinook estuary habitat restoration goals. This Agreement would incorporate those projects as long as they address the Skagit Chinook Recovery Plan objectives and are within the Implementation Agreement Restoration Area.

Project Review Process

The Oversight Committee (See Part 5.2.2) will conduct a project review to verify that a proposed restoration project meets the conditions of this Implementation Agreement, and will complete a checklist (Appendix D) presenting the findings and conclusions of that review. The decision of the Oversight Committee will be forwarded to the party requesting the project credit and the Credit Administrator (See Part 5.1) of this Agreement. The Oversight Committee will seek review by an outside technical committee, such as the Skagit Watershed Council's Restoration and Protection Committee, to verify that new projects (as defined in Part 4.4.2 of this Agreement) are consistent with the goals and objectives of the Skagit Chinook Recovery Plan. The Oversight Committee will make a determination to include the proposed project in the 2,700 acre habitat restoration target and apply project credits as stipulated in Part 4.5.1, or reject the project.

Land Use Agreement Criteria for Projects

To assure agencies and stakeholders that projects will be held in long-term commitments to estuary restoration one of the following types of land agreements shall be utilized:

- Conservation easement
- Direct land purchase by a conservation organization or local, state, federal agency

4.5 Estuary Restoration and Maintenance Action Habitat Credit

4.5.1 CREDIT DETERMINATION AND USE

Within the jurisdictional boundaries and statutory responsibilities of the participating Districts, there are 38 tidegate and one tier 1 floodgate complexes (see following description of floodgate tiers) that include a total of 89 individual tidegates and 3 floodgates (Table 4-2). There are also 18 tier 2 and 3 floodgate complexes that include a total of 29 individual floodgates (Table 2-2).

For the purpose of this Agreement and on behalf of the participating Districts, as determined by signature to this Agreement, WWAA agrees to support the conversion of a maximum of 2,700 acres of land base within the Coverage Area to estuary habitat consistent with the stated smolt production goals and objectives of the Federally approved Skagit Chinook Recovery Plan. The habitat credit determination process used in this Agreement is intended to be applied solely to the implementation of this Agreement, and was developed, through the mutual participation of the parties to this Agreement to address

the 2,700 acre estuarine restoration target and the maintenance needs of the drainage infrastructure covered through this Implementation Agreement.

The habitat credits for floodgate maintenance are based upon a three-tier classification. Tier 1 includes floodgates with a marine and fresh water connection and fish occurrence. Tier 2 includes floodgates with a fresh water to fresh water connection, with fish occurrence and are operated to improve water quality in fish bearing waters. Tier 3 includes floodgates located on non-fish bearing waters. Tier 1 floodgates are treated, for habitat credit purposes, identical to tidegates. Tier 2 floodgates do not require habitat credit for maintenance actions as they are operated for water quality improvement in fish bearing waters and as such provide sufficient conservation measures for maintenance actions. Tier 3 floodgates do not interface with fish bearing waters and therefore do not require habitat credits for maintenance actions. These tier 2 and 3 floodgates are included within this Agreement as they are likely to require federal permits for maintenance actions.

Three habitat restoration projects involving agricultural lands, Smokehouse-Fornsby 1, Mill Town, and South Fork Dike Set-back have been completed. These three projects were identified in the Skagit Chinook Recovery Plan and will be accepted as projects contributing to meeting the goal of 2,700 acres of estuary habitat restoration. The Parties to this Agreement concur that these three projects will reduce the 2,700 acre goal by 313.5 acres, but are not eligible for tidegate and tier 1 floodgate habitat credit (see below for habitat crediting details) because each of these projects was completed prior to the adoption of this Agreement.

To determine the number of estuary restoration habitat credits needed to complete each tidegate or tier 1 floodgate maintenance action, the following methodology was used (summarized in Table 4-1): the total acreage of the three completed projects (313.5 acres) was subtracted from the total estuary restoration acreage goal of 2,700 acres, resulting in a habitat restoration target for this Agreement of 2,386.5 acres. For each of the tidegate and the tier 1 floodgate complexes identified in Tables 2-1 and 2-2 the delta area influenced by the presence of the gate[3] complex was calculated (Table 4-2). The delta area influenced by the presence of the gate complexes is inclusive of the taxing boundary of each District plus additional lands within the legal boundary of the District contributing to the drainage area but not taxed by the District. The delta area influenced by the presence of the tidegate and tier 1 floodgate complexes within each District was totaled for all Districts resulting in a base area calculation of total delta area influenced, 53,131 acres. A ratio of the habitat restoration target (2,386.5 acres) and the base area was calculated and applied to the area influenced by each gate complex which allowed a determination of needed habitat credit acreage per gate complex and consequently for each gate (Table 4-2). For example:

Site Id. 37 Alice Bay: Area influence = 1549 acres X 0.045 [ratio habitat requirement to base area] = 69.6 acres total habitat credit required for this complex. With four gates in the complex the habitat credit required to maintain each gate is 17.4 acres [69.6 / 4].

[3] For this Agreement a "gate" is inclusive of tidegates and floodgates, and includes all components of the structure, inclusive of, but not limited to: door, hinges, nuts, bolts, pins, liner, tube, gaskets, armoring, and embankment or support structure.

Table 4-1. Drainage Area Calculation for Tidegate Maintenance Habitat Credit.

ESTUARY HABITAT RESTORATION TARGET (ACRES)	2700
CREDIT – FORNSBY 1 (ACRES)	62
CREDIT – MILLTOWN (ACRES)	212
CREDIT – SF DIKE SETBACK (ACRES)	39.5
HABITAT RESTORATION TARGET (ACRES)	**2386.5**
BASE AREA – TOTAL DELTA AREA INFLUENCED (ACRES)	53131
RATIO OF RESTORATION TARGET TO BASE AREA INFLUENCED	0.045

Table 4-2. Habitat Requirements per Tidegate and Tier 1 Floodgates.

District	Site Id.	Name/Location Gate Complex	Number of Gates per Complex	Area Influenced by Complex (acres)	Total Habitat Credit Required per Complex (acres)	Habitat Credit per Gate (acres)
5	36	SHROEDER PLACE	1	310	13.9	13.9
5	37	ALICE BAY	4	1549	69.6	17.4
5	40	JOE LEARY SLOUGH (LAND N. SIDE)	1	890	40.0	40.0
5	42	JOE LEARY/D'ARCY ROAD	1	240	10.8	10.8
Total Acres District 5				**2989**		
12[1]	45	NO NAME SLOUGH	1	103	4.6	4.6
12	77	TELEGRAPH SLOUGH/BALL PLACE	2	100	4.5	2.2
12	79	INDIAN @ BEN WELTON	2	80	3.6	1.8
12	80	LITTLE INDIAN SLOUGH/SISSON W	1	54	2.4	2.4
12	81	LITTLE INDIAN SLOUGH/SISSON E	1	40	1.8	1.8
12	95	NO NAME SLOUGH	1	103	4.6	4.6
12	101	LITTLE INDIAN SLOUGH/ERICKSON	1	90	4.0	4.0
12	103	NO NAME SLOUGH	2	207	9.3	4.6
Total Acres District 12				**777**		
14	43	JOE LEARY SLOUGH	12	9824	441.3	36.8
Total Acres District 14				**9824**		
15[2]	3	SULLIVAN SLOUGH BY-PASS	4	11027	495.3	123.8
15	4	SWANSON SLOUGH	1	310	13.9	13.9
15	5	WHITE SLOUGH	1	1200	53.9	53.9
Total Acres District 15				**12537**		

District	Site Id.	Name/Location Gate Complex	Number of Gates per Complex	Area Influenced by Complex (acres)	Total Habitat Credit Required per Complex (acres)	Habitat Credit per Gate (acres)
16[3]	25	SOUTH EDISON	3	1501	67.4	22.5
16	35	HENRY FARM/EDISON SLOUGH	4	1502	67.5	16.9
Total Acres District 16				**3003**		
17	201	BIG DITCH	6	5959	267.7	44.6
Total Acres District 17				**5959**		
18	19	MC ELROY SLOUGH	1	500	22.5	22.5
18	31	NORTH EDISON	2	489	22.0	11.0
18	33	KNUTZEN FARM	1	830	37.3	37.3
Total Acres District 18				**1819**		
19	46	BOAT BASIN TIDEGATE	1	333	15.0	15.0
19	53	HIGGINS SLOUGH/SWINOMISH CHANNEL	1	649	29.2	29.2
19	54	C. KNUTSEN/SWINOMISH CHANNEL	1	329	14.8	14.8
19	60	INDIAN SLOUGH DAM	7	3418	153.5	21.9
19	76	HIGGINS SLOUGH/SWINOMISH CHANNEL	5	3445	154.7	30.9
19	82	LITTLE INDIAN SLOUGH	2	351	15.8	7.9
Total Acres District 19				**8525**		
22	7	RAWLINS ROAD	1	305	13.7	13.7
22	9	HALL SLOUGH	1	524	23.5	23.5
22	10	GENE KING/SKAGIT BAY	1	215	9.7	9.7
22	11	GENE KING/BROWN SLOUGH	1	64	2.9	2.9
22	12	BROWN SLOUGH/SKAGIT BAY	3	0	0.0	0.0
22	13	BROWN SLOUGH/FIR ISLAND RD	1	475	21.3	21.3
22	14	DAVIS SLOUGH	2	2023	90.9	45.4
22	15	DRY SLOUGH	2	865	38.9	19.4
22	16	WILEY SLOUGH	1	124	5.6	5.6
22	17	WILEY SLOUGH	6	2903	130.4	21.7
Total Acres District 22				**7498**		
3	26	FISHER SLOUGH/SKAGIT RIVER FLOODGATES	3	200	9.0	3.0
Total Acres District 3				**200**		
TOTALS[4]			**92**	**53131**	**2386.5**	

Notes:

[1] District 12 area for No Name Slough (total 413 acres) split between gate complexes 45, 95 and 103.

[2] District 15 includes land acquired in 2007 along Swinomish Channel.

[3] District 16 includes land drained in the northwest portion that do not pay taxes because of an easement agreement.

[4] District 25 is not included as all of the drainage is through floodgates into the Samish River.

The total habitat credits required to maintain all of the gate complexes will equal the habitat restoration target of 2,386.5 acres.

To complete maintenance actions the habitat credit per gate shall be utilized in the following manner:

- Minor Repair: 0 habitat credit cost
- Major Repair: ½ habitat credit cost
- Replacement: full habitat credit cost

To complete major repair actions, as defined in Part 4.1.2, one-half of the gate's required habitat credit will be allocated to the repair action. If replacement actions are required for that gate in the future, an additional one-half habitat credit will be allotted to and expended by that gate, for a total of the full habitat credit, and said gate will not require an additional habitat credit withdrawal for any future maintenance action. No more than the habitat credit shown in Table 4-2 shall be required to cover major repair and replacement actions for each individual tidegate or tier 1 floodgate covered by this Agreement.

The resulting habitat credit assigned to each gate, when used for a maintenance action covered by this Agreement, shall remain in effect in perpetuity and will not require any additional credit once assigned, and are not transferable to any other gate.

Habitat credit will only be assigned to a specific tidegate or floodgate. Once assigned, the habitat credit will only be valid for the prescribed maintenance action, as defined in this Agreement, and only for the tidegate or floodgate to which it was assigned. Under no circumstances can the assigned habitat credit be reassigned to another gate after the initially designated gate has been repaired or replaced.

Habitat credit will not be required to permanently remove an existing tidegate or floodgate.

Habitat credit will not be required at the time when a tidegate or tier 1 floodgate is relocated and replaced as a necessary design component of an estuarine habitat restoration project. However, habitat credit will be required to conduct future maintenance on any relocated or replaced gate associated with a habitat restoration project. The habitat credits required for future maintenance actions will be based on the area influenced and habitat credit requirements for the gate complex as shown in Table 4-2 above, regardless of the reduced area influenced by the gate complex, or a change in the number of gates, as a result of the habitat restoration project.

Habitat credit will not be required to implement any of the operational improvement actions identified in section 4.5.2.

4.5.2 OPERATIONAL IMPROVEMENT ACTIONS CREDIT

Tidegate Operational Improvement Credits

In addition to habitat credits that are deposited in the credit "bank" (See Part 4.6.1) as a result of implementing estuarine restoration projects pursuant to Part 4.4.2, habitat credits

can also become available for deposit as the result of the following actions that improve fish passage but do not result in estuary habitat restoration:

- For conventional tidegates or tier 1 floodgates between a natural watercourse and either a managed watercourse with headwaters or a managed watercourse without headwaters (historic watercourse) where a cast iron or steel gate is replaced with an aluminum gate, habitat credits will be deposited in the bank based on the surface area of channel habitat that becomes accessible to juvenile salmonids, multiplied by 5% (assumed increase in juvenile salmonid upstream passage as a consequence of the lighter door).

- For conventional tidegates or tier 1 floodgates between a natural watercourse and either a managed watercourse with headwaters or a managed watercourse without headwaters (historic watercourse) where a cast iron or steel gate is replaced with an fiberglass or plastic gate, habitat credits will be deposited in the bank based on the surface area of channel habitat that becomes accessible to juvenile salmonids, multiplied by 10% (assumed increase in juvenile salmonid upstream passage as a consequence of the lighter door).

- For conventional tidegates or tier 1 floodgates between a natural watercourse and either a managed watercourse with headwaters or a managed watercourse without headwaters (historic watercourse) where a cast iron or steel gate is replaced with a top hinged gate with an internal float, habitat credits will be deposited in the bank based on the surface area of channel habitat that becomes accessible to juvenile salmonids, multiplied by 15% (assumed increase in juvenile salmonid upstream passage as a consequence of the lighter door).

- For conventional tidegates or tier 1 floodgates between a natural watercourse and either a managed watercourse with headwaters or a managed watercourse without headwaters (historic watercourse) where the conventional top hinge gate is replaced with a side hinge gate (Figure 4-1), habitat credits will be deposited in the bank based on the surface area of channel habitat that becomes accessible to juvenile salmonids, multiplied by 20% (assumed increase in juvenile salmonid upstream passage as a consequence of the lighter door).

- For conventional tidegates or tier 1 floodgates between a natural watercourse and either a managed watercourse with headwaters or a managed watercourse without headwaters (historic watercourse) where the conventional top hinge gate is replaced with an SRT, habitat credits will be deposited in the bank based on the surface area of habitat that becomes accessible to juvenile salmonids, adjusted by the % of the time between February 1 and August 1 that the gate is open. An SRT is controlled by floats that can be adjusted to manage the length of time that the tidegate door is open (Figure 4-2). This type of gate allows tidal water to pass upstream of the gate.

As noted above in Section 4.5.1, habitat credit will not be required to implement any of the operational improvements specified above. The operational improvement habitat credits specified above will be available for each tidegate or floodgate for which the operational

improvement is implemented. The operational improvement habitat credits will be calculated based on the surface area of the managed watercourse with headwaters (green) or managed watercourse without headwaters (magenta) upstream of the tidegate or tier 1 floodgate to the next upstream fish passage barrier within the jurisdictional boundary of the District.

For example, Drainage and Irrigation District (DID) 17 maintains tidegate complex 201 in Big Ditch (Managed Watercourse with Headwaters) that includes six tidegates. There is approximately 16.53 acres of channel surface area in Big Ditch upstream of tidegate complex 201 and within the jurisdictional boundary of the District. If DID 17 replaced one conventional tidegate with a side hinge gate, the existing fish passage baseline for the tidegate would be improved by 20% and DID 17 would receive 3.3 acres (16.53 X 0.20) of habitat credits for future maintenance. If DID 17 replaced all 6 conventional tidegates with side hinge gates, the existing fish passage baseline for the tidegates would be improve by 100% and DID 17 would receive 16.53 acres of habitat credits for future maintenance.

In the event a future estuarine restoration project includes the same channel area for which credits were deposited in the habitat bank as a result of replacing a conventional tidegate or tier 1 floodgate with an aluminum gate, fiberglass or plastic gate, side hinge gate or SRT, the area of the channel [previously credited to the bank] will be deducted from the total area of the estuary restoration.

The resulting banked habitat credits for the tidegate and tier 1 floodgate improvement projects will be available only for the District (at the credited complex) that completes the operational improvement action, as identified above. The credit administrator (See Part 4.6.1) will be responsible for tracking the accrual and use of these habitat credits.

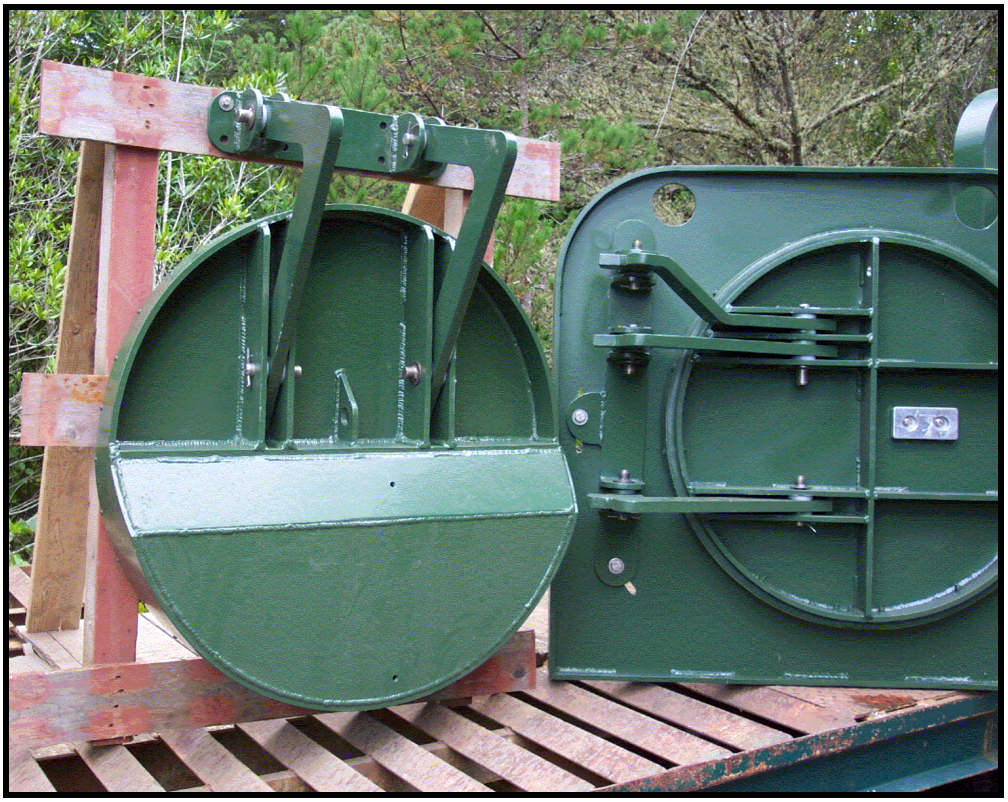


Figure 4-1. Top hinge (left) with internal float gate, and a side hinge (right) gate.

Figure 4-2. McElroy Slough Automatic Regulating Tidegate, "Aberdeen" style gate, open at a -2.7 foot tide event (County owned tidegate complex).

4.5.3 ESTUARY RESTORATION IMPLEMENTATION STEPS AND CREDIT ALLOCATION

Estuarine restoration projects generally occur through the following sequence:

1. Secure landowner permission or agreement.
2. Secure landowner easement or purchase of land.
3. Secure funding for restoration feasibility and/or design.
4. Conduct feasibility assessment and develop permit level design.
5. Complete construction plans sufficient to implement the project restoration design.
6. Secure funding to implement the restoration design.
7. Secure local, state and federal permits necessary to implement the restoration project.
8. Implement the restoration project and site wetted by natural processes.

Credit available from an estuary habitat restoration project, as calculated per 4.5.1 above, will be deposited to the credit bank in the following increments:

1. At completion of Step 1 through 4, (above, regardless of order in which they are completed) one-half of the projects credits shall be deposited, contingent upon WDFW receiving a letter from the affected District supporting the restoration project.

2. At the completion of Step 8, all remaining project credits shall be deposited. At this time, any adjustment to total credits realized by the project shall be made. The adjustment will cover estimations that are either over or under actual project credits that became available at Step 4.

Determination of estuarine habitat restoration project credit status shall be made by the Oversight Committee (See Part 5.2). The local restoration project sponsor will provide a letter to the Oversight Committee stating that the project has completed Step 4 or Step 8 (as defined above). When a project is confirmed to have achieved either Step 4 or Step 8 the Oversight Committee will notify the Credit Administrator (See Part 5.1) to deposit the appropriate habitat credits.

If it is determined by any party to this Agreement that an estuarine habitat restoration project that has received partial credit at Step 4 will not proceed to Steps 5 through 8, that party shall report such findings to the Oversight Committee and the Credit Administrator. The Oversight Committee will confirm with the habitat restoration project sponsors that the project will not be completed and will notify the Credit Administrator accordingly. This notification will result in the Credit Administrator removing the previously banked credit for this project if the land is returned to agricultural production. If this results in a negative credit balance, the Credit Administrator shall notify all parties to this Agreement immediately and in all circumstances not more than 5 working days from the date of notification by the Oversight Committee. If the land is not returned to agricultural production the credit banked through Step 4 completion (one-half of the total project credit) will remain in the bank.

4.5.4 CREDIT FOR EXISTING ESTUARY RESTORATION PROJECTS

Existing Qualifying projects

Five existing estuarine habitat restoration projects have been identified and considered as eligible sources for available habitat credits (Fornsby 1, Mill Town, South Fork Dike Setback, Fisher Slough, and Wiley Slough). The Fornsby 1, Milltown Island and South Fork Dike Setback restoration projects have completed the eight-step restoration sequence listed above in Part 4.5.3, and credit will be applied as discussed in Part 4.5.1. As of June 1, 2007 the Fisher Slough project is at Step 5, and the Wiley Slough project is at Step 6.

The Fisher Slough restoration project will result in 68 acres of habitat credits. One-half of these credits (34) will be made available to the habitat bank at inception of the bank, contingent upon WDFW receiving a letter from Diking District 3 supporting the proposed Fisher Slough restoration project. The Wiley Slough restoration project will result in 160 acres of habitat credit. One-half of these credits (80) will be made available to the habitat bank at inception of the bank, contingent upon WDFW receiving a letter from Consolidated Diking District 22 supporting the proposed Wiley Slough restoration project. The habitat bank balance, at its inception, will total 114 habitat credit acres, contingent upon WDFW receiving letters of support as stipulated.

4.6 Credit Banking and Use Process

4.6.1 CREDIT BANKING PROCESS

Within the context of this Agreement, habitat credits will be deposited in the maintenance bank following the sequence detailed in Parts 4.5.2 and 4.5.3. Additionally, the Parties agree that credit will be deposited for the Fisher Slough and Wiley Slough restoration projects, as determined in Part 4.5.4.

Credit Administrator and Responsibilities

The Credit Administrator shall not assign any of its duties or responsibilities to another party without approval of all signatories to this Agreement.

The Credit Administrator will be responsible for maintaining an accounting of credit deposits and credit assignments. The entity will maintain, adjust and update credits as information is provided on habitat restoration projects from the Oversight Committee. This shall include the initial project deposit at Step 4 of the project implementation sequence and the final project deposit, with adjustments as required, at Step 8 of the project implementation sequence.

Upon notification by the Oversight Committee that a project will not proceed beyond Step 4 of the project implementation sequence, the Credit Administrator shall remove the previously banked credit for this project if the land is returned to agricultural production. The Credit Administrator will notify all signatory parties to this Agreement of any credit

removal or negative credit balance within five working days of the notification from the Oversight Committee.

The Credit Administrator shall be responsible for processing credit requests by the Districts. The Credit Administrator will review the submitted Request for Credit form (Appendix C), to ensure it is complete and appropriately authorized. The Credit Administrator will determine if the requested credit amount conforms to the procedures outlined in this Agreement. Once review is complete, the Credit Administrator will notify the involved District of approval or denial of the credit request.

Below is a summary of the responsibilities of the Credit Administrator:

Information Tracking Responsibilities:
- Maintain a database of estuarine habitat restoration projects credits
- Maintain a database for all operational improvement credits
- Maintain a database of infrastructure, as identified in Tables 2-1 and 2-2,
    - Assign an identification number to each gate, including the site identification number that is currently established
    - Photo document, with date, each gate and maintain a current status of each gate
    - Maintain status of credit use for each gate
- The Credit Administrator shall maintain copies of all submitted, approved and denied Requests for Credit forms

Reporting Protocols
- Prepare Oversight Committee meeting minutes and distribute to WDOE, Corps and other interested parties upon request
- Annual reports shall contain, at a minimum, the following information:
    - Summary of credits deposited, by estuary habitat project
    - Summary of tidegate operation improvement actions detailing; gate number, District and action
    - Current credit balance
    - Credits utilized by District, with identification number for each gate
    - Log of all credits utilized

Agency Coordination
- Provide information to WDOE, Corps and any signatory agency upon request

Credit Administrator Dissolution or Transfer Protocols

If it is determined that the Credit Administrator is no longer able to perform the responsibilities identified within this section, a new entity will be identified by the Oversight Committee. Selection of a new Credit Administrator will require mutual consent of all signatories to this Agreement.

Prior to dissolution of the existing Credit Administrator, all documents and electronic files will be transferred to a party designated by the Oversight Committee. At the inception of a

new Credit Administrator, the designated party will transfer all documents and electronic files to the newly identified Credit Administrator.

4.6.2 CREDIT USE PROCESS

To utilize credit, a District will prepare and submit a Request for Credit form (Appendix C). Within five working days of receipt of the Request for Credit form, the Credit Administrator will notify, in writing, the applying District as to the approval or denial of credit. The Credit Administrator may request additional or clarifying information, and will make every attempt to obtain the required information and complete the request within the five-day timeframe. Fax copies of the approved Request for Credit shall be provided to the requesting party and the appropriate District Commissioner.

PART 5: ADMINISTRATION AND MANAGEMENT

5.1 Credit Administrator

For purposes of satisfying the requirement for habitat credit administration, the parties to the preparation of this Implementation Agreement designate the following organization to administer the terms and conditions of this Agreement relating to the management, accrual, distribution and tracking of project credits:

Entity: Western Washington Agricultural Association

Contact: Mike Shelby, Executive Director

The WWAA is a 501(c) 5 non-profit association participating on behalf of the agricultural drainage interests of the Drainage, Irrigation, and Diking Districts located within the Skagit and Samish River deltas. For purposes of this Agreement, WWAA is representing the interests of the participating Districts in negotiations and interactions with federal, state and local regulatory agencies for the development of a delta-wide landscape approach for federal, state and local regulatory review and permitting of tidegate and floodgate maintenance actions.

The above entity shall be responsible for the management, assigning, tracking and reporting of credits to the Oversight Committee as stipulated elsewhere within this Agreement.

5.2 Oversight Committee

5.2.1 PURPOSE

The purposes of the Oversight Committee are to: 1) provide direction and coordination for implementation of the Skagit Delta Tidegates and Fish Initiative – Implementation Agreement, 2) determination of eligibility for project credits; and 3) supervision of the Credit Administrator activities.

The Oversight Committee shall be composed of a representative from:

- Washington Department of Fish and Wildlife
- National Marine Fisheries Service
- Two District Commissioners, from separate Districts, to be selected by the duly elected Commissioners of all Districts signatory to this Agreement
- Western Washington Agricultural Association
- Invited party: a Tribal representative, to be determined by the Tribal communities of the Skagit area

The Oversight Committee will convene within thirty (30) days of the Agreement being signed by the principal parties (WDFW, NMFS, USFWS and WWAA). The Oversight Committee shall function under the facilitation of NMFS's Office of Law Enforcement (OLE).

The Oversight Committee will meet as needed, at least quarterly, in the first year of organization and then at least semi-annually thereafter. At the time NMFS OLE is no longer able to perform duties as facilitator the Oversight Committee will select a new facilitator.

5.2.2 ROLES AND RESPONSIBILITIES

Project Review and Crediting Process

The Oversight Committee will review proposed estuary restoration projects to determine their eligibility for contribution to the estuary habitat restoration goal of this Implementation Agreement, as outlined in sections 4.4.2, 4.5.1, 4.5.2, 4.5.3, 4.5.4. and 4.6.1 of this Agreement. The Oversight Committee will conduct a project review to verify that a proposed restoration project meets the conditions of this Implementation Agreement, and will complete a checklist (Appendix D) presenting the findings and conclusions of that review. The decision of the Oversight Committee will be forwarded to the party requesting the project credit.

The Oversight Committee will seek review by an outside technical committee, such as the Skagit Watershed Council's Restoration and Protection Committee, to verify that new projects (as defined in Part 4.4.2 of this Agreement) are consistent with the goals and objectives of the Skagit Chinook Recovery Plan.

The Oversight Committee has the sole authority to determine project credit eligibility and the appropriate project credit or partial credit deposits and withdrawals for tidegate maintenance. When a project is confirmed by the Oversight Committee to be eligible for Implementation Agreement credits the Oversight Committee will notify the Credit Administrator to deposit the appropriate credits.

Upon notification to the Oversight Committee that a previously credited project will not proceed, the Oversight Committee is responsible for decertifying the credits. The Oversight Committee has sole authority to direct the Credit Administrator regarding removal of currently banked credits.

5.2.3 MANAGEMENT AND SUPERVISION

The Oversight Committee will supervise the Credit Administrator activities related to management, assigning, tracking, reporting and accounting of credit deposits and credit assignments approved by the Oversight Committee as outlined in Parts 4.6.1 and 4.6.2. If the Credit Administrator designated in the Implementation Agreement is no longer able to perform his/her assigned duties a new entity, from within the Implementation Agreement signatory parties, will be selected by the Oversight Committee to assume the Credit Administrator duties. Selection of a new Credit Administrator will require mutual consent of all signatories to the Implementation Agreement.

The Oversight Committee will review and approve reports prepared by the Credit Administrator.

The Oversight Committee is responsible for the evaluation of the Implementation Agreement activities, and for the consideration and discussion of any proposed changes to the Agreement. The Oversight Committee will develop recommendations regarding any substantive proposed changes to the Implementation Agreement for consideration by the signatories to the Implementation Agreement. Proposed changes to this Agreement, such as inclusion of undefined maintenance actions or technology improvements that may impact aquatic habitat, or changes to the function of the Oversight Committee will be submitted in letter format to the Oversight Committee for review to determine if the change deviates from the regulatory intent established through this Agreement. If the change in question is determined to constitute a deviation from the form and substance of this Agreement, a meeting of all signatory parties will be held to discuss required actions to address the proposed change. The Oversight Committee shall coordinate with the Credit Administrator to notify signatory parties of any meeting or function to be convened for the purpose of revising or amending provisions of this Agreement. Notification shall be by mail or e-mail and an acknowledgement of receipt of notification from all signatory parties to this Agreement must be received by the Credit Administrator. Any proposed change that does not affect the intent of this Agreement will be included as an Addendum to the Agreement and provided to all signatory parties to this Agreement.

The Oversight Committee will convene reviews of the Implementation Agreement at 5-year intervals to review and evaluate the status of the Agreement. The Oversight Committee will conduct, as a part of the review, a survey of the signatories to the Implementation Agreement, along with other affected and interested parties, as identified by the Oversight Committee, for the purpose of evaluating the effectiveness of the Implementation Agreement, verify that the process if functioning as planned and that restoration projects are occurring and progress is being made in working towards the restoration goal.

5.2.4 OPERATING PROCESS

The Oversight Committee will convene the first management meeting within thirty days of the Implementation Agreement being signed. The first order of business will be to establish operating and decision-making procedures for implementing the Oversights Committee's responsibilities under this Implementation Agreement.

The Oversight Committee will meet at least quarterly in the first year of organization and then at least semi-annually thereafter.

The Oversight Committee shall function under the facilitation of NMFS's OLE. The Oversight Committee will select, from within the Implementation Agreement signatory parties, a new facilitator for the Oversight Committee should the OLE no longer be able to serve in this capacity.

The Oversight Committee will prepare written committee meeting minutes and distribute to committee members, other signatories to the Implementation Agreement, the WDOE, Corps, and other interested parties upon request.

5.3 Conditions

This Agreement does not in any manner alter or abrogate the statutory authorities and responsibilities of the signatory Parties. It is not intended, nor may it be relied upon, to create any rights in third parties enforceable in litigation with the United States or the State of Washington. This Implementation Agreement does not, in and of itself authorize, nor shall it be construed to permit any maintenance action describe herein.

5.4 Funding

It is anticipated that the parties to the Implementation Agreement will, in good faith and with due diligence, work to identify, develop and secure the necessary funding to implement the full terms and conditions of this Agreement. Each party to this Agreement shall fully support authorizations and appropriations of public funds, as well as efforts to obtain non-public funds for the implementation of the Agreement.

The Oversight Committee is responsible for the development and adoption of an initial work plan and operating budget. The plan and budget will be annually updated and approved by the Oversight Committee.

If the parties to the Implementation Agreement are collectively unable to secure funding to provide for the full implementation of the terms and conditions of the Implementation Agreement; 1) the WWAA can be excused as the Credit Administrator for the Agreement, and 2) the signatory agencies will assume all administrative and management responsibilities to ensure continuation of the Implementation Agreement.

PART 6: DISPUTE RESOLUTION

The Parties to this Agreement recognize that disputes may arise in the course of furthering the purpose and intent of the MOU and this Agreement, as well as in the development and implementation of estuarine restoration projects that will result in accrual and disbursement of credits for tidegate and floodgate maintenance actions. In the event of a dispute, disagreement or emergent issue (e.g. a grievance) involving the provisions of this Agreement, the Parties agree to abide by the following principles and protocols:

1) In all instances, an attempt will first be made to seek resolution at the local level through informal communications.

2) A representative of the concerned/aggrieved Party will initiate a prompt and informal personal communication with each affected Party to convey the substance of the issue and discuss the appropriate course of action for resolution.

3) In the event an issue cannot be resolved informally, the Parties agree to jointly engage and equitably fund the services of a mutually agreed-upon mediator or facilitator to assist in settling the dispute.

4) If resolution is not achieved using the above steps, the Parties shall be free to pursue other courses of formal action but will not proceed with formal action without first assuring full disclosure of the issue and steps taken to each signatory to this Agreement.

5) In the event of an alleged violation of the terms and provisions of a permit issued pertinent to this Agreement, and not withstanding the aforementioned protocols, the Parties recognize the appropriate Federal, state or local regulatory agency with jurisdiction will follow established agency policy and procedures with regards to the investigation and handling of such incidents.

If any action at law or equity, including any action for declaratory relief, is brought to enforce or interpret the provisions of this Agreement, each party to the litigation shall bear its own attorneys' fees and costs of litigation.

PART 7: ESTUARY RESTORATION PROJECT FUNDING CONSIDERATIONS

Execution of this Agreement for purposes of acquiring privately owned lands for estuarine habitat restoration is predicated on the principle and presence of a willing seller and willing buyer, as well as on the availability of funding to complete such transactions in a timely and appropriate manner. The Parties acknowledge and agree that securing funding for restoration projects will be the responsibility of the restoration community, with the support (as defined in Part 4. 4.1) of the signatory Districts.

PART 8: DEFAULT AND SEVERABILITY

This Agreement is effective upon signature by WWAA, NMFS, USFWS and WDFW and shall become effective for each District when signed by the Commissioners of that District. The Agreement will remain in effect until such time as it is dissolved, expires or is otherwise revised by mutual consent. Any Party may terminate their participation under this Agreement thirty days after providing written notice to all other signatory Parties to this Agreement of its intent to do so, at which time the applicable elements, benefits and obligations of this Agreement to said Party will no longer be in effect.

The Parties recognize that each is operating as an independent entity pursuant to the powers, duties and responsibilities vested in each of them under the laws of the State of Washington and/or the United States Code.

This Agreement may be reopened for purposes of review, revision or cancellation at times more frequent than the established intervals due to extenuating circumstances. Examples of such circumstances are:

- Legislative acts altering the substance of this agreement
- Acts of nature
- Decisions of a Court
- Other factors mutually agreed upon (e.g. new technology, equipment, information)
- New information (e.g. changes in biological conditions that may result in damages to fisheries resources) not available during the development of the Implementation Agreement.

No agent, employee, or representative of any Party shall be deemed to be an agent, employee, or representative of any other Party for any purpose relative to this Agreement and each Party is solely and entirely responsible for the acts of its agents and employees during the period this Agreement is in effect.

PART 9: SIGNATORIES TO THE IMPLEMENTATION AGREEMENT

Western Washington Agricultural Association Date
Curtis Johnson, President

NOAA's National Marine Fisheries Service Date
Steven Landino, Washington State Director for Habitat Conservation

Washington Department of Fish and Wildlife Date
Bob Everitt, Regional Director

United States Fish and Wildlife Service Date
Ken Berg, Manager, Western Washington Fish and Wildlife Office

Drainage and Irrigation District 5

District Commissioner Date

District Commissioner Date

District Commissioner Date

Drainage and Irrigation District 14

District Commissioner Date

District Commissioner Date

District Commissioner Date

Drainage and Irrigation District 15

District Commissioner Date

District Commissioner Date

District Commissioner Date

Drainage and Irrigation District 16

District Commissioner Date

District Commissioner Date

District Commissioner Date

Drainage and Irrigation District 17

District Commissioner Date

District Commissioner Date

District Commissioner Date

Drainage and Irrigation District 18

District Commissioner Date

District Commissioner Date

District Commissioner Date

Drainage and Irrigation District 19

District Commissioner Date

District Commissioner Date

District Commissioner Date

Drainage and Irrigation District 22

District Commissioner Date

District Commissioner Date

District Commissioner Date

Drainage and Irrigation District 25

District Commissioner Date

District Commissioner Date

District Commissioner Date

Diking and Drainage District 22

District Commissioner Date

District Commissioner Date

District Commissioner Date

District Commissioner Date

District Commissioner Date

Diking, Drainage and Irrigation District 12

District Commissioner Date

District Commissioner Date

District Commissioner Date

Diking District 3

District Commissioner Date

District Commissioner Date

District Commissioner Date

APPENDIX A - WATERCOURSE DESCRIPTIONS

The following definitions apply to those watercourses occurring within the Coverage Area (See Figure 2.2 below)**,** consistent with the aforementioned MOU and as further identified within the Skagit Tidegates and Fish Initiative Implementation Agreement:

Natural Watercourses *(Color Code: Blue)***:** Watercourses with headwaters that follow and/or replace a historic natural watercourse that has been altered, channelized, relocated, and/or constrained by dikes and that do not have flow control structures (tidegates, pump stations) at their confluence with marine waters. Also includes the marine waters. *(Examples: Skagit River, Samish River, Skagit Bay, Swinomish Channel, Padilla Bay, Samish Bay)*

Managed Watercourses with Headwaters *(Color Code: Green)***:** Watercourses with headwaters that follow and/or replace a historic natural watercourse that has been significantly channelized, relocated, and/or constrained by dikes and that have flow control structures (tidegates, pump stations) at their confluence with marine waters. *(Examples: Edison Slough, No Name Slough, Big Indian Slough, Big Ditch, Hill Ditch)*

Managed Watercourses without Headwaters *(Color Code: Magenta)***:** Watercourses without headwaters that follow and/or replace a historic natural watercourse that has been significantly channelized, relocated and/or constrained by dikes and that have flow control structures (tidegates, pump stations) at their confluence with marine waters. *(Examples: Wiley Slough, Dry Slough, Brown Slough, Hall Slough, Dodge Slough, Sullivan Slough, Joe Leary Slough)*

Artificial Watercourses *(Color Code: Yellow)***:** Watercourses without headwaters that are wholly built by humans and that do not follow or replace a historic natural watercourse, and are designed to convey water from local surface areas or subsurface drains for the purpose of removing excess water in order to improve conditions for agriculture.

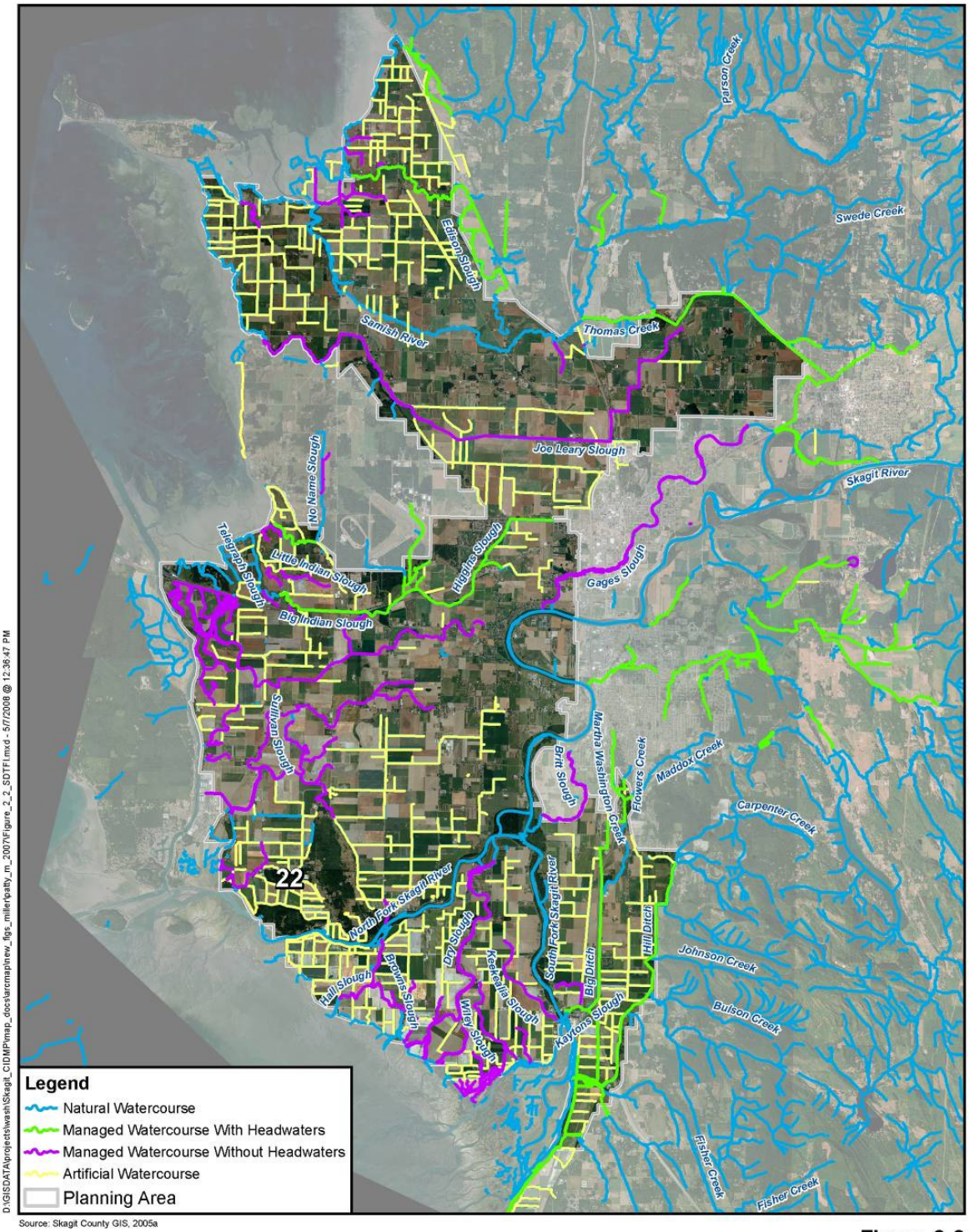


Figure 2-2
Watercourses in the Coverage Area by Classification

Skagit Delta Tidegates and Fish Initiative - Implementation Agreement May 2008

BIG DITCH (*Green*)
The Big Ditch drainage system was created between 1910 and 1945. The drainage watercourse is at a lower elevation than Fisher Slough, and as a result, it is routed underneath the slough in a siphon culvert. Big Ditch continues south from this siphon culvert for approximately 4 miles before entering Skagit Bay (TNC, 2005). Much of the lower Maddox system is used as agricultural land. Ditches have replaced the original system and this reach is referred to as the "Big Ditch". The lower reach of Maddox Creek was relocated from its historic channel on the east side of I-5 to the west side of I-5. The creek in this area is a man-made channel that flows through commercial developments and along the county road. The substrate in this reach is composed of fine-grained material, silts, and quarry spawls (WDFW, 2005).

BRITT SLOUGH
Britt Slough is a former freshwater channel that has been significantly changed by disconnection from the mainstem and through residential development (Tetra Tech, 2002). Currently, the upstream end of the slough has been filled in and is now the location of a wastewater treatment plant for the City of Mount Vernon. Over 20 habitat breaks occur within the slough where road crossings or driveways have been built. Many of these crossings have small culverts, sized to contain only localized runoff; it is likely that these culverts would be fish passage barriers if fish were allowed to access the slough. At the downstream end, the slough is crossed by a levee running parallel to the mainstem Skagit River. Beneath this levee are culverts controlled with flap gates, which open with sufficient hydraulic pressure and allow flood flows to drain into the river. A pump station is also present that pumps water downstream when it reaches a specified elevation (Tetra Tech, 2002).

BROWN SLOUGH (*Magenta)*
This slough is a former distributary channel of the Skagit River within the tidal zone of Skagit Bay. Browns Slough and Hall Slough were formerly connected, but are now physically separated by farmland; however, some amount of water from Hall Slough eventually discharges into Browns Slough. There is a tidegate beneath Fir Island Road which allows only freshwater flow downstream. Approximately 1,000 feet downstream of Fir Island Road is a cross levee constructed after the 1990 floods, and a water control gate is present beneath this levee. The opening allows tidal exchange up to Fir Island Road, and allows freshwater flow toward Skagit Bay during high flow events. Adjacent land uses are agricultural fields on both banks and residences at Fir Island Road. There are approximately six culverts or other crossings along the slough's entire length and a levee cuts off the slough near the North Fork Skagit River (Tetra Tech, 2002). The left bank levee has a long portion of riprap placed during construction of the cross levee.
This slough is used by juvenile salmonids for rearing, both upstream and downstream of the cross levee, and has been monitored by the Skagit Co-op. Salmon are not present upstream of the tidegate at Fir Island Road. The water is visually stagnant and very turbid even though fresh water is discharged through the tidegate during low tide. Investigations by the Skagit Co-op found water quality to be generally acceptable, although temperatures frequently exceeded state water quality standards (more than 19°C) in spite of the tidal influence. An additional agricultural ditch drains into the slough upstream of the cross levee from the right bank via a tidegate. Very few pieces of LWD are present in the

channel or marsh areas upstream of the cross levee (Tetra Tech, 2002). Vegetation varies from salt marsh to brackish/freshwater marsh and there is a very limited riparian zone. There is no buffer along the right bank. A narrow riparian zone exists along the left bank levee (Tetra Tech, 2002). High pH readings (9.2 to 9.4) have been documented in Browns Slough, with higher pH samples toward the bay.

DAVIS SLOUGH (*Magenta)*
No information was available to describe the condition of Davis Slough.

DRY SLOUGH *(Magenta)*
Dry Slough has been identified as the remnant of the Middle Fork of the Skagit River and is thought to have functioned as a major distributary channel. The upstream end begins near the North Fork Skagit River (isolated by a levee) and runs through Fir Island and then through a tidegate at a second levee along Skagit Bay near the mouth of the slough. Dry Slough has two tidegates which allow only freshwater outflow to Skagit Bay. From the North Fork Skagit River to the Skagit Bay levee, Dry Slough is primarily a cattail wetland that appears to be significantly higher in elevation than either of the Skagit River forks, with very few areas of standing water. Many locations have little to no riparian buffer and are located directly adjacent to agricultural fields. Organic enriched mud and silt are the dominant substrate types for this slough, and surrounding soils are primarily silt loam and fine sandy loams. Water is relatively clear, but many aquatic macrophytes are seasonally present. Agricultural land and residential homes surround the entire length of the slough. A minimum of 10 road crossings are present, which are fish passage barriers (Tetra Tech, 2002).

EDISON SLOUGH *(Green)*
Edison Slough was once the North Fork Samish River, but construction of dikes has disconnected it from the Samish River (Phinney and Williams, 1975). It is now used for irrigation water with a tidegate controlling saltwater intrusion. There is a self regulating tidegate (SRT) at the tidegate complex at the Town of Edison that allows tidal inundation upstream of the tidegate complex. Skagit County is currently upgrading the design of this tidegate. Edison Slough is also part of the extensive floodplain area of the lower Samish River. Much of this habitat has been developed into farms and residences. Extensive diking exists along the lower 1.3 miles of Edison Slough. The shoreline near Edison Slough has extensive (greater than 30 percent by miles) shoreline modifications. The primary shoreline modifications near the Samish River Delta are riprap followed by landfill (dikes).

FISHER SLOUGH *(Blue)* HILL DITCH *(Green)*
Hill Ditch receives flow from three tributaries: Carpenter, Big Fisher, and Little Fisher Creeks. The confluence of the tributaries and Fisher Slough is confined by dikes, is subject to increased sedimentation, has an elevated streambed that increases flooding on farm land, and is subject to high storm flow energies that scour the instream habitat and threaten dike integrity. Fisher Slough is straightened and constrained by dikes, with limited channel habitat and tidal wetland (TNC, 2005). A small amount of forest/scrub-shrub wetland is present. Approximately 8 percent of the channel edge has riparian forest. The mouth of

Fisher Slough has a floodgate that is seasonally operated to restrict Skagit River storm flow while allowing relatively natural tidal flow.

HALL SLOUGH *(Magenta)*
Although historically Hall and Browns Sloughs were once connected, they are now separated by a strip of agricultural land. The downstream area is a tidal salt marsh slough constrained on both sides by levees. A levee crosses the slough immediately downstream of Maupin Road. A tidegate, designed to allow only freshwater outflow, is present beneath this levee. However, the tidegate is reported as inoperable due to silt accumulation on the saltwater side of the gate, as well as a large log jam (Tetra Tech, 2002). Given the interconnectivity of the interior drainage ditches, the water eventually flows to Browns Slough for discharge to Skagit Bay. There is also a pump station at Maupin Road, which can be activated to pump fresh water out from behind the gate to handle excessive flows.
In Hall Slough, the estuarine scrub-shrub has been extremely impacted, with an estimated loss of 93 percent (Tetra Tech, 2002).

HIGGINS SLOUGH *(Magenta)*
No information was available to describe the condition of Higgins Slough.

INDIAN SLOUGH *(determination pending)*
Indian Slough is a former blind tidal channel from Padilla Bay that also drained localized runoff from the surrounding wetlands. There are two branches of Indian Slough: Big Indian and Little Indian Slough (south and north branches, respectively). Currently, Indian Slough is tidal-influenced up to Bayview-Edison Road on both branches. Tidegates are present at the Bayview-Edison Road crossings, which prevent tidal inundation upstream. Impoundment of freshwater outflow does occur during high tides. A pump station is present at the Big Indian Slough crossing (Tetra Tech, 2002).
West of Bayview-Edison Road the slough has a fine silty mud substrate. Marsh and channel width varies from approximately 70 to 100 feet. West of the road the slough has good channel sinuosity, although further meandering is constrained by levees. East of Bayview-Edison Road, the channel becomes trapezoidal in shape, with no tidal influence or riparian habitat present. Levees are present along Big Indian Slough upstream of Bayview-Edison Road to the railroad crossing, where it then turns into a narrow ditch at the railroad and runs east-west immediately adjacent to the railroad line (Tetra Tech, 2002).

Big Indian Slough is the second largest watercourse draining into Padilla Bay, and has one of the most degraded riparian conditions within the Padilla Bay drainages. Elevated water temperatures and low dissolved oxygen levels have been reported. The low dissolved oxygen levels have been recorded during storm events as well as during some low flows. Levels of metals were generally good in 1993, but turbidity was very high, ranging from 15 to 65 NTU.

JOE LEARY SLOUGH *(Magenta)*
Historically, this slough was one of two major drainage channels for the large Olympia Marsh wetland complex (the other major drainage was the Samish River). It may also have periodically been a flood channel for the Skagit River. Currently, tidal influence extends up to a levee crossing with tidegates about 500 feet downstream of Bayview-Edison Road.

At the levee crossing there are 12 culverts with tidegates that only allow freshwater outflow (Tetra Tech, 2002).

Joe Leary Slough is the largest watercourse in the Padilla Bay Watershed. This slough flows through tilled cropland, and many of its tributaries are ditches that drain farmland. The lower reaches are constrained by dikes, and the slough has tidegates with a storage channel behind the gates. Water quality is reported to be of concern. The slough is on the 303(d) List for warm water temperatures and low dissolved oxygen levels. The dissolved oxygen levels have been consistently below the state standard in both high and low flow conditions. In addition, nutrient (nitrogen and phosphorus) levels are high during low flow conditions, while ammonia levels are elevated in high flows.

Elevated suspended sediments are reported in winter and early spring with the worst areas coming from farmland without crop cover and where V-ditches drain fields. The turbidity standard of 5 NTU was greatly exceeded with a range of 23 to 99 NTU, with the mean turbidity in Joe Leary Slough higher than in other Puget Sound streams. In the 1993 monitoring, exceedances of metals occurred during high flows. In the late 1980s, elevated polycyclic aromatic hydrocarbon (PAH) levels were measured in sediments at the mouth of Joe Leary Slough. The water in Joe Leary Slough often appears rust colored; this condition is unique to this watercourse and is likely caused by suspended or dissolved constituents such as iron or manganese, or naturally occurring organic components such as tannins or lignins. Joe Leary Slough has degraded riparian conditions. There is very little riparian vegetation; a small forested patch exists on the left bank just upstream of the Bayview-Edison Road crossing (Tetra Tech, 2002).

KAYTON'S SLOUGH *(Green)*
This watercourse is the portion of Big Ditch from the culvert under Conway Road to the pump station north and west of the Town of Conway (WDFW, 2005). This slough is bordered by agricultural land on the north and residential and commercial development on the south. The channel has been straightened and riparian vegetation is absent. Limited rearing may occur within this watercourse.

LITTLE INDIAN SLOUGH *(Magenta)*
Little Indian Slough is more tightly confined by levees. East of Bayview-Edison Road the slough becomes trapezoidal in shape, with no tidal influence or riparian habitat present. Little Indian Slough has no levees east of the road, although it is highly channelized and has steep slopes (Tetra Tech, 2002).

MCELROY SLOUGH *(Yellow)*
Near Samish Bay.

NO NAME SLOUGH *(Green)*
It is likely that this slough has always been the outlet for a small creek feeding into it from the adjacent hillslope (Bay View Ridge). There is a tidegate and pump station located at the mouth of the slough at Padilla Bay, which is crossed by a dike (Tetra Tech, 2002). These discharge water on low tides and store water on high tides, creating a more distinct boundary between fresh water and salt water (Smith, 2003). There is some brackish water

influence for a short distance upstream of the dike, although the fresh water is primarily backed up during high tides. Fish can access the slough during low and medium tides, but not while water is being pumped out. Adult coho salmon have been observed spawning in the slough (Tetra Tech, 2002). Riparian vegetation west of Bayview-Edison Road is limited to less than 25 feet in most locations and is comprised of shrubs and herbs, with no mature trees. The east side runs through agricultural land as well and has limited riparian habitat, primarily comprised of non-native vegetation such as reed canary grass and blackberries (Tetra Tech, 2002). The slough is listed for low dissolved oxygen with recorded violations during high flow conditions.

SULLIVAN SLOUGH *(Magenta)*
Historically, Sullivan Slough was a large tidal channel from Skagit Bay with several branches that also drained a large wetland area to the west of the North Fork of the Skagit River. The slough exists in its historic alignment from Skagit Bay up to the Chilberg Road crossing, and then exists as agricultural ditches and a constructed spur channel with an outlet to the Swinomish Channel. Tidal influence extends up to Chilberg Road on the main channel, while on the spur channel, tidal influence ends at the first road crossing (approximately 500 feet). South of Chilberg Road, Sullivan Slough is comprised of a braided channel system, which runs through an approximately 500-foot-wide brackish and salt marsh habitat constrained on both sides by levees and surrounded by agricultural land. The area is a mosaic of salt and freshwater, riparian, and upland habitats. A narrow riparian zone has become established on the levees. The diversity of vegetation is high and generally dominated by native species, and communities' transition from riparian to brackish marsh to saltwater marsh habitat. Since the construction of the jetty between the Swinomish Channel and the North Fork Skagit River, Sullivan Slough has apparently been filling in with sediment (Tetra Tech, 2002). As delta accretion continues, much of what was formerly intertidal mudflat or shallow subtidal habitat is now transitioning to vegetated salt marsh. Numerous pieces of LWD are present, many of them fallen cottonwoods from the adjacent riparian zone (Tetra Tech, 2002).

SWANSON SLOUGH (*Magenta)*
Swanson Slough is a historic watercourse located on the Swinomish Channel.

SWINOMISH CHANNEL *(Blue)*
The Swinomish Channel is greatly impacted by shoreline modifications. Most of the segments along the channel have been altered by riprap, landfill (dikes), or bulkheads. A lack of riparian vegetation occurs and much of the Swinomish Channel has less than 10 percent overhanging riparian vegetation. Patchy eelgrass beds have been documented in the channel, particularly on the west bank.

A proposed project to improve the hydraulic connection between the North Fork Skagit River and the Swinomish Channel would involve removing a portion of the existing jetty. This would improve fish passage and encourage more utilization of estuarine habitat in Padilla Bay by juvenile Chinook salmon. This project is included in the Skagit Chinook Recovery Plan (SRSC and WDFW, 2005).

TELEGRAPH SLOUGH *(Magenta)*
Telegraph Slough is part of a historically large blind channel system (including Blind Slough and lower Higgins Slough) from Padilla Bay that may have occasionally received flood overflows from the Skagit River, and also received drainage from freshwater wetlands. Currently, this system has some connectivity with the Swinomish Channel, but not from Padilla Bay. Levees are present on the left and right banks throughout much of the system, but are old and generally overgrown with shrubs and trees. Fully functional tidegates are present at the confluence of the slough with the Swinomish Channel (Tetra Tech, 2002). A tidal channel is present throughout Telegraph Slough, ending in high salt marsh immediately south of Highway 20. The slough is a mosaic of upland, riparian, and marsh habitats. In the lower marsh areas, braided channels of silt/mud substrate are present, and become more defined and larger with less vegetation as they near the Swinomish Channel. The water that does not drain entirely out of the slough is highly turbid with extensive algae growth on the surface (Tetra Tech, 2002).

WHITE SLOUGH *(Magenta)*
White Slough is a historic watercourse located on the Swinomish Channel.

WILEY SLOUGH *(Magenta)*
Wiley Slough is located in the southern portion of the Skagit River Delta along the northern bank of Freshwater Slough. A major portion of this slough and surrounding lands under the ownership of WDFW are the subjects of a restoration project. The project area originally had an extensive and complex network of tidal slough channels. To a lesser extent, relic channels remain today. The area has been disconnected from tidal exchange with Freshwater Slough and Skagit Bay for approximately 45 years (since the dikes were constructed sometime between 1956 and 1965). This has precluded the accumulation of suspended sediments delivered from the neighboring tidal mudflats and Freshwater Slough, and has limited the accumulation of fine sediments and organic materials associated with tidal marsh vegetation (Hinton et al., 2005).

As recently as 1956, the levee system was expanded to isolate the Wiley Slough project area from the key processes of riverine and tidal flooding, thereby altering hydrology, sediment transport and storage, detritus accumulation, vegetative growth, and use by aquatic species. This isolation occurred after transfer of the property from the USFWS to the State Department of Game (Hinton et al., 2005). The loss of riverine and tidal flooding had a crucial effect on the formation and maintenance of a variety of estuarine habitat conditions. For example, construction of the Wiley Slough levee has resulted in direct loss of about 16 acres of tidal channel habitat and approximately 160 acres of intertidal marsh habitat. There have been additional off-site impacts because of dike construction: 20 acres of intertidal channel habitat have been lost seaward of the dikes due to sediment deposition resulting from loss of tidal prism landward of the dikes (Hood, 2004).

The management directive for these lands was that they were to be used for the benefit of waterfowl. Early land managers chose to convert this site for active management of cereal grains to attract and hold waterfowl for increased hunting opportunities. To allow the production of cereal grains, the site had to first be drained and converted to tillable soil. As with most of Fir Island, this conversion required construction of a levee to protect the site

from tidal influence. This conversion appears to have started with construction of a central "training dike" along Wiley Slough proper. This spur dike was primarily intended to improve agricultural drainage for existing farmlands to the north, and may have been necessary to address drainage infrastructure requirements prior to the extension of the levee system to include the Wiley Slough site. Levee construction resulted in the enclosure and isolation from tidal influence of 160 acres of tidal marsh and 16.3 acres of tidal channel, and in elimination of channel usage by juvenile salmon. Inside the dikes, the smaller tidal channels were entirely filled in, plowed over, and assimilated into agricultural fields. The larger tidal channels, including Wiley Slough, have accumulated sediments from farmland erosion and become narrower and shallower than they were historically (Hinton et al., 2005). Tidal channels seaward of the dikes were also impacted by dike construction. Net channel loss outside the Wiley Slough dikes has amounted to 20.5 acres since dike construction. This is due to sediment accumulation in the tidal channels, which lost flushing volume as a result of upstream diking (Hood, 2004). Current data indicate that juvenile Chinook, coho, and chum utilize the Wiley Slough area (Hinton et al., 2005). Salmonids are almost completely absent above the Wiley Slough tidegate, while juvenile salmon were found just downstream of the tidegate and in adjacent sloughs. Species richness below the tidegate and in the vicinity around Wiley Slough is approximately 10 to 12 species, including salmonids, smelt, sculpin, flatfish, and others (Hinton et al., 2005). Upstream of the tidegate in Wiley Slough only stickleback and one Chinook salmon and one coho salmon were captured in recent surveys (Hinton et al., 2005).

The foremost goal of the Wiley Slough restoration project is to restore natural processes, conditions, functions, and biological responses to the project area (approximately 175 acres) by removing dikes to restore riverine and tidal flooding to the project area. Restoration of natural estuarine processes will result in the restoration of estuarine habitat for a wide variety of fish, wildlife, and other organisms (Hinton et al., 2005)

APPENDIX B - PROTECTED SPECIES AND HABITATS WITHIN THE COVERAGE AREA

B.1 Protected Species

A wide range of protected species occur in Skagit County and within the Districts' boundaries (Table B-1). Of the protected species, bull trout, steelhead trout and Chinook salmon are known to occur within, or are directly associated with certain waterways in the Coverage Area. Actions associated with agricultural practices are most likely to affect these species. Marbled murrelets utilize habitats adjacent to the Coverage Area (marine areas) and therefore may be affected indirectly. The potential is extremely unlikely for impacting marine mammals through the direct effects of agricultural activities that take place within the Coverage Area, but marine mammals may be impacted through indirect effects in adjoining areas.

Table B-1. ESA Protected Species.

Common Name	Scientific Name	Federal Status
Birds		
Marbled murrelet	*Brachyramphus marmoratus*	FT
Fishes		
Bull trout (designated critical habitat)	*Salvelinus confluentus*	FT
Chinook salmon (Puget Sound ESU; designated critical habitat)	*Oncorhynchus tshawytscha*	FT
Puget Sound Steelhead trout DPS	*Oncorhynchus mykiss*	FT
Mammals		
Southern resident killer whales	*Orcinus orca*	FE; Depleted under the Marine Mammal Protection Act

FE = Federally Endangered; FT = Federally Threatened; ESU = Evolutionarily Significant Unit; DPS = Distinct Population Segment

B.2 Estuaries and Nearshore Habitat

The estuarine areas of Padilla Bay, Skagit Bay, Samish Bay, and the Swinomish Channel occur immediately adjacent to the Coverage Area boundary and may be indirectly affected by agricultural actions. An estuarine habitat is defined as a body of water adjacent to fresh water where salt water mixes with fresh water. The upland boundary of estuary habitat can generally be delineated by the dikes at maximum high tide occurrence. Following the convention set forth in the House Bill 1418 Report (Smith and Manary, 2005); the upper extent of the estuarine habitat is equivalent to a 13-foot tide. For the Skagit River, the upper extent of estuarine habitat occurs at the confluence of the North and South Forks.

Estuaries provide a critical transition area between fresh and salt water for anadromous fish species; physiological transitions occur within the estuary. Estuaries serve many functions in the life histories of salmonids by providing habitat for smoltification, rearing, migration, and refuge. Estuaries also contribute greatly to ecological processes such as detritus cycling (Smith and Manary, 2005). Detritus, generated through the decay of plant material, provides a major source of food for small invertebrates. These invertebrates can be a primary food source for many juvenile salmonids and forage fish species (Smith and Manary, 2005).

Nearshore habitat is defined as a marine area distant from major freshwater sources. It serves as the interface between marine and terrestrial habitats (Smith and Manary, 2005). The nearshore habitat adjacent to the Coverage Area occurs in Padilla and Samish Bays. These areas provide important habitat for salmonids, and are also vital as spawning and rearing areas for forage fish species: herring (*Clupea pallasi*), surf smelt (*Hypomesus pretiosus*), sand lance (*Ammodytes hexapterus*), and anchovy (*Engraulis mordax mordax*) (Smith, 2003). Forage fish are important and abundant fish species, and as the name implies, they are a critical part of the prey base for a large variety of other marine organisms. Forage fish are harvested by recreational and commercial fisheries and are utilized for tribal subsistence (WDFW, 2005b).

The nearshore habitat provides migration corridors, rearing and refuge habitat, and detritus input for many aquatic species. Aquatic vegetation along the shoreline consists of eelgrass; nonfloating kelp; floating kelp; and sargassum, a non-native brown algae. Eelgrass communities are of importance because they provide several benefits for salmonids, including rearing habitat, food, protection from predators, and shoreline stabilization.

B.2.1 SKAGIT RIVER ESTUARY

The Skagit River estuarine delta extends from the mouths of the North and South Fork Skagit Rivers upstream to their confluence, although tidal influence reaches as far upstream as Sedro Woolley. Recent estimates indicate that total estuarine/riverine tidal habitat now covers 6,316 acres, with 2,508 acres of estuarine emergent marsh; 2,471 acres of emergent/forested transition; and 1,337 acres of forested riverine/tidal zone. The channel area is estimated at 1,436 acres of main stem channel; 215 acres of subsidiary channels; 59 acres of large blind channels; and a maximum of 232 acres of small blind channels. A 72-percent loss of total estuarine delta habitat has been estimated for the Skagit Basin from the river mouth to Sedro Woolley. The highest percentage loss is riverine tidal habitat, which has been reduced by about 84 percent. Estuarine forested transition habitat and estuarine emergent marsh habitat have also shown dramatic losses of 66 percent and 68 percent, respectively.

Currently, there is a fringe of marsh habitat seaward of the dikes in the north Skagit Delta and an area of marsh along the South Fork Skagit River mouth. Riparian conditions along the sloughs and streams within the Skagit Delta are rated “poor”. Nearly all of the riparian areas along the Fir Island sloughs and 90 percent along the Skagit Flats streams and sloughs have been converted to a non-forest use. A non-forest land use results in a loss of riparian function, and likely affects the water temperatures that are found in many of these streams.

The Skagit delta supports large concentrations of wintering waterfowl, shorebirds, and raptors. A significant portion of an entire trumpeter swan population winters in this area, as well as the entire population of gray-bellied brant, a subpopulation of brant geese. Additionally, thousands of snow geese utilize fields in the area.

B.2.2 PADILLA BAY

Padilla Bay was established as a National Estuarine Research Reserve in 1980 and is the only estuarine reserve in Washington State. The 11,000 acres in the reserve are managed by WDOE. Currently, Padilla Bay is a shallow bay with exposed mudflats on out-going tides. Sloughs deliver fresh water to the bay, and these sloughs have numerous water quality problems. The land use in the Padilla Bay Watershed is mostly agriculture (65 percent). Two concerns are sediment toxicity and the potential for eutrophication. The potential for eutrophication is of concern due to increased nutrient flow to Padilla Bay from the sloughs. The presence of contaminated sediments is documented in Padilla Bay. The inner bay has elevated phenols and has failed three different toxicity tests, while the outer bay has elevated phenols and phthalates, but did not fail any toxicity tests.

A significant loss of both estuarine and freshwater wetland habitat has occurred in the Padilla Bay Watershed. Diking, draining, and filling have removed nearly all of the salt marsh. Only a fringe of salt marsh remains. An estimated 454 wetlands have been identified in the Padilla Bay Watershed, but most of these no longer have contact with streams that either provide or directly connect to salmonid habitat. A coarse estimation of shoreline modifications indicates that most of the east and south sides of Padilla Bay have extensive modifications. Landfill (dikes) comprises the greatest number of feet of shoreline modifications, with riprap as the second greatest. Several sections of the Padilla Bay shoreline also have less than 10 percent overhanging riparian vegetation.

Padilla Bay has one of the largest intertidal eelgrass beds in the western United States. It is believed that Padilla Bay eelgrass beds may have increased in area due to the diversion of fresh water (Skagit River) away from the bay.

B.2.3 SKAGIT BAY

Skagit Bay is one of the most important areas for salmonids because of its proximity to the Skagit River. Significant numbers of eelgrass beds are located in Skagit Bay, and these are recommended for protection because of their importance to salmonid production. Much of the east Skagit Bay shoreline has less than 10 percent overhanging riparian vegetation. Water quality in Skagit Bay appears to be good.

B.2.4 SAMISH BAY

The Samish Bay Delta has been constrained by dikes to support agricultural activity and flood control. Dikes exist along the lower 5.5 miles of the Samish River including the estuary (tidal influence extends to about RM 4). The diking has isolated former salmonid habitat. The primary shoreline modifications are riprap followed by landfill (dikes).

Drainage and stormwater discharge is passed to Samish Bay via tidegates and pumps. Contaminated sediments also occur within the bay. Two of three sites sampled in Samish Bay had either elevated phenols or failed bioassay tests.

Eelgrass beds are known to occur in Samish Bay, but some of those beds are routinely plowed for Pacific oyster cultivation.

B.2.5 SWINOMISH CHANNEL

The Swinomish Channel is greatly impacted by shoreline modifications. Most of the segments along the channel have been altered by riprap, landfill (dikes), or bulkheads. A lack of riparian vegetation occurs and much of the Swinomish Channel has less than 10 percent overhanging riparian vegetation. Patchy eelgrass beds have been documented in the channel, particularly on the west bank.

A proposed project to improve the hydraulic connection between the North Fork Skagit River and the Swinomish Channel would involve removing a portion of the existing jetty. This would improve fish passage and encourage more utilization of estuarine habitat in Padilla Bay by juvenile Chinook salmon. This project is included in the Skagit Chinook Recovery Plan (SRSC and WDFW, 2005).

B.3 Fish Species Utilization within the Coverage Area

Within the Coverage Area federally protected fish species includes; the Puget Sound Chinook salmon Evolutionarily Significant Unit (ESU), Coastal-Puget Sound bull trout Distinct Population Segment (DPS), and Puget Sound steelhead DPS.

The proposed tidegate or floodgate activities are likely to occur in, or indirectly affect the watercourses presented in Table B-2. Federally protected fish species utilization of these watercourses is identified in Table B-2, along with the occurrence of critical habitat for Chinook salmon and bull trout.

Table B-2. Fish Species Presence and Critical Habitat for Water Courses within the Coverage Area.

Mgt./ jurisdiction	Watercourse	FC	SC	SuC	SSH	WSH	BT	Critical Habitat
Fed/St/Co	Skagit River	X	X	X	X	X	X	CHN/BT
Fed/St/Co	South Fork Skagit River	X	X	X	X	X	X	CHN/BT
Fed/St/Co	North Fork Skagit River	X	X	X	X	X	X	CHN/BT
Fed/St/Co	Samish River	X				X	X	BT
DK3	Fisher Creek/Slough	X			X	X		
D19/D12	Telegraph Slough	X	X	X			X	
County	Edison Slough	X	X					
D14	Joe Leary Slough	X	X				X	
D12	No Name Slough							

Mgt./ jurisdiction	Watercourse	FC	SC	SuC	SSH	WSH	BT	Critical Habitat
D19	Higgins Slough							
D12/D19	Big Indian Slough	X						
D17	Big Ditch	X	X				X	
D22	Dry Slough	X	X				X	
D22	Browns Slough	X	X				X	CHN
D15	Sullivan Slough	X					X	CHN
D22	Wiley Slough						X	
D22	Hall Slough	X						CHN
D12	Little Indian Slough	X					X	
D22	Davis Slough							
D17	Kayton's Slough	X	X				X	
D15	White Slough							
D18	McElroy Slough							
Fed/St/Co	Swinomish Channel	X	X	X	X	X	X	CHN
Fed/St/Co	Padilla Bay	X	X	X	X	X	X	CHN/BT
Fed/St/Co	Skagit Bay	X	X	X	X	X	X	CHN/BT
Fed/St/Co	Samish Bay	X	X	X	X	X	X	CHN/BT

Sources: WDFW, 2005d; Williams, 2005; FR, 2005a; TAT, 2005

FC = fall Chinook, SC = spring Chinook, SuC = summer Chinook, SSH = summer steelhead, WSH = winter steelhead, BT = bull trout, CHN = Chinook

It is generally assumed that between February and July, fish from other watercourses may immigrate from the estuary into the lower reaches of the watercourse via the culvert/tidegates to forage on available prey. It is generally assumed that the upstream distribution and duration of residence for these immigrating fish is limited by water quality, prey availability and their physiological affinity for salt water. In addition to salmonid species, forage fish species such as surf smelt and sand lance also use the estuary habitats for rearing and could potentially immigrate into the lower reaches of the watercourse. Adult native char and cutthroat could also be expected to immigrate into the lower reaches of the watercourse in pursuit of juvenile salmon and forage fish species.

B.3.1 PUGET SOUND CHINOOK SALMON

The Puget Sound Chinook Evolutionarily Significant Unit (ESU) was listed as threatened on March 24, 1999 by NMFS and the threatened status was reconfirmed on June 28, 2005 (FR, 2005b). Fall, spring, and summer Chinook salmon (*Oncorhynchus tshawytscha*) occur within the Skagit River system, and fall Chinook occur within the Samish River. There are six different Chinook salmon populations recognized in the Skagit Basin. These six populations are: lower Skagit, upper Skagit, lower Sauk, upper Sauk, Suiattle, and upper

Cascade populations (Smith, 2003). Within the Coverage Area, Chinook occur throughout numerous watercourses.

Chinook populations within the Skagit River have been in long-term decline. Catch data from the terminal area have shown a declining trend since 1935 (SRSC and WDFW, 2005). Of the six Chinook populations in the Skagit River, all but the Suiattle are listed as depressed in the 2002 WDFW Salmonid Stock Inventory (SaSI). The Suiattle population was listed as healthy. In the Samish River system, the Chinook population is a non-native stock, and the population status is described as unknown in the 2002 SaSI report.

Two distinct life history strategies occur within these populations: stream type and ocean type. Stream types reside longer in fresh water and migrate seaward as yearlings or older. Ocean types migrate to sea as sub-yearlings, typically within the first 3 months after emergence. A detailed description of Skagit River Chinook life histories is presented in the *Skagit Chinook Recovery Plan* (SRSC and WDFW, 2005). All six wild Skagit Chinook salmon stocks include delta rearing life history strategies in their populations. Juvenile Chinook utilize the deltas (estuaries) adjacent to Skagit, Samish, and Padilla Bays to varying degrees, depending on their specific life history type and "sub" type. For example, a portion of the ocean type Chinook are delta rearing migrants that utilize the tidal delta habitat for several weeks to several months before migrating to Skagit Bay (SRSC and WDFW, 2005), while the parr migrants travel downstream directly to Skagit Bay and do not rear in the delta habitat. The lack of estuary habitat in the Skagit Basin area has been identified as a limiting factor for Chinook salmon populations (Smith, 2003).

The loss of delta channel edge and blind channel habitats preferred by juvenile Chinook for rearing is limiting the Chinook population levels in number and size (SRSC and WDFW, 2005). Limitations in current delta habitat conditions are also displacing juvenile Chinook from delta habitat to Skagit Bay habitat, and forcing a change in their life history strategy from delta rearing to fry migrants. Literature shows that fry migrant survival is one order of magnitude lower than that of delta rearing individuals (SRSC and WDFW, 2005).

Critical Habitat

Critical habitat for the Puget Sound Chinook salmon ESU was designated on September 2, 2005 (Federal Register / Vol. 70, No. 170). This designation specifically identified habitat within the Lower Skagit Sub-basin (Federal Register / Vol. 70, No. 170). Critical habitat includes the stream channels within the designated stream reaches, and includes a lateral extent as defined by the ordinary high-water line. In areas where the ordinary high-water line has not been defined, the lateral extent will be defined by the bankfull elevation. As previously mentioned, bankfull elevation is the level at which water begins to leave the channel and move into the floodplain. It is reached at a discharge which generally has a recurrence interval of 1 to 2 years in the annual flood series (Federal Register / Vol. 70, No. 170). In estuarine and nearshore marine areas, critical habitat includes areas contiguous with the shoreline from the line of extreme high water out to a depth of no more than 30 meters relative to mean lower low water (FR, 2005a).

- Within the Coverage Area and extending into marine waters, critical habitat for the Puget Sound Chinook ESU includes the following watercourses: Skagit River – all segments within the Coverage Area.
- North Fork Skagit River – from the Coverage Area boundary upstream to the confluence with the Skagit River.
- South Fork Skagit River - from the Coverage Area boundary upstream to the confluence with the Skagit River.
- Browns Slough – upstream to Fir Island Road crossing.
- Hall Slough – from the Coverage Area boundary upstream to the terminus of designated habitat (location unspecified).
- Sullivan Slough – old channel (Unnamed [48.3831, –122.4842]).
- Nearshore marine habitat.

The entire watershed for the Samish River was excluded from the Critical Habitat designation for Puget Sound Chinook Salmon.

Primary constituent elements (PCEs) for Chinook salmon have been identified within the designated critical habitat areas. The PCEs are those habitat components that are essential for the primary biological needs of foraging, reproducing, rearing of young, dispersal, genetic exchange, or sheltering. The PCEs cover freshwater spawning sites; freshwater rearing sites; freshwater migration corridors; estuarine areas for physiological transition and rearing and migration; nearshore marine areas; and offshore marine areas (Federal Register / Vol. 70, No. 170).

B.3.2 COASTAL-PUGET SOUND BULL TROUT

The U.S. Fish and Wildlife Service issued a special rule determining the threatened status for bull trout in the coterminous U.S. on November 1, 1999 (Federal Register / Vol. 64, No. 210 / Monday, November 1, 1999 / Rules and Regulations). This determination includes the Coastal-Puget Sound population segment, which encompasses all Pacific coast drainages within Washington, including Puget Sound.

Bull trout were historically distributed throughout Washington State and especially in the northern Puget Sound rivers including the Nooksack, Skagit, Stillaguamish, and Snohomish River basins (Mongillo, 1993). In the Coverage Area, bull trout are presently known to occur in the Skagit and Samish River systems. They are also present in the estuary and nearshore areas, because segments of the populations demonstrate an amphidromous life history (that is, fishes that regularly migrate between fresh water and the salt water [in both directions], but not for the purpose of breeding). The Swinomish Channel is documented as a corridor for bull trout migration and rearing (Beamer, 2004).

The Skagit River supports the largest natural population of bull trout/Dolly Varden in Puget Sound. Bull trout/Dolly Varden spawn in most, if not all, of the accessible upriver

areas in the drainage. Anadromous, fluvial, adfluvial, and resident fish all exist in the watershed and, in many cases, overlap geographically. All stock and populations are native and are maintained by wild production (WDFW 1998; 2004). Three distinct stocks within the Skagit River Basin are currently identified: lower Skagit River and tributaries, upper Skagit River, and Baker Lake (WDFW, 2004). The lower Skagit River population has recently been determined to be bull trout based on genetic analysis (WDFW, 2004). Goetz et al. (2004) identified over 19 local populations in the lower Skagit River area, representing over 40 percent of the local populations in the Puget Sound basin. In 2001, it was thought that the lower Skagit River supported a spawning population of migratory bull trout that numbered in the thousands, likely making it the largest population in Washington. Based on recent tag recapture efforts, this number has been reviewed and is thought to be in the tens of thousands rather than in the thousands (Goetz et al., 2004). In the 1998 and 2004 WDFW Salmonid Stock Inventory, the lower Skagit stock is described as healthy (WDFW, 1998; 2004).

Life histories of the stocks in the Skagit River are complex in the areas accessible to anadromous and non-anadromous fish. Spawning occurs in the upriver areas as water temperatures decrease to around 8^{o}C. In many cases, fluvial, anadromous, and resident adults spawn in the same areas. After spawning, resident adults remain in the area, while fluvial adults move throughout the upper river area and remain in pools during the winter, spring, and early summer. They return to their spawning staging areas in late summer. Anadromous adults, after spawning, begin the downriver migration from late fall through the winter and enter the estuary area in the spring. They remain in the estuary until early to mid-summer and begin the upriver spawning run again (WDFW, 1998).

A significant portion of the migratory fish in the basin exhibit an anadromous life history and use the estuarine and nearshore marine areas in Skagit Bay and Port Susan. The anadromous fish are typically found in nearshore marine waters from the early spring through the late fall. The maintenance of marine nearshore and estuary habitat is key to supporting this life history form. The anadromous fish forage primarily on salmon smolts and marine forage fish (i.e., surf smelt, sand lance, and herring) while in the estuary and nearshore marine waters. Surf smelt, sand lance, and herring become more and more important as forage as the summer growing season progresses. Protecting the spawning beaches for these forage fish in Skagit Bay and Port Susan is key to maintaining the current abundance of the anadromous life history form. While the anadromous fish are in the river, either as post-spawn adults or overwintering sub-adults, they rely on much the same forage base as the fluvial fish (USFWS, 2004a).

In the Skagit River, juvenile and sub-adult bull trout migrate downstream between April and July (98 percent of all migrants) at 2 or 3 years of age, although the range of seasonal timing of entry extends from mid-February to early September. The peak of the migration occurs in May (59 percent) and June (25 percent) (Goetz et al., 2004).

Within Skagit Bay, bull trout are essentially present year-round. Peak abundance usually occurs in May or June; however, in recent years (coinciding with higher overall abundance) there appears to be a bi-modal distribution where significant numbers of bull trout are present in Skagit Bay during the fall months. Bull trout are more consistently associated

with spit habitat throughout the year than any other habitat type, with stable bluffs a strong secondary habitat feature. Bull trout are found occupying coastal lagoon habitat in July (Goetz et al., 2004).

The Samish River contains important foraging, migration, and overwintering habitat necessary for bull trout recovery (USFWS, 2004a). The Samish River habitat is especially important to bull trout populations that occur in the Nooksack and Skagit River systems (USFWS, 2004a). Adult and sub-adult bull trout have been caught on the main stem of the Samish River upstream of the confluence with Friday Creek, as well as in the lower river; however, it is likely that potential use extends to the uppermost reaches of anadromous salmon use. These are likely anadromous bull trout from the Nooksack and Skagit core areas due to their close proximity (USFWS, 2004a).

Critical Habitat

Critical habitat for the Coastal-Puget Sound bull trout population was designated in September 2005 (Federal Register / Vol. 70, No. 185 / Monday, September 26, 2005). Within the Coverage Area this is identified as Unit 28 – Puget Sound. Critical habitat includes the stream channels within the designated stream reaches, and includes a lateral extent as defined by the ordinary high-water line. In areas where ordinary high-water line has not been defined, the lateral extent will be defined by the bankfull elevation. Bankfull elevation is the level at which water begins to leave the channel and move into the floodplain and is reached at a discharge that generally has a recurrence interval of 1 to 2 years in the annual flood series.

Critical habitat also includes the inshore extent for marine nearshore areas (the mean higher high water [MHHW] line), including tidally influenced freshwater heads of estuaries. This refers to the average of all the higher high-water heights of the two daily tidal levels. Adjacent shoreline riparian areas, bluffs, and uplands are not designated as critical habitat. For marine nearshore areas, critical habitat extends offshore to a depth of 33 feet relative to the mean lower low-water line (MLLW) (average of all the lower low-water heights of the two daily tidal levels). This area between MHHW and minus 10 MLLW is considered the habitat most consistently used by bull trout in marine waters based on known use, forage fish availability, and ongoing migration studies, and captures geological and ecological processes important to maintaining these habitats. This area contains essential foraging habitat and migration corridors such as estuaries, bays, inlets, shallow subtidal areas, and intertidal flats (Federal Register / Vol. 70, No. 185 / Monday, September 26, 2005).

For the Coverage Area and adjoining marine waters, critical habitat includes the Skagit River, North Fork Skagit River, South Fork Skagit River, Samish River, and the eastern shoreline of Puget Sound.

Primary constituent elements (PCEs) for bull trout have been identified within the designated critical habitat areas. The PCEs are those habitat components that are essential for the primary biological needs of foraging, reproducing, rearing of young, dispersal, genetic exchange, or sheltering. The PCEs address water temperature, stream channel complexity, substrate, presence of a natural hydrograph, high quality and cold natural water

sources (e.g., springs, seeps), migratory corridors, food base, and water supply quantity and quality (Federal Register / Vol. 70, No. 185 / Monday, September 26, 2005).

B.3.3 PUGET SOUND STEELHEAD

The Puget Sound Steelhead Distinct Population Segment (DPS) was listing by NMFS on May 11, 2007 as threatened (Federal Register / Vol. 72, No. 91 / Friday, May 11, 2007 / Rules and Regulations). The DPS includes all naturally spawned anadromous winter-run and summer-run steelhead populations in streams and rivers basins of the Straight of Juan de Fuca, Puget Sound and Hood Canal, Washington.

Winter and summer populations of steelhead trout occur within the Skagit River system. Six populations of steelhead are described in the Skagit Basin: three populations of winter steelhead and three populations of summer steelhead (WDFW, 2002). All of the winter steelhead populations are described as being native in origin with wild production. The Skagit main stem/tributaries winter steelhead population declined from a healthy status in 1992 to a depressed status in 2002.

The status of the Cascade and Sauk winter steelhead populations are unknown. The three summer steelhead populations in the Skagit Basin are classified as having an unknown status (WDFW, 2002). The three populations are greatly separated spatially in spawning distribution. One population spawns in Finney Creek, another in the upper Cascade River, and the third in the upper Sauk River. The Finney Creek and Sauk River summer steelheads are native in origin with wild production, while the Cascade River population has an unknown origin and wild production. All of these populations occur within WRIA 4, the Upper Skagit. Occurrence within the Coverage Area is assumed to be limited to migration and rearing.

In the Samish River, one population of winter steelheads occurs. This population spawns throughout the Samish River and in Friday Creek and its tributaries. Spawning generally occurs from mid-February through early June. This is described as native stock with wild production (WDFW, 2002). The status of this stock is described as healthy. This population occurs within WRIA 3. Occurrence within the Coverage Area is assumed to be for migration, rearing, and spawning (spawning information is based on WDFW's SalmonScape/sasimap).

B.3.4 ESSENTIAL FISH HABITAT

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) requires federal fishery management plans to describe the habitat essential to the fish being managed and describe threats to that habitat from both fishing and non-fishing activities. In addition, in order to protect this Essential Fish Habitat (EFH), federal agencies are required to consult with the National Marine Fisheries Service (NMFS) on activities that may adversely affect EFH.

Essential fish habitat has been designated for the 82 species of Pacific Coast groundfish, 3 species of salmon, and 5 species of coastal pelagic fish and squid that are managed by the Pacific Fishery Management Council.

The 82 groundfish species include rockfishes, flatfish, sharks, and fish such as lingcod and sablefish.

The Pacific Fishery Management Council manages the fisheries for coho, Chinook, and Puget Sound Pink Salmon and has defined EFH for these three species. Salmon EFH includes all those streams, lakes, ponds, wetlands, and other water bodies currently or historically accessible to salmon in Washington. The EFH needs of all these species, at each life stage, are broad, covering freshwater, estuarine, and marine environments. Salmon EFH extends from the nearshore and tidal submerged environments within state territorial waters out to the full extent of the exclusive economic zone (200 miles or 370.4km) offshore of Washington.

The fishery management plan for Pacific coast Coastal Pelagic Species includes 5 species: northern anchovy, Pacific sardine, Pacific (chub) mackerel, jack mackerel, and market squid. Essential fish habitat for these coastal pelagic species is defined both through geographic boundaries and by sea-surface temperature ranges. The east-west geographic boundary of EFH for each individual finfish and market squid is defined to be all marine and estuarine waters from the shoreline along the coasts of California, Oregon, and Washington offshore to the limits of the exclusive economic zone (200 miles) and above the thermocline where sea surface temperatures range between 10 C and 26 C.

B.4 Other Species with ESA Coverage in the Coverage Area

B.4.1 MARBLED MURRELET

The Washington, Oregon, and California marbled murrelet populations were listed as threatened by USFWS in 1992. Critical habitat was designated for the species in May 1996 (USDI, 1996). Six geographic zones for marbled murrelets were identified in the Marbled Murrelet Recovery Plan (USFWS, 1997b). Two of these zones, Puget Sound (Zone 1) and Western Washington Coast Range (Zone 2), are in Washington. The most recent estimate of the total breeding population of Washington marbled murrelets is approximately 5,000 birds (Speich et al., 1992; Speich and Wahl, 1995). These estimates were based on counts of birds on the water during the spring-summer breeding period. Both Ralph et al. (1995) and the Marbled Murrelet Recovery Team (USFWS, 1997b) have concluded that the listed population appears to be in a long-term downward trend.

In North America, the marbled murrelet ranges along the Pacific coast from Alaska and south to California (Marshall, 1990). Marbled murrelets are semi-colonial seabirds and are dependent for breeding and rearing habitat upon old-growth forests, or forests with an older tree component (Ralph et al., 1995). These stands are characterized as old-growth and late-successional coniferous forests, being of large size (greater than 32 inches in diameter at breast height) and multi-storied with a moderate to high canopy closure. The trees must

have large, near-horizontal branches for egg-laying platforms, which are usually located higher up in the canopy. Breeding occurs from late spring to fall.

A breeding pair will produce only one egg that incubates for approximately 30 days. The pair will incubate the egg in 24-hour shifts, rotating each evening (Marshall, 1990). The young remain until they are capable of flying to the sea. Marbled murrelets usually move to other areas to search for food when not breeding (Ralph et al., 1995). Primary food sources include forage fish (smelt and sand lance) (Ralph et al., 1995) and invertebrates (Marshall, 1990).

Marbled murrelets do not use farms for any of the stages of their lives, but farms can affect murrelets if runoff into salt water reduces forage by negatively affecting eelgrass beds and beaches. Murrelets feed on small fish (sand lance and herring) and on plankton (adults may feed primarily on plankton) (Stofel, 2005).

Review of the Priority Habitat and Species mapping data provided by WDFW indicates that the nearest detection location is approximately 3 miles from the Coverage Area's northeastern boundary. With inclusion of the adjacent buffer (0.75 mile to the detection site), the outer margin of the buffer section is within approximately 1.5 miles of the northeastern Coverage Area boundary.

Critical Habitat

Critical habitat for the marbled murrelet was designated on May 24, 1996 (USFWS, 1996). Critical habitat was only identified in the terrestrial environment and not in the marine environment. Designated lands are in areas identified as essential to the conservation of the species. The USFWS identified 11 critical habitat units in Washington. Approximately 1,631,300 acres (660,180 hectares) of habitat were designated as critical habitat in Washington, with approximately 74 percent of the area on federal lands, primarily in Late Successional Reserves as established in the Forest Plan. The primary constituent elements (the physical and biological habitat features) for designating marbled murrelet critical habitat were identified in the document as individual trees with potential nest platforms and forest lands of at least one half site potential tree height regardless of contiguity within 0.8 km (0.5 mile) of individual trees with potential nesting platform and that are used or potentially used by the marbled murrelet for nesting or roosting. Within the boundaries of designated critical habitat, only those areas that contain one or more primary constituent elements are, by definition, critical habitat (USFWS, 1996).

Review of the USFWS on-line critical habitat mapper indicates that the nearest designated critical habitat area is approximately 12.6 miles from the eastern Coverage Area boundary.

B.4.2 SOUTHERN RESIDENT ORCA/KILLER WHALE

NMFS listed the Southern Resident Killer Whale DPS as endangered on November 18, 2005 (Federal Register / Vol. 70, No. 222 / Friday, November 18, 2005 / Rules and Regulations). The final rule became effective on February 16, 2006.

Killer whales (*Orcinus orca*) are the largest species in the *Delphinidae* family and the world's largest dolphin (NOAA Fisheries, 2005). These long-lived species are present in coastal waters and within Puget Sound (Ylitalo et al., 2001). The southern resident orcas consist of three pods, identified as J, K, and L pods (NOAA Fisheries, 2005). These pods reside for part of the year in the inland waterways of the Strait of Georgia, Strait of Juan de Fuca, and Puget Sound, especially during the spring, summer, and fall (NOAA Fisheries, 2005). This population, known as the Eastern North Pacific southern residents, is designated as a depleted stock under the Marine Mammal Protection Act (May 2003). This action has lead to the development of a conservation plan to address factors that may be causing the population's decline (NMFS, 2005).

The southern resident population occurs primarily in the Georgia Basin and Puget Sound from late spring to fall, when it typically comprises the majority of killer whales found in Washington. The population travels more extensively during other times of the year to sites as far north as the Queen Charlotte Islands in British Columbia and as far south as Monterey Bay in California. Southern resident population trends are unknown before 1960, when roughly 80 whales were present, but it is likely that numbers were at a depleted level due to indiscriminant shooting by fishermen. The population has been closely monitored since 1974, with exact numbers of animals and other demographic details learned through annual photo-identification surveys. Membership increased from 70 to 98 whales between 1974 and 1995, but this was followed by a rapid net loss of 18 animals, or 18 percent of the population from 1996 to 2001. J and K pods have generally maintained their numbers during the decline, equaling or exceeding their largest recorded sizes in 2003. However, L pod, which comprises about half of the southern resident population, has been in sharp decline since 1994 (Wiles, 2004).

All three pods typically arrive in May or June and spend most of their time in inland waters until departing in October or November. However, K and L pods make frequent trips lasting a few days to the outer coasts of Washington and southern Vancouver Island during this time period. During early autumn, Southern Resident pods, especially J pod, routinely expand their movements into Puget Sound, probably to take advantage of chum and Chinook salmon runs (Fed. Reg. 71FR69054). During the late fall, winter, and early spring, the ranges and movements of the Southern Residents are less well known. J pod continues to occur intermittently in the Georgia Basin and Puget Sound part of this time, but its location during apparent absences is uncertain (Osborne, 1999). One sighting of this pod was made off Cape Flattery, Washington, in March 2004 (Krahn *et al.*, 2004). Prior to 1999, K and L pods followed a general pattern in which they spent progressively smaller amounts of time in inland waters during October and November and departed them entirely by December of most years (Osborne, 1999). Sightings of both groups passing through the Strait of Juan de Fuca in late fall suggested that activity shifted to the outer coasts of Vancouver Island and Washington (Krahn *et al.*, 2002), although it is unclear if the whales spend a substantial portion of their time in this area or simply transit to other locations (Fed Reg 71FR69054).

Threats to the southern resident population in Washington include possible declines in their main prey, salmon, and the fact that the southern resident whales (and the transient population) are heavily contaminated with organochlorine pollutants, primarily PCBs and

DDT residues. Both populations are now considered among the most highly contaminated marine mammals in the world (Wiles, 2004).

Critical Habitat

NMFS established designated critical habitat for the Southern Resident Killer Whale on November 29, 2006 (Federal Register /Vol. 71, No. 229 / Wednesday, November 29, 2006 / Rules and Regulations). Three specific areas are designated, (1) the Summer Core Area in Haro Strait and waters around the San Juan Islands; (2) Puget Sound; and (3) the Strait of Juan de Fuca, which comprise approximately 2,560 square miles (6,630 sq km) of marine habitat.

The final critical habitat designation does not include waters shallower than 20 feet based on extreme high tide. Tidal fluctuations vary at locations throughout the critical habitat areas, but generally the shallow areas not included in the critical habitat designation are very shallow (5–10 feet) in some tidal conditions and can even be exposed at very low tides.

Critical habitat includes all waters relative to a contiguous shoreline delimited by the line at a depth of 20 feet relative to extreme high water in each of the following areas: all marine waters in Skagit County east of the Deception Pass Bridge (Highway 20) (48°24′ 25″ N./ 122°38′35″ W.)

Primary Constituent Elements pursuant to the regulations, such requirements include, but are not limited to, the following: (1) Space for individual and population growth, and for normal behavior; (2) food, water, air, light, minerals, or other nutritional or physiological requirements; (3) cover or shelter; (4) sites for breeding, reproduction, rearing of offspring, germination, or seed dispersal; and generally, (5) habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

Based on this natural history of the Southern Resident killer whales and their habitat needs, the physical or biological features of Southern Resident killer whale habitat are: (1) Water quality to support growth and development; (2) Prey species of sufficient quantity, quality and availability to support individual growth, reproduction and development, as well as overall population growth; and (3) Passage conditions to allow for migration, resting, and foraging. These constitute the primary constituent elements essential for conservation of the Southern Resident killer whale (Federal Register /Vol. 71, No. 229 / Wednesday, November 29, 2006 / Rules and Regulations).

APPENDIX C – REQUEST FOR CREDIT FORM

Request For Credit

(To be completed by District conducting maintenance action)
Submit completed form with SPIF to the U.S. Army Corps of Engineers
PO Box 3755
Seattle, Washington 98124-3755

District: _____ Date: _____

Site Name: _____Site Number: _____ Gate Number:_____

Project Description: _____

_____

_____

_____

_____

Type of Repair: ☐ minor ☐ major ☐ replacement

Credit amount requested: ☐ ½ ☐ 1

Indicate if the following have been completed:

U.S. Corps of Engineers SPIF: ☐ yes ☐ no date completed: _____

WDFW HPA Issued: ☐ yes ☐ no date completed: _____

Requesting Party: _____ _____ _____
print name *phone* *fax*

_____ _____
Signature Date

District Commissioner: _____
print name

_____ _____
Signature Date

Credit Administrator Approval Fax date: _____

Approved: ☐ yes ☐ no Mail date: _____

Comments: _____

Approved by: _____ _____
Signature Date

APPENDIX D – NEW PROJECT REVIEW CHECKLIST

New Estuary Habitat Restoration Project Review

Submit completed checklist to WWAA c/o Mike Shelby
2017 Continental Place, Suite 6
Mount Vernon, WA 98273

Project Sponsor: _____ Date: _____

Project Name: _____ Project Location: _____

Project Description: _____

_____

_____

_____

_____

_____

_____

_____

_____

Does the project support the objectives of the Skagit Chinook Recovery Plan?

☐ yes ☐ no

Does the project involve agricultural land within the Implementation Agreement Coverage Area? ☐ yes ☐ no

Does the project result in increased or improved estuary habitat for Chinook salmon?

☐ yes ☐ no

Is the proposed project supported by the agricultural community?

☐ yes ☐ no

If yes, provide letter of support or other documentation.

Oversight Committee Approval: ☐ yes ☐ no

Date Approved: _____

Copies to:

☐ Project Sponsor
☐ Credit Administrator

APPENDIX E – MEMORANDUM OF UNDERSTANDING

GREATER SKAGIT DELTA TIDEGATES AND FISH INITIATIVE MEMORANDUM OF UNDERSTANDING

By and Between

WESTERN WASHINGTON AGRICULTURAL ASSOCIATION

NOAA NATIONAL MARINE FISHERIES SERVICE

WASHINGTON DEPARTMENT OF FISH AND WILDLIFE

This Memorandum of Understanding (MOU) represents a commitment and agreement by the above named parties to develop and implement a delta-wide landscape approach for the recovery and restoration of estuarine habitat that directly supports the goals and objectives of the Puget Sound Chinook Salmon Restoration Plan. It is designed as a collaborative and cooperative effort to contribute to the recovery of Skagit River Chinook salmon populations while supporting the long-term sustainability of agriculture in the greater Skagit delta by ensuring a properly permitted and functioning process for maintaining the existing drainage and tidegate infrastructure system.

PURPOSE AND INTENT

It is the purpose and intent of this MOU to: 1) Identify the interests of each party, 2) Recognize the benefits of a collaborative approach that moderates the contentious negotiations that have sometimes occurred previously, and 3) Commit to the development of a long-term implementation agreement that enhances the condition and function of natural habitats and contributes to certainty of agricultural sustainability.

The specific goals and objectives of the implementation agreement will be to:

1) Identify, based upon the Skagit Chinook Recovery Plan, a collection of habitat enhancement projects that provide sufficient estuarine habitat for Chinook recovery.

2) Establish a process that links tidegate maintenance (which includes repair, rehabilitation and replacement) to specific enhancement goals.

3) Facilitate federal review and permitting of tidegate maintenance needs in the Skagit and Samish River deltas.

4) Establish a framework that ensures open and constructive levels of communication and cooperation between parties.

5) Provide mutual support and assistance to the signatories of this MOU for achieving the estuarine habitat restoration and smolt production goals of the Skagit Chinook Recovery Plan by establishing procedures to acquire the resources and funding necessary to implement the Greater Skagit Delta Tidegates and Fish Initiative.

BACKGROUND

Tidegates are essential for the long-term sustainability of agriculture in the Skagit and Samish deltas because they protect against flooding and provide drainage of agricultural farmlands. Some existing tidegates in the Skagit and Samish River deltas will require major repair or replacement in the near future. Drainage Districts are legally responsible for maintaining (repairing or replacing) these structures to protect private and public property from damage associated with flooding and need to minimize potential adverse effects to crop production and human infrastructure by limiting inflow of marine or brackish waters upstream of the tidegates.

Tidegates also provide barriers to fish passage and prevent access to upstream areas that could provide rearing habit for Puget Sound Chinook salmon and other fish species. In the Skagit and Samish deltas much of the land protected by tidegates has sub-tidal elevations and would be inundated, providing estuarine rearing habitat, were it not protected by tidegates and their associated dikes. The importance of estuarine habitat has been identified in the House Bill 1418 *(2003)* report: *Tidegates and Intertidal Salmon Habitat in the Skagit Basin* and the National Marine Fisheries Service's Puget Sound Chinook Recovery Plan. Inflow of marine and brackish waters above the tidegates provides a mechanism to reduce the adverse effects to fish populations that have occurred as a result of isolating sub-tidal landscapes.

The apparent conflict between providing for fish access and protecting existing infrastructure has previously resulted in contentious negotiations, mistrust among negotiating parties and failure to obtain productive results. A significant recent success was achieved through the implementation of the Skagit Drainage and Fish Initiative, a multi-party process that focused on drainage maintenance activities exclusive of tidegates. The parties to this Memorandum now intend to expand that process to include tidegate maintenance. A successful initiative will: 1) Provide an efficient and timely mechanism for federal permitting of the repair and replacement of tidegates, and 2) Provide a mechanism to restore sufficient estuarine habitat to support recovery of Chinook salmon populations in the Skagit basin.

Skagit Tidegates and Fish Initiative
Memorandum of Understanding
Page 3 of 3

APPROACH

The Greater Skagit Delta Tidegates and Fish Initiative (TFI) is a collaborative effort by the participating parties to implement a set of strategically selected estuarine restoration projects within the greater Skagit River delta area that are consistent with and provide a direct contribution to the goals and objectives of the Skagit Chinook Recovery Plan (SCRP). This MOU represents an endorsement and commitment by each party to participate in implementing a delta-wide landscape approach to tidegate maintenance and habitat restoration. The foundation and guiding principle of this agreement is to achieve functional estuarine habitat goals with the least possible impact on established and functioning agricultural land and drainage infrastructure. For purposes of fulfilling this initiative, a maximum of 2,700 acres of delta agricultural lands will be converted to estuarine habitat, consistent with the stated goals and objectives of the Skagit Chinook Recovery Plan of 2006.

This initiative is intended to provide an efficient mechanism to obtain federal and state permits and authorizations for tidegate maintenance. The initiative will also facilitate compliance with the federal permitting process for tidegate maintenance activities that are linked to prescribed progress benchmarks for delta estuarine habitat restoration.

Curtis Johnson, pres.

Curtis Johnson, President
Western Washington Agricultural Association

4/17/07
Date

D. Robert Lohn

D. Robert Lohn, Regional Administrator
National Marine Fisheries Service,
Northwest Region

4/18/07
Date

Jeffrey P. Koenings

Jeffrey P. Koenings, PhD, Director
Washington Department of Fish and Wildlife

4/23/07
Date

APPENDIX F – LETTERS OF SUPPORT

U.S. Army Corps of Engineers

Washington Department of Ecology

Governor's Office of Regulatory Assistance

DEPARTMENT OF THE ARMY
SEATTLE DISTRICT, CORPS OF ENGINEERS
P.O. BOX 3755
SEATTLE, WASHINGTON 98124-3755

REPLY TO
ATTENTION OF

JUN 28 2007

Regulatory Branch

Western Washington Agricultural Association
Curtis Johnson, President
2017 Continental Place, Suite 6
Mount Vernon, Washington 98273

Reference: Tidegates and Fish Initiative

Dear Mr. Johnson:

This letter is in regard to the development of the Tidegate and Fish Initiative. This has been a joint process that involved the Western Washington Agricultural Association, the U.S. Army Corps of Engineers, and other interested parties working together to develop a delta-wide landscape approach to maintenance of existing tidegates in a manner compatible with the recovery of Skagit River Chinook salmon populations in the greater Skagit delta.

The Seattle District Regulatory Branch supports the current efforts to develop a plan to increase estuarine habitat for salmon smolt production as mitigation for tidegate replacement actions. We believe your efforts to ultimately provide 2,700 acres of restored habitat are laudable. My Regulatory Branch staff is committed to providing assistance in developing a plan that will address Endangered Species Act concerns while facilitating our permit process. We will continue to have a staff member attend the Tidegate and Fish Initiative Work Group meetings to assist in their efforts.

A copy of this correspondence will be furnished to D. Robert Lohn, Regional Administrator, National Marine Fisheries Service, Northwest Region, 7600 Sand Point Way NE, Bin C15700, Building 1, Seattle, Washington 98115-0070 and Jeffrey P. Koenings, PhD, Director, Washington Department of Fish and Wildlife, 600 Capitol Way N., Olympia, WA 98501. If you have any questions or comments concerning our Regulatory Program or if you require any particular support for the plan's development, please contact Mr. Randel Perry, at (206) 764-6985 or via email at randel.j.perry@usace.army.mil.

Sincerely,

Michelle Walker
Chief, Regulatory Branch

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

August 23, 2007

Mr. Curtis Johnson, President
Western Washington Agricultural Association
2017 Continental Place, Ste. 6
Mount Vernon, WA 98273

Dear Mr. Johnson:

Re: Tidegates and Fish Initiative

Through this letter, the Department of Ecology (Ecology) expresses its support for the Tidegates and Fish Initiative (TFI) developed by the Western Washington Agricultural Association, the Washington State Department of Fish and Wildlife, and NOAA's National Marine Fisheries Service with input and participation from the US Army Corps of Engineers, Ecology, and the Governor's Office of Regulatory Assistance.

Ecology supports the TFI proposal to mitigate for impeding fish passage by garnering the support of the agricultural community for restoration of up to 2700 acres in the Skagit River estuary. This delta-wide landscape approach links restoration of functional estuarine habitat with tidegate repair and replacement activities. Ecology's mission to protect water quality and clean up water pollution in accordance with the Clean Water Act will continue via other avenues as well. With the help and cooperation of the agricultural community, we are engaged in identifying ways to improve water quality in agricultural areas through implementation of additional Best Management Practices and other actions.

The support of the agricultural community for estuarine habitat restoration will be a big step forward for Chinook salmon recovery in the Skagit River system. Ecology looks forward to working with you to keep agriculture sustainable while protecting water quality and implementing the TFI's restoration projects.

Sincerely,

Jeannie Summerhays
Regional Director
Northwest Regional Office

cc: Michelle Walker, Corps
Robert Lohn, NOAA NMFS
Jeffrey Koenings, WDFW

CHRISTINE O. GREGOIRE
Governor

STATE OF WASHINGTON
GOVERNOR'S OFFICE OF REGULATORY ASSISTANCE
P.O. Box 40002 • Olympia, Washington 98504-0002 • (360) 902-0883

October 24, 2007

Mr. Curtis Johnson, President
Western Washington Agriculture Association
2017 Continental Place, Ste. 6
Mount Vernon, WA 98273

Dear Mr. Johnson:

Re: Skagit Tidegates and Fish Initiative

The Governor's Office of Regulatory Assistance (ORA) would like to express its support of the work of the Western Washington Agriculture Association, the Washington State Department of Fish and Wildlife, and NOAA's National Marine Fisheries Service in developing the Skagit Tidegates and Fish Initiative (TFI) with assistance from the Washington State Department of Ecology, the US Army Corps of Engineers, and ORA.

While the process has taken time, it shows what can be accomplished when stakeholders work together in a collaborative manner. The delta-wide landscape approach proposed by the TFI, linking the restoration of 2700 acres of critical estuarine habitat with needed tidegate repair and replacement, will benefit both fish and farmers by creating certainty in the permitting process and improving habitat for fish. The work of the TFI demonstrates clear improvements in our regulatory processes.

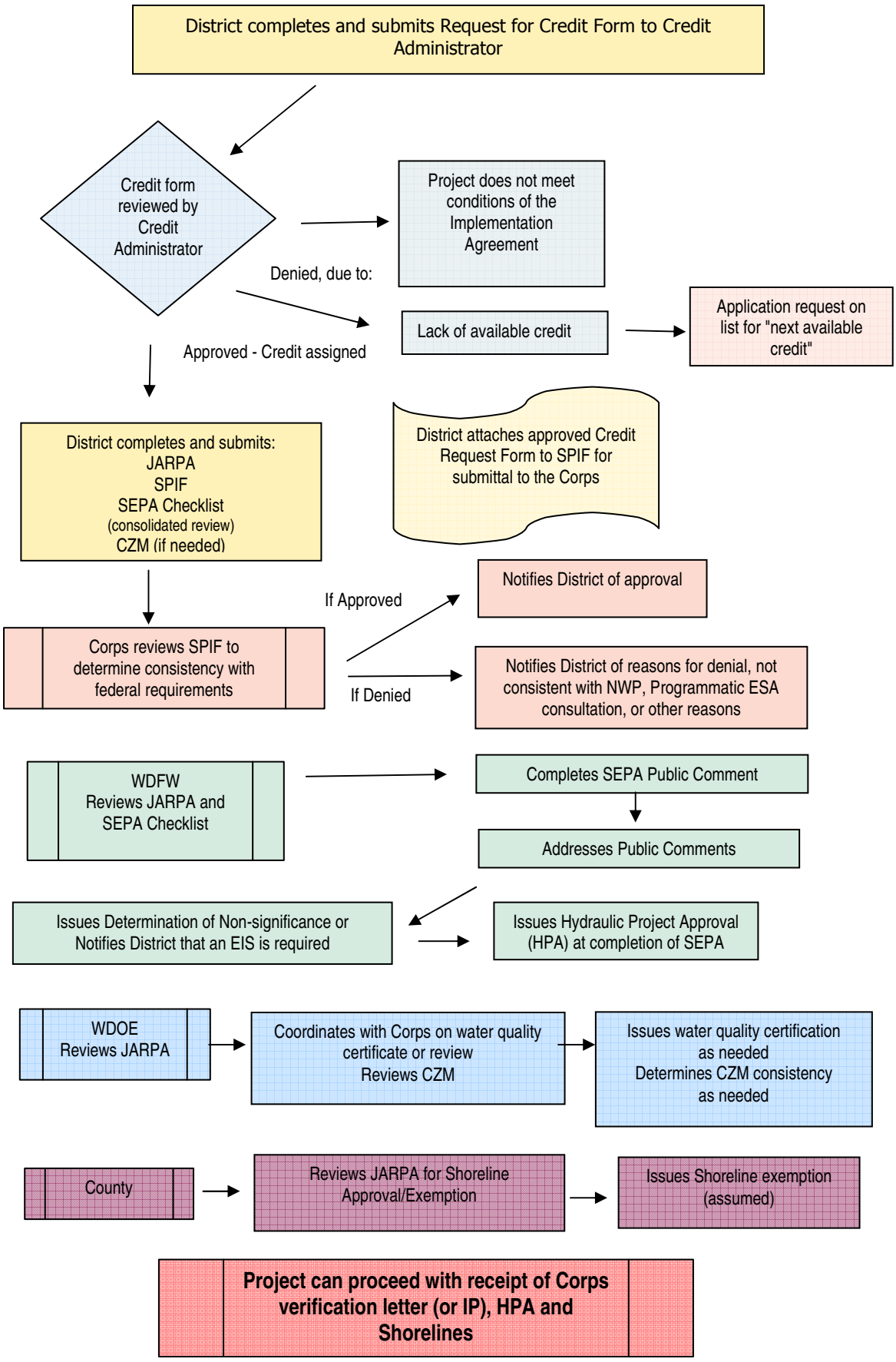
The support and commitment of the Western Washington Agriculture Association to this process has been critical and we know there is still much work to do. If the Governor's Office of Regulatory Assistance can continue to be of assistance in this process, please contact Sheila Hosner at 425-649-7114.

Sincerely,

Faith Lumsden
Director

Cc: Jeannie Summerhays, Ecology
Michelle Walker, Corps
Robert Lohn, NOAA NMFS
Jeffrey Koenings, WDFW

APPENDIX G - TIDEGATE/FLOODGATE MAINTENANCE PERMITTING PATHWAYS


District completes and submits Request for Credit Form to Credit Administrator
Credit form reviewed by Credit Administrator
Project does not meet conditions of the Implementation Agreement
Denied, due to:
Lack of available credit
Application request on list for "next available credit"
Approved - Credit assigned
District completes and submits:
JARPA
SPIF
SEPA Checklist
(consolidated review)
CZM (if needed)
District attaches approved Credit Request Form to SPIF for submittal to the Corps
If Approved
Notifies District of approval
Corps reviews SPIF to determine consistency with federal requirements
If Denied
Notifies District of reasons for denial, not consistent with NWP, Programmatic ESA consultation, or other reasons
WDFW
Reviews JARPA and SEPA Checklist
Completes SEPA Public Comment
Addresses Public Comments
Issues Determination of Non-significance or Notifies District that an EIS is required
Issues Hydraulic Project Approval (HPA) at completion of SEPA
WDOE
Reviews JARPA
Coordinates with Corps on water quality certificate or review
Reviews CZM
Issues water quality certification as needed
Determines CZM consistency as needed
County
Reviews JARPA for Shoreline Approval/Exemption
Issues Shoreline exemption (assumed)
Project can proceed with receipt of Corps verification letter (or IP), HPA and Shorelines

APPENDIX H - U.S. ARMY CORPS OF ENGINEERS SPECIAL PROJECT INFORMATION FORM

Version: [DATE]

U.S. Army Corps of Engineers
Seattle District, Regulatory Branch
P.O. Box 3755
Seattle, Washington 98124

Specific Project Information Form (SPIF)

Skagit Tidegate and Fish Initiative Implementation Agreement

Eligibility for Programmatic Consultation
This application: ☐ Meets all of the requirements of this programmatic consultation ☐ Does not meet all of the requirements of this programmatic consultation. This form constitutes a reference biological evaluation in association with: NMFS reference: USFWS reference:

1. Applicant: _____ **Corps Reference:** _____

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____

2. Agent:

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____

3. Project Location (include Vicinity map):

Section: _____ Township: _____ Range: _____

Latitude: _____ Longitude: _____

Waterbody: _____ County: _____

River Mile: _____ Tributary to: _____

4. Type of Action(s) Proposed:

☐ Minor Repair (see Part 4.1.1)
☐ Major Repair (see Part 4.1.2)
☐ Replacement (see Part 4.1.3)
☐ Permanently Remove tide- or floodgate (see Part 4.5.1)
☐ Operational Improvement (see Part 4.5.2)

5. Project Description:

a. Attach project drawings and, if available, photographs showing the existing tidegate/floodgate, trash rack, work areas, etc.

b. Describe access routes (indicating whether existing or new); staging and stockpiling areas; construction materials, equipment, methods and sequencing; site restoration.

c. How long will it take to construct the project?

List of Requirements

Part 4.3 of the Tidegate and Fish Initiative Implementation Agreement lists the best management practices (BMPs) of the Tidegate and Fish Initiative Implementation Agreement. In order to qualify for coverage under this programmatic consultation you must comply with the BMPs. In the table below place a mark in the "Will Meet" column if you will abide by the BMP. If you are unable to abide by a BMP, place a mark in the "Will Not Meet" column then in the far right column identify which of the BMPs you will not observe. Place a mark in the "Not Applicable" column if the BMP does not apply to your project. If you checked "will not meet" for any of the BMPs, the Corps may request additional information and will need to complete consultations with the U.S. Fish and Wildlife Service, and/or the National Marine Fisheries Service/NOAA Fisheries prior to construction.

Will Meet	Will Not Meet	Not Applicable	Best Management Practices (BMPs) for the Tidegate and Fish Initiative Implementation Agreement	BMPs You Will Not Meet (e.g., BMP 1)?
☐	☐	☐	Work meets the requirements for Nationwide Permit NWP 3, "Maintenance," (Federal Register, March 12, 2007, Vol. 72, No. 47)	
☐	☐	☐	Timing Limitation BMP #1 (see Part 4.3)	
☐	☐	☐	Notification Requirement BMP #2 (see Part 4.3)	
☐	☐	☐	Cofferdams BMPs # 3 - 8 (see Part 4.3.1)	
☐	☐	☐	Salmonid Removal BMPs #9A - 9E (see Part 4.3.2).	

Will Meet	Will Not Meet	Not Applicable	Best Management Practices (BMPs) for the Tidegate and Fish Initiative Implementation Agreement	BMPs You Will Not Meet (e.g., BMP 1)?
☐	☐	☐	General BMPs # 10- 24 (See Part 4.3.3)	

All Skagit Tidegate and Fish Initiative Implementation Plan Conditions Have Been Met. I as the applicant or designated agent have read all the requirements for the "*Tidegate and Fish Initiative Implementation Plan*", dated [DATE]. I certify that this project meets all conditions of the Implementation Plan. In the event that the U.S. Army Corps of Engineers, Seattle District, the U.S. Fish and Wildlife Service, and/or the National Marine Fisheries Service/NOAA Fisheries determines that the conditions have not been met, I agree to comply with all resolution measures in accordance with Corps regulations.

_____

Name of Applicant/Agent (Print)

_____ _____

Signature of Applicant/Agent Date

If the applicant **has checked "Will Not Meet" for any of the above conditions**, then this section must be completed and the applicant must sign below:

1. Why can't you meet all of the conditions of Skagit Tidegate and Fish Initiative Implementation Agreement? _____

2. Why are the impacts of the proposed project "Not Likely to Adversely Affect" ESA species and/or critical habitat? How have you minimized impacts? What alternative best management practices are you proposing to minimize impacts? (Note: If your effect analysis is lengthy, you may attach an addendum.) _____

I, as the applicant or designated agent, have read all the activity and waterway specific conditions and the general implementation conditions for Skagit Tidegate and Fish Initiative Implementation Plan, dated [DATE]. I understand that informal consultation with National Marine Fisheries Service and U.S. Fish and Wildlife Service will be initiated with this form. I will not proceed with construction until I receive written notification from the U.S. Army Corps of Engineers that the proposed work is authorized.

_____
Name of Applicant/Agent (Print)

_____ _____
Signature of Applicant/Agent Date