

WASHINGTON STATE  
DEPARTMENT OF  
E C O L O G Y

## Application for a 2015-2017 Floodplains by Design Project Grant

Submitted applications will be rated to create a ranked list in support of Ecology's FY 2015-2017 Floodplains by Design budget request.

Applications must be submitted electronically via email to Ecology by 5:00 pm, **September 8, 2014**. Send applications to:

**Adam Sant** at [Adam.Sant@ecy.wa.gov](mailto:Adam.Sant@ecy.wa.gov)

**With the Subject line: 2015-2017 Floodplains by Design Project Grant Application**

You will receive confirmation that your application has been received by close of business on September 15.

*Applicants must use this form as provided. No alterations will be accepted.*

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Project Title: Skagit Farms, Fish and Flood Initiative (3FI) – Phase 2

Organization/Jurisdiction Name: The Nature Conservancy  
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Legislative District(s): 40  
County: Skagit  
WRIA(s): Lower Skagit, WRIA 03  
Congressional District(s): 2  
Specific Project Location: Skagit River floodplain  
Major Watershed Project is in: Lower Skagit

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***Full project (or phase proposed herein) should be completed in 3-4 years.  
Project Narrative and Budget are limited to 20 pages.  
Scope of Work, Schedule, Maps and Photos can be in addition to those 20 pages.***

## 1. Short Description of Project (500 words or less)

The Skagit River and its delta are generally recognized as being extremely important for sustaining both salmon and agriculture in Puget Sound. The area is also recognized for being at risk for destructive flooding. Balancing the need to sustain agriculture while finding ways to recover endangered salmon and protect farms and communities from destructive flooding is a challenge being addressed by numerous natural resource and agriculture organizations, including those uniting to resolve these issues under the Farm, Fish and Floods Initiative (3FI) project.

The 2005 Skagit Chinook Recovery Plan (Recovery Plan) calls for a 60% increase in tidal delta rearing habitat for Chinook salmon equating to an additional 1.35M smolts annually (Beamer 2005). Using the Skagit Chinook Plan Model, it has been estimated that this goal will require approximately 2,700 acres of restored estuary. Since 2005, approximately 500 acres of critical estuarine habitat have been restored. The vast majority of this work has occurred on public and tribal lands, while the bulk of future restored habitat will require the conversion of private lands, much of it agricultural, for which the level of support is unknown. The Skagit River Delta is home to the largest and most robust agricultural industry in Puget Sound. Sustaining this industry is a key to the economic viability of agriculture in Skagit County as well as maintaining a way of life important to citizens of the Skagit Valley.

3FI is a partnership effort including Skagit County, Skagit Conservation District, Skagit Dike Partnership, Western Washington Agricultural Association (WWAA), Skagitians to Preserve Farmland (SPF), The Nature Conservancy (TNC), Washington Department of Fish and Wildlife (WDFW), and the National Oceanic and Atmospheric Administration (NOAA). These partners have organized under a signed Memorandum of Understanding (MOU) (Attachment 2) and work as a 3FI Oversight Team agreeing to collaborate to achieve the following mission:

***To create and advance mutually beneficial strategies that support the long-term viability of agriculture and salmon while reducing the risks of destructive floods.***

Phase 1 of the 3FI, funded through a Department of Ecology National Estuary Program grant, will be completed by December 31, 2014. Under the Phase 1 award, the project partners developed a scope of work for hydrodynamic modeling and an Alternative Analysis tool to rank projects for multiple benefits such as salmon recovery, flood risk reduction, and improvement to flood and agricultural infrastructure, while minimizing impacts to farmland. In addition, the project partners developed a Skagit Delta Farmland Preservation Strategy and an Analysis of Skagit County's Agro-Industrial Cluster.

As described in this proposal, TNC is seeking \$397,075 in funding toward Phase 2 of the 3FI effort. The work described in this proposal includes completing hydrodynamic modeling in the Skagit Delta and using the results from the modeling effort, completing the Alternatives Analysis tool to rank potential projects within the Skagit Delta for farm, fish and flood benefits while minimizing impacts to the agricultural industry. Finally, WWAA will conduct outreach to landowners to assess ability and opportunities for taking part in these projects.

## 2. Flood hazard / risk reduction (60 points)

As mentioned above, the Skagit Delta is at risk for destructive flooding. Between 1990 and 2007 the total damage caused by floods was *more than \$84M* (EcoNorthwest 2012). One of the stated goals for 3FI is to reduce the risk of destructive flooding in the Skagit Delta by implementing flood risk reduction alternatives consistent with the 3FI mission. During Phase 1 of the 3FI effort, a Skagit Delta Hydrodynamic Modeling Team (SHDM Team) was assembled to: 1) develop a scope of work for hydrodynamic modeling in the Skagit Delta; and 2) to develop an Alternatives Analysis tool, or “scorecard”, that could be used to rank future projects in the Skagit Delta for farm, fish and flood benefits while minimizing the impacts to agriculture. The SHDM Team is led by WDFW and NOAA and other members included representatives from WWAA, Skagit County, Dike District 17, Dike District 3, Consolidated Dike, Drainage and Improvement District 22, TNC, Skagit Conservation District, and the U.S. Geological Survey.

Some of the most exciting work to come out of 3FI Phase 1 has been the effort to understand where there may be an overlap between conceptual salmon recovery projects and locations where there may be issues with the levee system. This can be seen in the attached Figures 2 – 5:

- *Figure 2* identifies the SHDM project area in the Skagit Delta.
- *Figure 3* identifies the salmon recovery projects identified within the Recovery Plan.
- *Figure 4* shows locations identified by Dike District representatives where levee issues have been observed.
- *Figure 5* depicts conceptual projects that were identified during Phase 1 of the 3FI. These conceptual projects are examples where Chinook recovery projects and levee infrastructure improvements could happen together.

The hydrodynamic modeling effort will model projects from the Recovery Plan and these newly identified projects – twenty-five projects in total. The hydrodynamic modeling work being proposed will provide information about the level of flood risk reduction that may be provided by a specific project or group of projects.

*Figure 1* shows the Alternatives Analysis matrix tool developed by the SHDM Team to be completed as part of this proposal. Each project or group of projects modeled will be scored for five different components related to flood risk reduction:

- 1) Reduces water surface elevation within study area;
- 2) Reduces levee issues by constructing new engineered levees;
- 3) Reduces the risk of unplanned levee overtopping;
- 4) Reduces levee issues associated with scour locations; and
- 5) Improves agricultural drainage by including a flood flow return structure.

Items #1 and #4 above will be informed by the hydrodynamic modeling work while the other components will be informed by non-modeling activities. The SHDM Team mostly anticipates localized flood reduction benefits at or near the project locations. Localized benefits would be specific improvements at project locations as described in items #2-5, which will be documented through the Alternatives Analysis.

In summary, the hydrodynamic modeling and Alternatives Analysis work being proposed will be used by local decision makers to understand the flood risk reduction benefit for various on-the-ground restoration projects in the Skagit Delta. Projects that can demonstrate values for flood protection will have a better chance for community support compared with projects that are only beneficial to salmon recovery.

### **3. Floodplain ecosystem protection or restoration element (60 points)**

As previously noted, the 2005 Skagit Chinook Recovery Plan calls for an additional 1.35M smolts annually, which is estimated to require approximately 2,700 acres of restored estuary including two connectivity projects. These goals will allow more juvenile Chinook salmon to access existing estuarine habitat along the Skagit Delta's bay front, the Swinomish Channel and Padilla Bay. One of the stated goals of 3FI is to restore estuary habitats and functions in the tidal Skagit Delta needed to meet the Recovery Plan goal (approximately 2,700 acres and/or 1.35million smolts) consistent with the 3FI mission. The Recovery Plan lists the loss of tidal delta rearing habitat as the primary limiting factor for Chinook recovery. The 2010 Skagit Watershed Council Strategic Approach emphasized this by identifying restoration of estuary habitat as a tier 1 target area. However, since 2005, only approximately 500 acres of critical estuarine habitat have been restored. Both the Recovery Plan and the 2010 Strategic Approach identified the lack of community support as one of the barriers to estuarine project implementation; with the Recovery Plan noting, "*long-term restoration projects* are socially complex and resource intensive so will need to include elements of mutually understood benefits for most, if not all, interest groups involved." It should be noted that additional challenges related to estuary project implementation include the high cost for these complex projects that involve movement or upgrades to critical infrastructure, complexity of permitting requirements and, therefore, the extended timeline between project conception to completion.

The work described under this Phase 2 of the 3FI effort fills the following gaps in knowledge related to salmon recovery in the Skagit Delta:

#### *1. Data Gap – Landscape Effects of Delta Restoration Projects*

The tidal delta of the Skagit River is a highly complex system influenced by channel connectivity, tidal hydraulics, riverine flows and saltwater mixing. The Recovery Plan goal of implementing an additional 2,200 acres of estuarine habitat restoration in the delta, including two significant connectivity projects, has the potential to significantly affect these dynamics. Major questions exist about the individual and combined effects of estuarine restoration actions on existing habitat, the distribution of flow between the North and South forks of the river, sediment processes, salinity mixing zones and the influence of climate change on these actions. Because there is the potential for implementation of multiple projects to affect the larger dynamics of the system, it is important to analyze these collective impacts in order to make informed decisions that help to ensure that the Recovery Plan can be successfully implemented and to avoid unforeseen impacts/risks. For this reason, completion of hydrodynamic modeling in the Skagit Delta has been on the Skagit Watershed Council's three year work plan for many years

## *2. Data Gap – Prioritized List of Delta Restoration Projects*

The hydrodynamic modeling effort outlined in this proposal will evaluate the multiple benefits of Skagit Delta restoration projects and using the Alternatives Analysis tool, develop a prioritized list of projects that will be used to provide information about the costs and benefits for these projects, increasing the likelihood that a group of projects necessary to meet Chinook recovery goals can be successfully implemented.

## *3. Data Gap – Strategy for Achieving the Skagit Chinook Recovery Plan Delta Goals*

In the Skagit Delta area, there is currently a data gap related to how the Recovery Plan goal of 2,700 acres restored will be achieved. While extensive assessment and inventory of the Skagit watershed has been completed, including the Recovery Plan, only approximately 20% of the goal has been achieved to date. The remaining 80% of estuary restoration needed will largely require conversion of private lands, and there is a data gap that remains related to information needed in order for the local landowners to evaluate participation in identified Chinook recovery projects. By completing the hydrodynamic modeling and Alternative Analysis described in this proposal, information will be produced to allow for conversations with private landowners about ways to maximize benefits from these projects, minimize deleterious impacts, and garner the support of the community and property owners. This proposal includes outreach to landowners and stakeholders, such as Dike and Drainage Districts, as part of a Landowner Feasibility Assessment. WWAA, one of the partners on the 3FI Oversight Team, will lead the development and implementation of a communication and assessment strategy in order to better evaluate and understand the costs and benefits for private property owners participating in salmon recovery, flood risk reduction and infrastructure improvement projects. As will be detailed later in this proposal, part of this communication and assessment strategy will evaluate, measure, and quantify how identified 3FI projects can minimize impacts to farmland and improve agricultural infrastructure and provide benefit to the agricultural community.

The specific objectives for this next phase of the 3FI related to the SHDM Project include:

- 1) Conduct hydrodynamic modeling to estimate benefits and impacts of individual and collective project actions;
- 2) Complete non-modeling data analyses, including generating connectivity and Chinook smolt estimates, for all newly identified projects and updating Chinook estimates for existing Recovery Plan projects using updated methodologies that account for increased channel habitat in marshes adjacent to a restoration site;
- 3) Complete Alternative Analysis and identify ranking for multiple-benefit projects; and
- 4) Develop and implement a communications and assessment strategy in order to better evaluate and understand the costs, benefits and ability for private landowners to participate in salmon recovery and flood risk reduction projects.

With the assistance of the SHDM Team, TNC, NOAA, and WDFW propose to complete the objectives above over a two year period. In addition to these organizations, the SHDM Team includes, Western Washington Agricultural Association, Dike District 3, Dike District 17, Dike and Drainage District 22, USGS, Skagit County, and the Skagit Conservation District. TNC, NOAA, WDFW, and the SHDM Team will work with Pacific Northwest National Laboratory (PNNL) to

complete the hydrodynamic modeling effort to provide data for the Alternatives Analysis. The Skagit River System Cooperative (SRSC) will be contracted to produce landscape connectivity, Chinook smolt production numbers, and channel area projections using updated methodology for all newly identified projects and for relevant projects from the Chinook Recovery Plan. This data will be incorporated into the Alternative Analysis. Other data to populate the Alternative Analysis and efforts to update information about potential projects will be gathered by TNC, NOAA and WDFW.

As described, the Alternative Analysis (Figure 1) is comprised of three goals with an associated set of specific objectives and their measurable indicators against which all projects can be evaluated (Table 1). Each interest group (farms, fish and floods) has one goal and set of objectives and indicators. Each interest also receives equal weight (100 points) in the Alternative Analysis, allowing the SHDM Team to understand how a project contributes to individual and multiple interests. The Alternative Analysis and other SHDM Team work products have been distributed for review and comment in order to ensure that they are supported by various interest groups. As the Alternatives Analysis effort is completed through the proposed process, the results will be distributed again for review and comment.

**Table 1.** Goals, objectives and indicators for each interest group under the Alternative Analysis. Indicators highlighted in blue require modeling to estimate that data and those in green non-modeling analyses.

<b>Fish Goal: Restore Sufficient Estuary Habitat to Produce 1.35 Million Smolts</b>	
<b>OBJECTIVES</b>	<b>INDICATORS</b>
1. Increase Area Subject to Natural Tidal and Riverine Processes.	Modeling: Total project area with restored processes
2. Increase Area of Tidal and Riverine Channels Suitable To Chinook Rearing Fry.	Total number of acre-hours suitable habitat predicted
	Steady state predictions of channel area
3. Increase Chinook Smolt Production	Estimated new smolts produced annually
4. Increase the Landscape Connectivity	Index of connectivity summed across study area
5. Enhance Valued Nearshore Rearing Habitats By Reducing Sediment Impacts.	H,M,L potential for increased sediment storage
6. Maintain and/or Improve Diversity of Tidal Marsh Habitats.	Diveristy metric of habitat types across elevation gradient
<b>Flood Goal: Reduce Flood Damages and Risks to Safety</b>	
<b>OBJECTIVES</b>	<b>INDICATORS</b>
1. Reduce Water Surface Elevation Within the Study Area.	Local flood stage relative to existing conditions
2. Reduce Risk of Levee Failure By Constructing New Engineered Levees.	Linear feet of replaced or relocated levee in known risk locations
3. Reduce Risk of Unplanned Levee Overtopping.	Replaced or relocated levee/sea dike in known overtopping locations
4. Reduce Risk of Levee Failure Associated with Scour Locations.	Includes a known scour site or one predicted by model under existing conditions
5. Improve Agriculture Flood Drainage	Project site includes a flood flow return site identified by CDD#22 & Skagit County
<b>Farm Goal: Protect Short and Long Term Viability of Agriculture</b>	
<b>OBJECTIVES</b>	<b>INDICATORS</b>
1. Minimize Conversion of Farmland.	Acres of converted farmland
2. Minimize Conversion of Farmland By Maximizing Smolts Per Acre Restored.	Predicted smolts/acre of converted farmland (Fish3/Farm1)
3. Support Tidegate Maintenance Through the TFI Implementation Agreement.	TFI credits generated
4. Restore Public Land First.	Landownership
5. Minimize Conversion of Protected Farmland Parcels.	Overlap with existing farmland easements

As shown in Table 1, the data inputs for several indicators from the Alternative Analysis require additional work. Four of the indicators (two fish and two flood) require hydrodynamic modeling. As part of the completion of the Alternatives Analysis, similar to the category to understand the flood risk reduction benefit, there is a section to score the benefit to Chinook and other salmon. These categories include: 1) increase area subject to natural tidal and riverine processes; 2) increase area of tidal and riverine channels suitable to chinook rearing

fry; 3) increase Chinook smolt production; 4) increase landscape connectivity; 5) enhance valued nearshore rearing habitats by reducing sediment impacts; and 6) maintain and/or improve diversity of tidal marsh habitats. Scores for these various objectives will be used to rank the projects for the benefits towards Chinook recovery.

In summary, the efforts proposed will fill the data gaps described above but also play a significant role in increasing the likelihood for successfully implementing projects that address multiple values, and work to successfully implement the Recovery Plan in the Skagit Delta.

**4. Is your project in a Puget Sound Partnership Priority Floodplain? (5 points)**

*(Deschutes, Dungeness, Duwamish/Green, Elwha, Hood Canal, Lake Washington, Lower Skagit, Nisqually, Nooksack, Puyallup, Sauk, Skokomish, Skykomish, Snohomish, Snoqualmie, Stillaguamish, Upper Skagit)*

Answer question 4 here: Yes

No

**5. Other benefits (40 points)**

In addition to restoring estuary habitat and reducing the risk of destructive flooding, another goal of the 3FI is to “protect and improve the agricultural land base and infrastructure consistent with the 3FI mission (secure 20,000 acres of agricultural easements and implement the Tidegate Fish Initiative and the Drainage Fish Initiative).” The TFI, established in 2010, is consistent with the Recovery Plan in calling for an additional 1.35 million smolts and/or up to 2,700 acres of estuary habitat to be restored in the Skagit Delta, including private farmland. In exchange for restored habitat, the TFI allows for credits to be generated from restoration to allow local drainage districts to repair and replace tidegate infrastructure. This proposal connects to the 3FI goal above by developing a better understanding of the improvements to infrastructure through the Alternatives Analysis and how to ensure that TFI is successful and credits are available for use.

The Alternatives Analysis includes criteria related to farm benefits and/or impacts informed by the agricultural representatives on the SHDM Team. Those objectives to be scored include:

- 1) Minimize conversion of farmland by maximizing smolts per acre restored;
- 2) Support tidegate maintenance through the TFI implementation Agreement (meaning projects that earn more TFI credits will receive more points in the Alternatives Analysis);
- 3) Restore public land first to minimize impacts on private landowners and agricultural lands;
- 4) Minimize the conversion of farmland parcels.

In addition, several of the objectives to be scored for flood risk reduction (described above) in the Alternatives Analysis will provide value to the agricultural community since those efforts will seek to measure the value of a given project’s relationship to levee improvements or improvements to agricultural drainage. These could be considered improvements to agricultural infrastructure but will be scored specific to flood reduction benefits.

Another component of this proposal related to agriculture and the need to better understand concerns of private landowners involves a Landowner Feasibility Assessment. A communication and assessment strategy will be developed in order to better understand the costs, benefits and ability of private property owners to participate in salmon recovery and flood risk reduction

projects, and if so, under what terms. WWAA will lead an effort, in cooperation with the SHDM Team, to develop and implement a strategy to reach out to landowners in order to measure and assess the ability of private landowners to participate in salmon recovery and flood risk reduction projects identified by the Recovery Plan and the SHDM Project. WWAA has communicated to landowners at a very high level that maps and models are being developed for potential restoration project locations. It is now time to move forward with an assessment focused on specific locations and discussions with the owners of the land being identified through various planning efforts for salmon recovery, flood risk reduction and infrastructure improvements.

This landowner outreach effort will be coupled with outreach to dike and drainage district commissioners about the details of TFI and conversations about the agricultural community's options for generating credits under the TFI to maintain tidegate infrastructure. One of the 3FI goals is to help implement the TFI to meet the Chinook Recovery goal and provide the participating drainage districts the credits they need to maintain their infrastructure and maintain regulatory predictability.

One challenge for 3FI is to consider how to incentivize private landowners in places that have high potential for Chinook recovery and flood protection projects to participate in those projects. One potential option for addressing this challenge and an opportunity to discuss as part of this Landowner Feasibility Assessment is through the development and implementation of an Agricultural Easement with a TFI Option. This concept has been recommended in the Skagit Delta Farmland Preservation Strategy (a product from Phase 1 of the 3FI). The idea of an Agricultural Easement with a TFI option has been recommended in order to create an incentive for a private landowner to participate in estuary restoration through the TFI. A willing landowner could extinguish development rights on their land and create an option to set aside all or a portion of their property for future salmon restoration utilizing an Agricultural Easement with TFI Option. If a salmon restoration project never moves forward on that particular parcel, the land would remain protected as agricultural land. If the salmon restoration project does move forward, the landowner would be paid the fair market value for the portion of the parcel to be converted for the restoration project. The portion of the parcel not converted would remain as farmland and continued to be farmed. Additionally, the 3FI Skagit Delta Farmland Preservation Strategy recommends that the TFI Oversight Committee consider upon recording of an Agricultural Easement with a TFI Option, a percentage of TFI credits be released. The recommendation is that no more than 15% of credits would be released after all land necessary for a project has been enrolled under this type of easement. The easement would be held by the appropriate dike, drainage and improvement district and would offer an alternative to a standard agricultural easement.

Part of this proposal includes funding for continued facilitation for the 3FI Oversight Team to continue to develop this concept of an Agricultural Easement with a TFI Option and provide feedback to work being done during this next phase of 3FI. Certainly, the Landowner Feasibility Assessment will be an important way to communicate the broader goals and challenges of the TFI and 3FI, but also assess the interest or willingness for landowners to utilize an Agricultural Easement with a TFI Option.

## **6. Cost-effectiveness (20 points)**

Cost estimates for contractual work related to hydrodynamic modeling and non-modeling analyses are based on actual bids provided by contractors that are expected to perform the work and based on scopes of work that have already been developed for these efforts. Because 3-D modeling can be expensive, a step wise and phased modeling approach was developed to manage costs (see attached scope of work). The approach includes updating the existing Skagit model with current data and efficient modeling through the use of project groupings and an elimination process to identifying causes of landscape-level and local effects. The SDHM Team recognized the potential for climate change to affect the performance and function of the identified projects and because of this have included in this proposal a modeling phase designed to specifically evaluate these potential effects. Cost estimates for staff time are based on time spent working on the 3FI and SHDM project effort in 2013 and early 2014.

The remainder of the 3FI project is expected to be completed over multiple phases. Completed Phase 1 involved several project components:

- 1) Bringing together 3FI partners to develop mission and goals and common agenda;
- 2) Forming the SHDM Team and developing a scope of work for hydrodynamic modeling in the Skagit Delta and developing the Alternatives Analysis tool;
- 3) Completion of the Skagit Farmland Preservation Strategy; and
- 4) Completion of an Analysis of Skagit County's Agro-Industrial Cluster

Phase 2 will involve completion of the hydrodynamic modeling, the Alternative Analysis, a landowner feasibility assessment, and work to begin implementation of the Skagit Farmland Preservation Strategy. This proposal does not include funding to implement the Skagit Farmland Preservation Strategy; 3FI partners will seek funding from other sources for that body of work.

Phase 3 will involve actual implementation of estuary restoration, flood risk reduction and infrastructure improvement projects as well as continued focus towards the Skagit Farmland Preservation Strategy. Components of estuary and flood risk reduction projects will include easements and land acquisition, feasibility studies, and engineering designs, and actual construction and restoration. No funding for Phase 3 is being requested in this proposal.

This proposal is seeking funds to complete a portion of Phase 2 activities, including:

- 1) Completion of hydrodynamic modeling in the Skagit Delta;
- 2) Completion of the Alternatives Analysis tool and ranking projects based on farm, fish, and flood benefits, and;
- 3) Development and implementation of a landowner feasibility assessment.

## **7. Long-term cost avoidance: (30 points)**

- a. Describe how your project minimizes or eliminates future costs for maintenance, operation, or emergency response. **(15 points)**

This project seeks to understand the relative benefits of projects in the Skagit Delta for farm, fish and flood objectives in an effort to ultimately implement projects that rank as priorities and have landowner support. As mentioned earlier, several objectives to be analyzed that relate to

long term cost avoidance will be: 1) reduce risk of levee issues by constructing new engineered levees; 2) reduce of risk for unplanned levee overtopping; 3) reduce risk of levee issues associated with scour locations; and 4) reduce water surface elevation within the study area (Figure 2).

A study completed by EcoNorthwest in 2012 analyzed the Socioeconomic benefits resulting from TNC's Fisher Slough project in the Skagit Delta. This project converted approximately 60 acres of private farmland to estuary habitat while also improving flood protection and drainage and irrigation infrastructure. As part of the project, farmland was permanently preserved near the project that was at risk for conversion for development. The study estimated a value of more than \$2 million for the abated cost of new infrastructure and reduced cost of flood damage, and that is likely a low estimate. In addition, while the study could not quantify the risk of catastrophic failure of old infrastructure but suggested it would likely be substantial. The 3FI has resulted from the success of projects like Fisher Slough in the Skagit Delta and the projects that the 3FI partners seek to implement through the 3FI will have similar mutual benefits and therefore long-term cost avoidance benefits.

- b. Describe how your project accounts for expected future changes to hydrology, sediment regimes, or water supply resulting from other floodplain management efforts, land use changes, extreme weather events, or other causes. **(15 points)**

The hydrodynamic modeling portion of this proposed project is specifically intended to help understand the future changes to hydrology and sediment regimes as well as other components at a landscape scale when large scale restoration projects are implemented within the Skagit Delta. The tidal delta of the Skagit River is a highly complex system influenced by channel connectivity, tidal hydraulics, riverine flows and saltwater mixing. The implementation of an additional 2,200 acres of estuarine habitat restoration in the delta (~500 acres already implemented), including two significant connectivity projects, has the potential to significantly affect these dynamics. Major questions exist about the individual and combined effects of estuarine restoration actions on existing habitat, the distribution of flow between the North and South fork, sediment processes and salinity mixing zones, and the influence of climate change on these actions. Some restoration actions or combination of restoration actions could impact the landscape dynamics of the delta and our ability to achieve recovery goals across the delta. Because there is the potential for implementation of multiple projects to affect the larger dynamics of the system, it is important to analyze these collective impacts in order to make informed decisions that help to ensure that the Recovery Plan can be successfully implemented and to avoid unforeseen impacts/risks. The SHDM Team identified four important landscape-level effects to be examined through hydrodynamic modeling. These are as follows:

1. Changes to the North Fork-South Fork distribution of water flow
2. Changes to the distribution of sediment.
3. Changes to salinity mixing zone and location of the salt wedge.
4. Changes to existing habitats.

#### **8. Demonstration of need and support (30 points)**

- a. Describe how your project is consistent with the intent of existing floodplain management or habitat recovery plans or is specifically identified through existing plans or work programs. (Elements of the project may have been developed through more than one planning process.

Please identify the planning process used for each major element if they are not from a common plan.) **(15 points)**

The 3FI goal to restore 2,700 acres of estuary and/or 1.35 million smolts is a goal directly linked to the Skagit Chinook Recovery Plan. The hydrodynamic modeling effort described in this proposal has been on the Skagit Watershed Council's (salmon recovery lead entity) three year workplan for several years. Both the Recovery Plan and the Skagit Watershed Council's 2010 Strategic Approach identified the lack of community support as one barrier to estuarine project implementation; with the Recovery Plan noting, "*[long-term restoration projects] are socially complex and resource intensive so will need to include elements of mutually understood benefits for most, if not all, interest groups involved.*" As described earlier in this proposal, this effort will eliminate several data gaps that will allow the community at large to better understand the mutual benefits (or lack of benefits) resulting from the projects that will be modeled.

**Answer question 8.a. here:** Describe which flood control authorities, Tribal Nations, local governments, lead entities, key stakeholders or decision-makers representing floodplain interests located within the river reach or affected by the project have provided letters of support explicitly endorsing the project and its outcomes for their interests. **(15 points)**

The following agencies and organizations have signed a MOU agreeing to collaborate and resolve conflicts in the pursuit of achieving the mission and goals of the 3FI: National Oceanic and Atmospheric Administration (NOAA), Skagitians to Preserve Farmland, Skagit Conservation District, Skagit County, Skagit County Dike Partnership (represented by Dike District 17), The Nature Conservancy, Washington Department of Fish and Wildlife, and Western Washington Agricultural Association. It is anticipated that letters of support will be provided by all these partners as well as the Skagit Watershed Council, the lead entity in the Skagit watershed, by the deadline of September 22, 2014.

#### **9. Readiness to proceed and complete the proposed phase of the project (25 points)**

Phase 2 of the 3FI is ready to proceed as soon as funding is secured. The partners representing the 3FI Oversight Team and the SHDM Team have been working towards the 3FI goals since 2012 and wish to build on the products already developed and the successes to date. The work has been done to develop scope of work for the hydrodynamic modeling and Alternatives Analysis. Contractors have provided bids for the work and have been selected to move forward. NOAA, WDFW, TNC and WWAA are prepared to begin work with the SHDM Team and the 3FI Oversight Team to begin implementation of the proposed work. As mentioned above, this proposal will be part of Phase 2 of the larger 3FI effort that will ultimately include 3 phases.

#### **10. Pilot project and leverage opportunities (25 points)**

- a. If applicable, describe how your project could serve as a pilot effort or result in changes or results with broader impacts to the state. **(10 points)**

This 3FI proposal and project will serve as an example for how the farm, fish, and flood interests related to projects can be objectively scored and ranked based on objectives developed by a multi-disciplinary team. The 3FI partners are hopeful that the larger 3FI effort will ultimately be an example of how organizations and agencies can collaborate to achieve mutual goals. This could be particularly useful in other parts of the state where there are conflicts between farm, fish and flood interests.

- b. If applicable, describe how your project leverages existing investments, such as SRFB, FCZDs, Dike Districts, TMDLs, WWRP, ESRP, NEP, and other funding sources. Evidence of this will be based on the amount and diversity of the leveraged funding sources. **(10 points)**

This project will leverage the \$305,000 investment from the National Estuary Program (NEP) between 2012 and 2014 along with the additional \$105,000 in matching funds, which funded Phase 1 of 3FI. NOAA will provide match for this proposal for their work in the hydrodynamic modeling and completion of the Alternatives Analysis providing additional leverage. Additionally, TNC has submitted a proposal to the Washington State Salmon Recovery Funding Board (SRFB) for 3FI. If successful (unknown until December 2014), this will provide additional leverage and ability to further advance 3FI goals.

- c. If applicable, describe how your project addresses inequity or social justice issue by benefitting underserved communities. **(5 points)**

Not applicable.

**11. Budget** (add more tasks as needed).

Task	Amount Requested from Ecology*	Other Funding for Project** (20% of Total Cost Minimum)	Total Cost
Task 1--Administration	79,906	-	<b>79,906</b>
Task 2--Hydrodynamic Modeling, Non-modeling Analyses, and Alternatives Analysis	271,069	87,750	<b>358,819</b>
Task 3--Landowner Feasibility Study	46,100	11,525	<b>57,625</b>
<b>Total</b>	<b>397,075</b>	<b>99,275</b>	<b>496,350</b>

\*Amount requested from Ecology under this grant program

\*\*Other sources of funding dedicated to this project. Insert narrative below that details what the source of funding is and whether or not it has been received or applied for but not yet received. Match must be at least 20% of Total Project cost.

**Narrative and/or Table of other funding sources for project, here:**

The Nature Conservancy has also submitted a proposal for 3FI Phase 2 to the Washington State Salmon Recovery Funding Board (SRFB) to fund the hydrodynamic modeling (though not the modeling for climate change affects) and Alternatives Analysis efforts. It will not be known until December 2014 if this SRFB proposal is successful. It is anticipated if proposals to both the SRFB and Department of Ecology's Floodplains by Design program are successful, TNC will seek permission to use a portion of the Floodplains by Design funding to complete components of the hydrodynamic modeling not funded by SRFB, conduct the landowner feasibility assessment, and also begin Phase 3 work to conduct engineering and feasibility studies and/or begin seeking easements for priority projects with landowner support.

12. **SCOPE OF WORK:** Please attach a Scope of Work and schedule. If your proposal is a phase of a larger multi-year project, please place this proposal in the context of the overall project and provide preliminary cost projects to complete the project.

See attached Scope of Work.

13. **Maps:** Please attach at least two (2) maps to your application. The first map should be a vicinity map and the second should be a map of your project.

See Figures 2 -5 at the end of this document

14. **Planting Maintenance/Survival:** If your project includes plantings, please provide a description of how you will ensure plant survival and maintenance.

Not applicable

15. **Photos:** Photos are not required, but if you think they enhance our understanding of your application, please include them. We are particularly interested in "before" photos that can be matched with "after" photos.

Not applicable

16. **Executive order 05-05, Archaeological and Cultural Resources** (online at [http://www.governor.wa.gov/office/execorders/eoarchive/eo\\_05-05.pdf](http://www.governor.wa.gov/office/execorders/eoarchive/eo_05-05.pdf)) directs state agencies to review all capital construction projects for potential impacts to cultural resources to make sure that reasonable action is taken to avoid adverse impacts to these resources. If this grant program is funded by the 2015 Legislature, successful grant applicants will be required to submit additional information to Ecology to comply with this Executive Order.

**Additional factors in ranking and award:** This is a very new funding source. To ensure that projects meet the objectives of the program, these additional factors will be considered in creating the proposed funding list:

- **Balance of project types:** Balance funding ready-to-proceed construction projects with funding pre-construction activities. This balance in project types is vital to ensuring success over time.
- **Geography:** There is strong interest in ensuring that projects in all areas of the state receive funding.
- **Advancing multi-benefit floodplain management:** It is important that the project list advance the principles and practical application of multi-benefit floodplain management.

#### Certification

I certify to the best of my knowledge that the information provided above is true and correct and that I am legally authorized to sign and submit this information on behalf of the organization applying for this grant.

Signature

Date

Printed name and Title

Name of Organization Applying for Grant

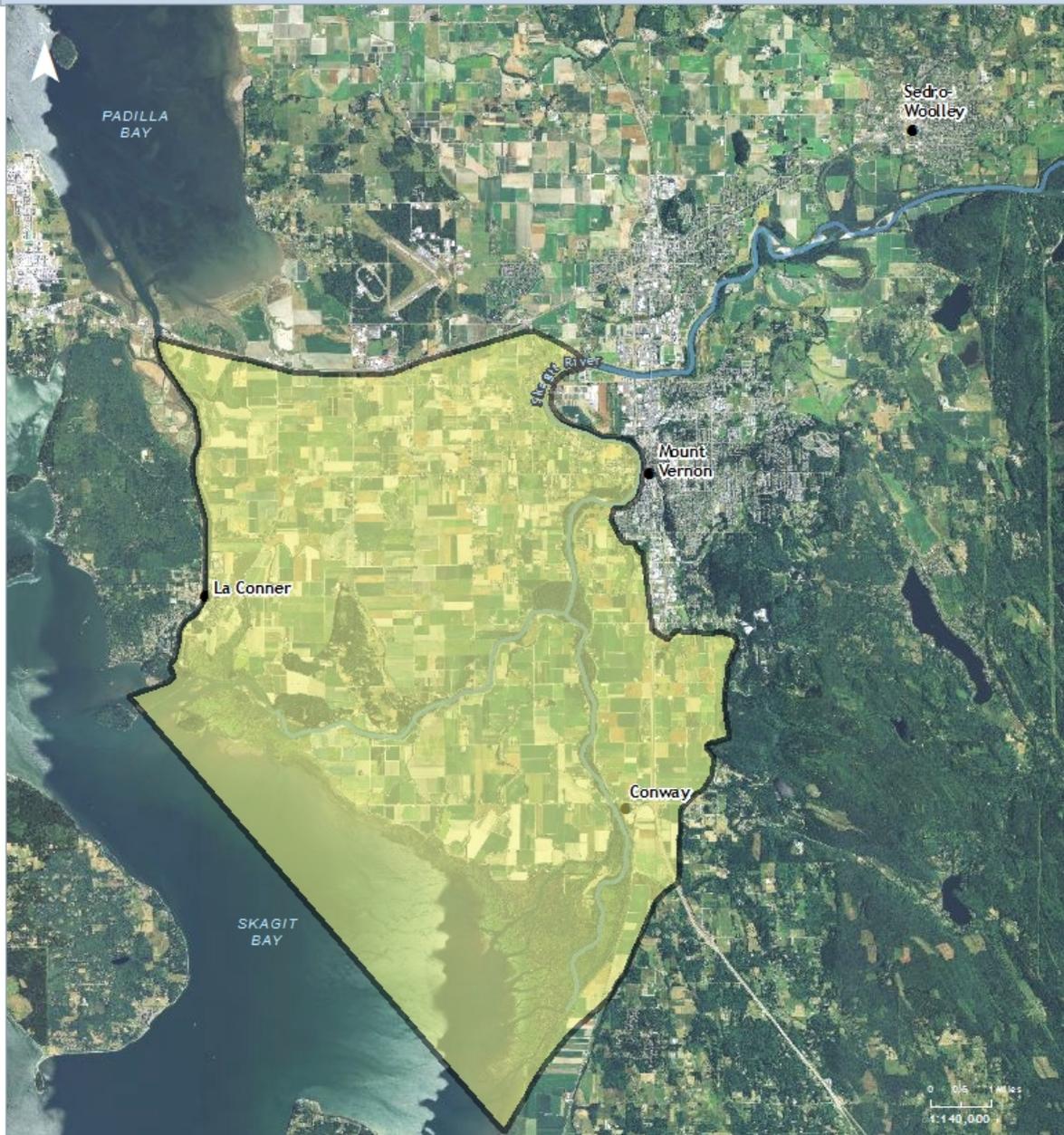
Melissa A. Garvey 9/8/2014

Melissa A. Garvey, Deputy State Director

The Nature Conservancy



## Skagit Delta Hydrodynamic Project Study Area

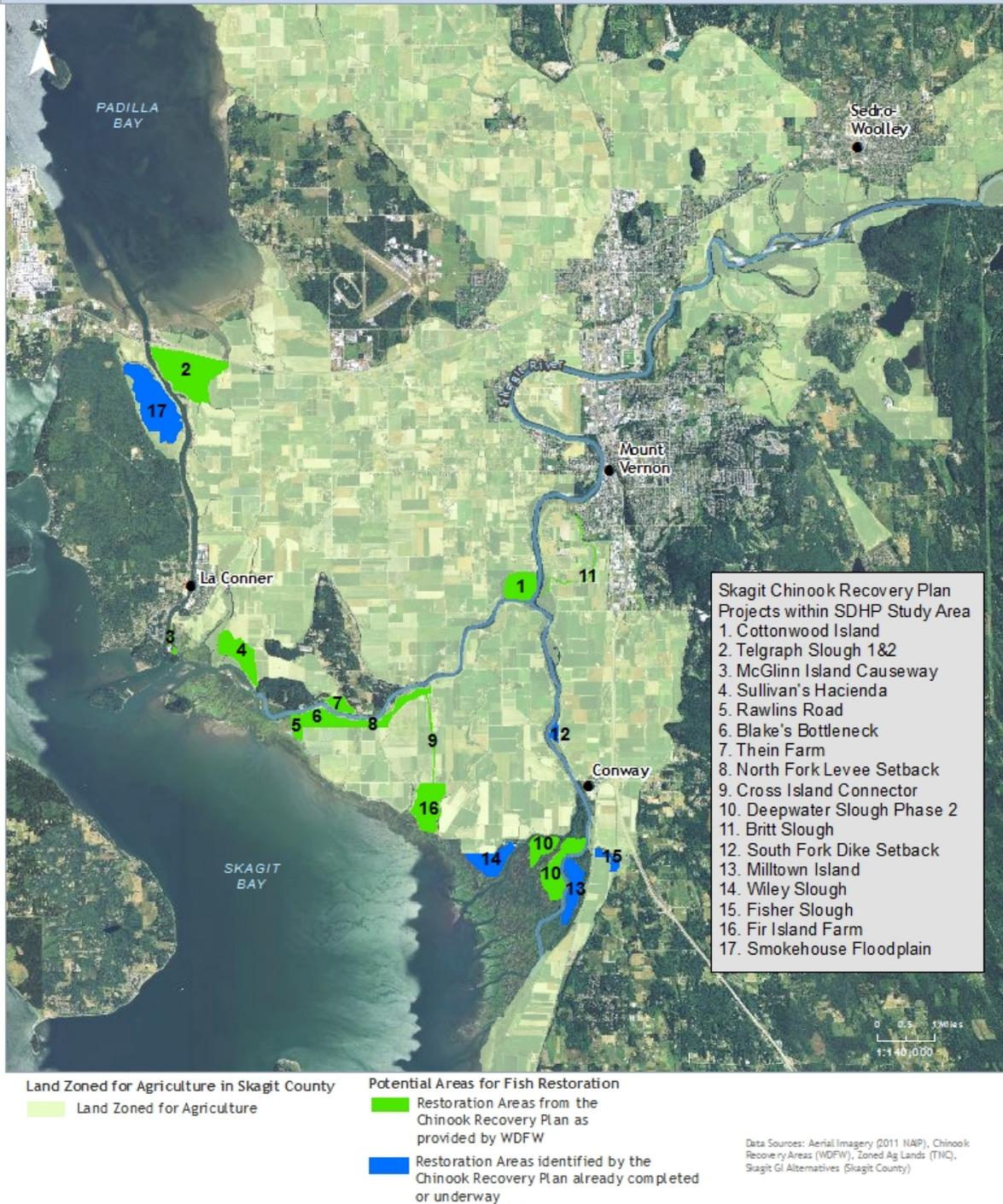


Skagit Delta Hydrodynamic Project Study Area  
Project Study Area outline

Data Sources: Aerial Imagery (2013 NAIP),  
Project Study Area (NOAA)

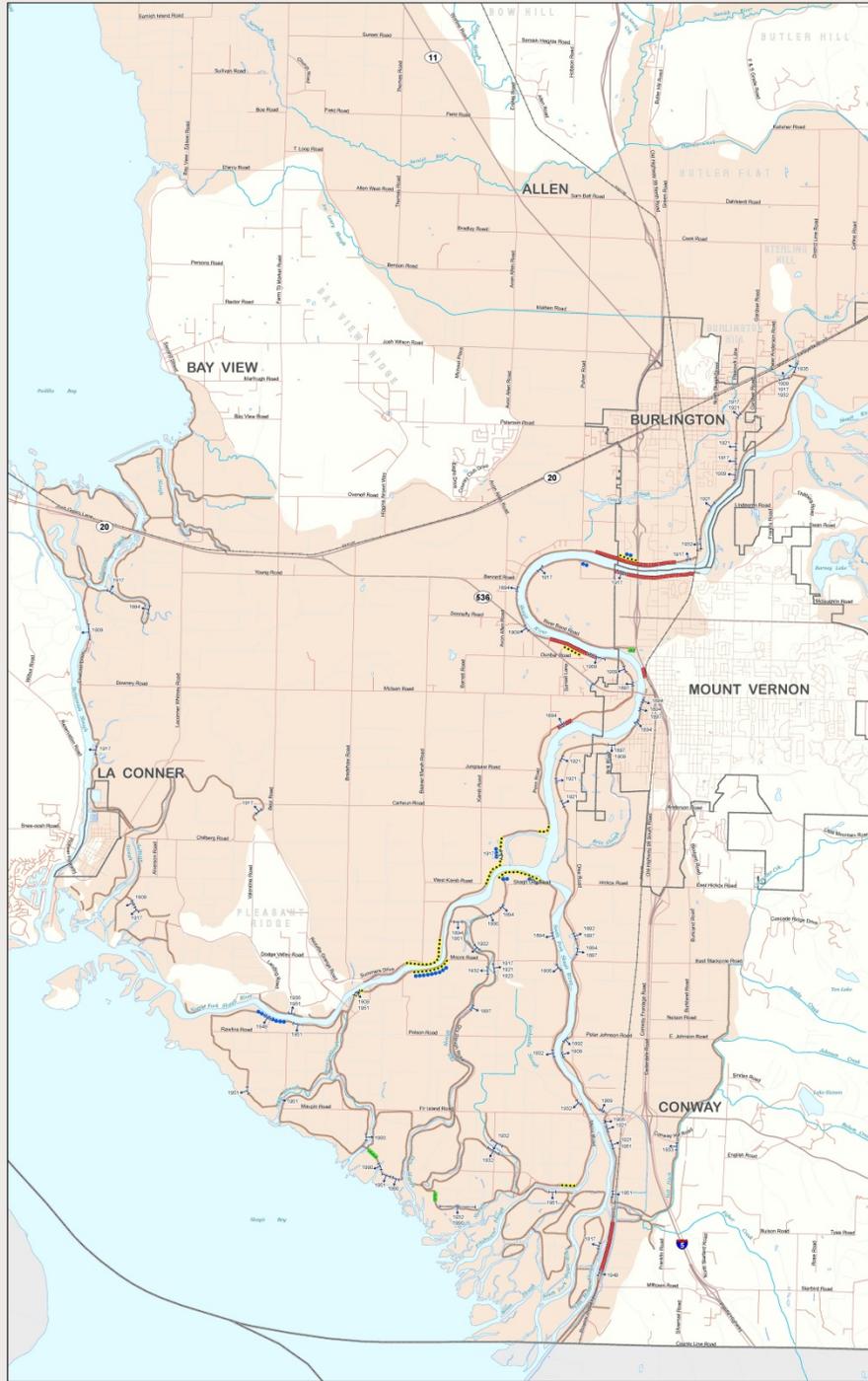
**Figure 2.** Skagit Delta hydrodynamic project study area.

## Implemented and Proposed Salmon Recovery Projects from Skagit Chinook Recovery Plan



**Figure 3.** Implemented and potential salmon recovery projects from the Skagit Chinook Recovery Plan.

# Flood Event Levee Issue Map Lower Skagit River Basin Skagit County Washington



### Legend

- Dike
- Overlapping
- Repair or Failure Damage Area
- Seepage
- Historic Dike Failure Location and Direction
- Historic Dike Locations
- FEMA 100 Flood Plain
- Railroads
- Incorporated Areas

### DATA SOURCE

Historic dike failure locations where known failures of dikes have occurred. Data source for dike failure location and year are from "Floods in the Skagit River Basin, Washington", U.S. Geological Survey, Water Supply Paper 1102, 1981.

Historic dike failures are shown and other areas with their record during flood events was then a 100 year flood. These failures will result in hundreds of foot plain areas.

Isolated (not flooded) areas will occur during the 100 year flood, but generally spanning the entire flood plain shown will be inundated.

### 100 YEAR FLOOD

The large flood depicted on this map is based on the FEMA regional 100 year flood. This flood would have approximately a 1% chance of occurring in any given year.

Some FEMA mapped areas within the 100 year flood have been included within the flood plain shown.

If such a flood were to occur, many thousands of homes would be flooded. Thousands of people may have to be evacuated, and numerous public facilities and businesses could be shut down. In some neighborhoods flood waters could be deep and currents swift. Many roads would become impassable and extremely dangerous to use.

Isolated wetlands constitute a flood greater than the 100 year flood can occur.

### GIS Data Source

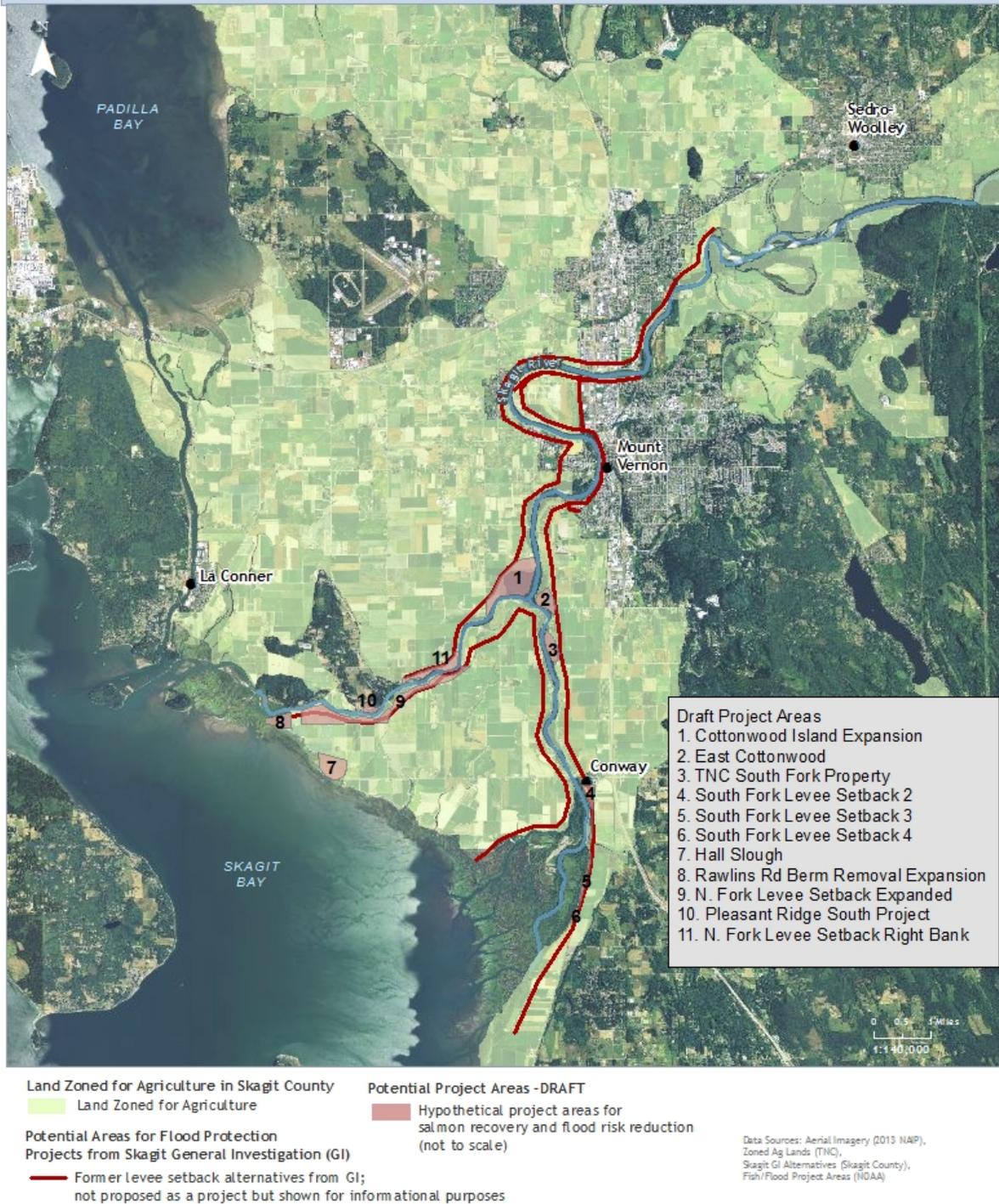
In its continuing efforts to perform landscape vegetation and to improve customer service by expanding the availability of their data, the Skagit River Management Agency (SRMA) has selected the GIS Data Source. Skagit County is the primary data source and SRMA will use the data to support its planning and management activities. The product consists of a series of information layers that are used to support the GIS system. The data layers are described in support of the management activities. They do not replace the paper FIFDs.

Note: Map content was developed in 1999 by the U.S. Army Corps of Engineers and Skagit County. For further information contact Skagit County Public Works, Skagit River Management Division.

Map Produced by Skagit County GIS  
06.2.2015

Figure 4. Flood event levee issue map for Lower Skagit basin.

# New and Expanded Project Concepts



**Figure 5.** New conceptual project areas identified by SHDM Team, some that could address levee issues and benefit salmon recovery efforts.

## Scope of Work and Timeline

### Farms Fish and Flood Initiative – Phase 2

This proposal identifies three tasks:

- 1) Project Management
- 2) Hydrodynamic modeling, non-modeling analyses, and the Alternatives Analysis; and
- 3) A landowner feasibility assessment.

Under Task 1, The Nature Conservancy (TNC) will provide overall project management and management of the award, if successful. Guided by the Skagit Delta Hydrodynamic Model Team (SHDM Team), TNC, the National Oceanic Atmospheric Administration (NOAA), and Washington Department of Fish & Wildlife (WDFW) will co-lead Task 2. Western Washington Agricultural Association (WWAA) will lead Task 3 efforts. Contractors will complete the hydrodynamic modeling, portions of the non-modeling analyses, and facilitation of the Alternatives Analysis with oversight from TNC and NOAA as appropriate.

#### Task 1 – Project Management

TNC, the RECIPIENT, will provide overall management of the award and develop and manage all subawards and contracts associated with project work. TNC will assist partners and Task Leads identified within this scope of work to coordinate and develop deliverables on schedule. The RECIPIENT will perform the following:

- The RECIPIENT will administer the project. Responsibilities will include, but not be limited to: maintenance of project records; submittal of payment vouchers, fiscal forms, and progress reports; compliance with applicable procurement, contracting, and interlocal agreement requirements; application for, receipt of, and compliance with all required permits, licenses, easements, or property rights necessary for the project; and submittal of required deliverables.
- The RECIPIENT will manage the project. Efforts will include conducting, coordinating, and scheduling project activities and assuring quality control. Every effort will be made to maintain effective communication with the RECIPIENT's designees; grant managers at Ecology; all affected local, state, or federal jurisdictions; and any interested individuals or groups. The RECIPIENT must carry out this project in accordance with any completion dates outlined in this agreement.
- The RECIPIENT will ensure this project is completed according to the details of this agreement. The RECIPIENT may elect to use its own forces or it may contract for professional services necessary to perform and complete project-related work.

#### Task 1 Deliverables:

- Quarterly progress reports and financial vouchers
- Final project summary report (December 2017)

## **Task 2 - Hydrodynamic Modeling, Non-modeling Analyses, and Alternatives Analysis**

Subtask 2.1 – 2.3 below describe the hydrodynamic modeling work. Subtask 2.1 updates the existing hydrodynamic model developed by Batelle and establishes baseline conditions. Subtask 2.2 is the evaluation of the data from Subtask 2.1 and includes additional model runs to evaluate the projects and landscape effects. Subtask 2.3 will be implemented only if climate change sensitivity is detected. Subtask 2.4 involves the non-modeling analyses work, and Subtask 2.5 is the completion of the Alternatives Analysis

### **Subtask 2.1 – Hydrodynamic Modeling Phase 1**

2.1.1 Update existing model with recent river bathymetry and other new geometry and hydraulic data. Run this model to get baseline conditions.

2.1.2 Develop a detailed description of restoration projects involving additional review of topography, Lidar, and aerial photos sufficient to render them accurately in the model.

2.1.3 Input the geometry for all of the restoration projects into the model and run them collectively. If water surface elevation data is available (data supplied by an outside source), the model will be calibrated at selected discharges.

2.1.4 Use the preliminary data from the model run to evaluate the overall effects of the restoration projects by comparing them to the existing conditions. This step determines whether there are any system-wide effects which are defined as:

- a. Changes in the balance of flow between the north and south forks of the Skagit River.
- b. Changes in the balance of sediment discharge between north and south forks. Since the model does not directly measure sediment transport, surrogates will be used.
- c. Relative changes in salinity and the extent of upstream travel of the salt water wedge.
- d. Pronounced effects on habitat in one fork or the other.

### **Subtask 2.2 – Hydrodynamic Modeling Phase 2**

2.2.1 If there are no system-wide effects, examine local changes to understand the impacts of the projects and collect data for the Alternatives Analysis. Look for inter-project effects and remove larger project(s) that might mask the effects of smaller projects. It is assumed that the data output from this one or multiple runs would let the SHDM Team evaluate the indicators needed for the Alternative Analysis.

2.2.2 If there are system-wide effects, reduce the model period to focus on when the effects are most critical and then remove the group that is most likely causing the effects. If the effects remain, remove the next likely group until the effects are no longer present.

2.2.3 After the groups of influence are identified, remove the largest projects that are likely causing the effect iterative a maximum of four times until the projects that drive the effect of interest is identified. Results from these collective runs feed into the Alternative Analysis.

### **Subtask 2.3 – Hydrodynamic Modeling Phase 3**

2.3.1 After full analysis is complete, examine for climate change effects. These conditions could affect agricultural performance, flood risk, or habitat. If there is a likelihood of deleterious

effects, rerun the existing conditions using the middle estimate of sea level rise and three peak discharge estimates from climate change predictions.

2.3.2 Rerun the same climate change scenario in the model with the proposed projects running the same boundary conditions.

#### **Subtask 2.4 – Non-modeling Analyses**

2.4.1 Generate data inputs for the 25 identified conceptual projects for four indicators: Chinook smolt estimates; improvements to landscape connectivity; channel area development; and habitat diversity.

2.4.2 Finalize the draft GIS data developed during 3FI's Phase 1 for all projects.

2.4.3 Obtain the original GIS polygons from Skagit River Systems Cooperative (SRSC) for the Chinook Recovery Plan projects. Finalize the GIS-based indicator data for all 25 projects.

2.4.4 For all projects not included in the Recovery Plan, contract with SRSC to generate the local and landscape connectivity, channel area, and Chinook smolt estimates using existing and updated Skagit Chinook Recovery Plan methods. SRSC to develop a tool for estimating habitat formed in adjacent marshes. This revised channel area estimate will be used for all relevant new projects as well as relevant Chinook Recovery Plan projects to produce improved estimates for Chinook benefit.

#### **Subtask 2.5**

2.5.1 After assembling data from Subtask 1 and 2, NOAA, WDFW, and TNC, in cooperation with the SHDM Team, will complete the Alternative Analysis and rank for their potential to provide multiple-benefits.

#### **Task 2 Deliverables**

- Visuals depicting predicted changes from projects to support outreach. See [http://pugetsound.pnnl.gov/PSGB/PSGB\\_Research/Nearshore\\_Restoration\\_ESRP/Nearshore\\_Restoration\\_Overview.stm](http://pugetsound.pnnl.gov/PSGB/PSGB_Research/Nearshore_Restoration_ESRP/Nearshore_Restoration_Overview.stm) for examples from past projects. (June 2016)
- Final modeling report. (June 2016)
- Standardized Chinook benefits report for all projects not in Recovery Plan and Recovery Plan projects with updated numbers following improved protocols. (June 2016)
- Completed Alternative Analysis for all 25 projects and associated report of results. (December 2016)

#### **Task 3 – Landowner Feasibility Study**

A communication and assessment strategy will be developed and implemented to better evaluate and understand the costs and benefits for private property owners to participate in salmon recovery and flood risk reduction projects. WWAA will lead this effort to develop and implement a strategy to evaluate, measure and assess the costs and benefits for private property owners to participate in salmon recovery and flood risk reduction projects:

##### **Subtask 3.1**

In cooperation with SHDM Team, develop methods and necessary tool or questionnaires for the study

**Subtask 3.2**

Develop strategy and materials for landowner meetings and conduct landowner outreach meetings

**Subtask 3.3**

Complete a report that details the outcomes of the landowner outreach work including how this information relates to the project rankings from the Alternatives Analysis (see Subtask 2.5) and also shares the lessons learned from this study

**Deliverables:**

- A final report to evaluate and understand the ability for private property owners to participate in salmon recovery and flood risk reduction projects. The report will include lessons learned through this effort.

**Timeline**

	2015		2016				2017	
	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
Skagit Delta Hydrodynamic Modeling								
Non-modeling analyses								
Alternatives Analysis								
Landowner Feasibility Assessment								

## Attachment 2 - 3FI MOU

### Memorandum of Understanding By and Between

**The Nature Conservancy  
National Oceanic and Atmospheric Administration  
Skagit County  
Skagitonians to Preserve Farmland  
Washington Department of Fish & Wildlife  
Western Washington Agricultural Association  
Dike and Drainage Partnership  
Skagit Conservation District**

**WHEREAS**, the purpose of this MOU is to formalize the good faith commitments being made by each of the parties listed above, in the spirit of collaboration, to achieve the Farms, Fish and Flood Initiative (3FI) mission; and

**WHEREAS**, the Skagit Delta represents one of the most valuable landscapes within Puget Sound in terms of the richness and desirability of its natural resources and critical habitats and for its diverse agriculture industry with its unique delta infrastructure, making it one of the most productive agricultural valleys in the country; and

**WHEREAS**, lands that comprise the Skagit Delta are at the forefront of a host of contemporary issues involving the need to protect and restore natural resources, recover endangered species, protect tribal treaty rights, protect property and individual property rights, and to maintain a viable agricultural industry by protecting a critical mass of farmland and its flood protection, interior drainage and irrigation infrastructure; and

**WHEREAS**, the Parties are building upon agreements such as House Bill 1418 Report in 2004, Skagit Tribal/Agricultural Accord signed in 2005, the Drainage Fish Initiative signed in 2006, the Guidance on WDFW's Vision for Conservation and Land Acquisition for the Skagit Delta signed in 2008 and the Tidegate Fish Initiative signed in 2010, and actions such as the Fisher Slough restoration and flood protection project, which collectively have allowed for increased trust and collaboration to protect and enhance natural resources and a critical mass of farmland and its infrastructure in the Skagit Delta; and

**WHEREAS**, this Memorandum of Understanding represents good faith commitments which are being made by each of the parties, in the spirit of collaboration, to achieve the 3FI mission which is to create and advance mutually beneficial strategies that support the long-term viability of agriculture and salmon while reducing the risk of destructive floods; and

**WHEREAS**, the 3FI partners all share the same core values of forging relationships and solutions based on mutual benefit and trust; collaborating to ensure all goals are met to achieve the 3FI mission; practicing humility, openness and creativity in exploring ideas

and solutions; respecting confidentiality; treating all 3FI partner's interests equally; honoring tribal treaty rights and sovereignty; respecting the needs, values and cultures of local communities; respecting private property rights and working with willing landowners; and

**WHEREAS**, the Purpose of this Memorandum of Understanding is to establish a framework for how the parties will collaborate and resolve conflicts in the pursuit of achieving the mission and goals of the 3FI.

**NOW THEREFORE BE IT RESOLVED**, This Memorandum of Understanding reflects the collective desire of the Parties to work together to achieve the mission and goals of the 3FI under the framework described in **Appendix A** of this Memorandum of Understanding which may be amended from time to time by the Parties.

DATED this 9 day of April, 2013.

**BOARD OF COUNTY  
COMMISSIONERS  
SKAGIT COUNTY, WASHINGTON**



Sharon D. Dillon  
Sharon D. Dillon, Chair

Ron Wesen  
Ron Wesen, Commissioner

Kenneth A. Dahlstedt  
Kenneth A. Dahlstedt, Commissioner

Attest:

Linda Hamman  
Clerk of the Board

For contracts under \$5,000:  
Authorization per Resolution R20030146

Recommended:

Henry Haff  
Department Head

\_\_\_\_\_  
County Administrator

Approved as to form:

[Signature] 4/4/13  
Civil Deputy Prosecuting Attorney

Approved as to indemnification:

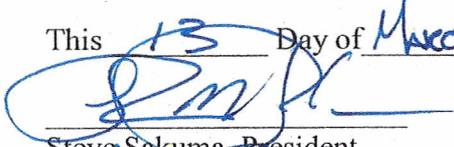
Jessie Nell Harper  
Risk Manager

Approved as to budget:

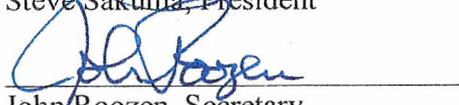
Lusta Lagne  
Budget & Finance Director

**APPROVED BY SKAGITONIANS TO PRESERVE FARMLAND'S BOARD OF DIRECTORS**

This 13 Day of March 2013



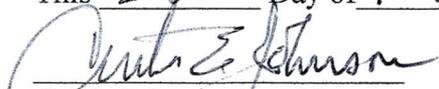
Steve Sakuma, President



John Roozen, Secretary

**APPROVED BY WESTERN WASHINGTON AGRICULTURAL  
ASSOCIATION'S BOARD OF DIRECTORS**

This 28 Day of Feb 20 13

  
Curtis Johnson, President

**APPROVED BY THE NATURE CONSERVANCY'S WASHINGTON STATE  
DIRECTOR**

This 30<sup>th</sup> Day of January 2013

  
Mike Stevens, Washington State Director

**APPROVED BY SKAGIT COUNTY DIKE AND DRAINAGE PARTNERSHIP**

This 15 Day of May 2013

A large, stylized handwritten signature in blue ink, which appears to be "Daryl Hamburg". The signature is written over a horizontal line.

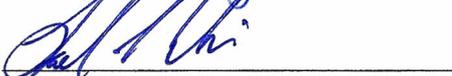
Daryl Hamburg, Chairman

A handwritten signature in blue ink, which appears to be "Stanley Nelson". The signature is written over a horizontal line.

Stanley Nelson, Commissioner

A handwritten signature in blue ink, which appears to be "David Olson". The signature is written over a horizontal line.

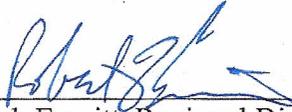
David Olson, Commissioner

A handwritten signature in blue ink, which appears to be "Leonard Eliason". The signature is written over a horizontal line.

Leonard Eliason, Commissioner

**APPROVED BY WASHINGTON DEPARTMENT OF FISH AND WILDLIFE**

This 12<sup>th</sup> Day of Feb 20 13

  
\_\_\_\_\_  
Bob Everitt, Regional Director

**APPROVED BY NATIONAL OCEANIC AND ATMOSPHERIC  
ADMINISTRATION**

This 2 Day of April 2013



Jennifer A. Steger  
Northwest & Alaska Regional Supervisor for Restoration Center

**APPROVED BY SKAGIT CONSERVATION DISTRICT**

This 16<sup>th</sup> Day of April 2013

  
Paul Blau, Chairman

## Appendix A

### **Section 1 - Farms Fish and Flood Initiative (3FI) Mission**

To create and advance mutually beneficial strategies that support the long-term viability of agriculture and salmon while reducing the risks of destructive floods.

### **Section 2 - Farms Fish and Flood Initiative Goals**

The Parties to this MOU agree to collaborate to help achieve the following three (3) goals.

- **Goal 1:** Restore estuary habitats and functions in the tidal Skagit Delta needed to meet the Skagit Chinook Recovery Plan goal (approximately 2,700 acres and/or 1.35 million smolts) consistent with the 3FI mission.
- **Goal 2:** Reduce the risk of destructive flooding in the Skagit Delta by implementing flood risk reduction alternatives consistent with the 3FI mission.
- **Goal 3:** Protect and improve the agricultural land base and infrastructure consistent with the 3FI mission (secure 20,000 acres of agricultural easements and implement the Tidegate Fish and Drainage Fish Initiatives).

### **Section 3 - Farms Fish and Flood Initiative Project Area**

The project area covered under this MOU generally includes all lands downstream of the City of Sedro-Woolley.

### **Section 4 - Core Values**

The Parties to this MOU agree to honor and hold the following values as a demonstration and commitment to each other in order to achieve the goals of the 3FI

1. Forge relationships and solutions based on mutual benefit and trust.
2. Collaborate to ensure all goals are met to achieve 3FI Mission.
3. Practice humility, openness and creativity in exploring ideas and solutions.
4. Respect confidentiality.
5. Treat 3FI partner interests equally.
6. Respect the needs, values and cultures of local communities.
7. Respect private property rights and work with willing landowners.
8. Honor treaty rights and tribal sovereignty

### **Section 5 - Decision Making**

The Parties to this MOU agree to strive for consensus on all decisions. Where this is not possible the parties agree to employ the process described in the Modified Consensus Decision Tree attached hereto as **Exhibit A**.

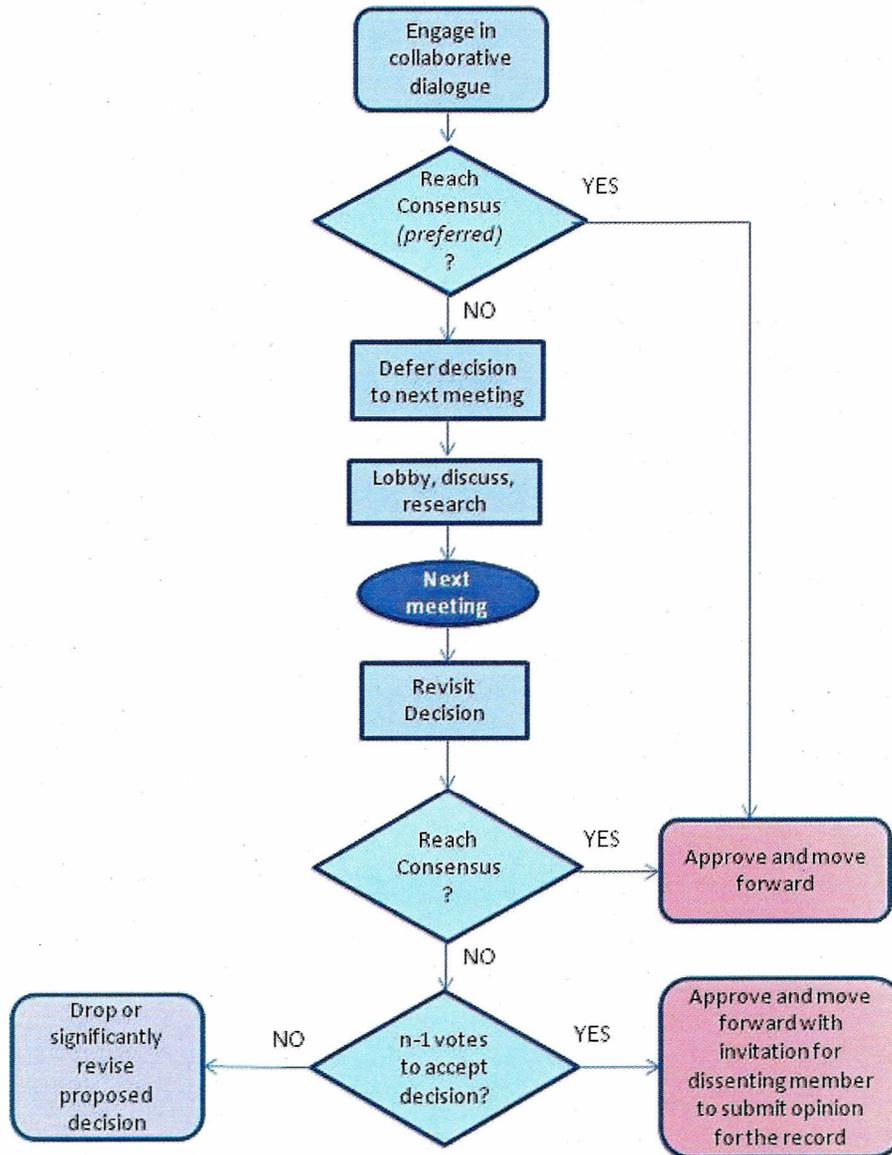
## **Section 6 – Voluntary Participation**

- 1) Parties to this MOU agree to work together voluntarily in a collaborative manner.
- 2) Parties may terminate their participation in writing, in 3FI and the 3FI MOU at any time.

# Exhibit A

## THE 3FI APPROACH TO DECISION MAKING\*

Revised 4-17-13



\* Decisions reached by consensus is the default 3FI decision making model. Voting is an exception to this process and used only as a last resort.



## SKAGIT COUNTY BOARD OF COMMISSIONERS

RON WESEN, First District  
KENNETH A. DAHLSTEDT, Second District  
SHARON D. DILLON, Third District

April 9, 2013

Kris Knight  
The Nature Conservancy  
410 North Fourth Street  
Mount Vernon, WA 98273

RE: Farm, Fish, and Flood Initiative Memorandum of Understanding

Dear Mr. Knight,

Regarding the enclosed signed Memorandum of Understanding (MOU), by and between Skagit County; the Nature Conservancy; National Oceanic and Atmospheric Administration; Skagitians to Preserve Farmland; Washington Department of Fish & Wildlife; Western Washington Agricultural Association; and the Dike and Drainage Partnership, we would like to make one clarification concerning the phrase "respect confidentiality."

Skagit County's position is that the Farm, Fish, and Flood Initiative (3FI) must be in relation to the County's statutory obligations for transparency, such as pursuant to the public records act (RCW 42.56) and the open public meetings act (RCW 42.30), etc. Nothing in the 3FI process described in the MOU would necessarily be confidential or exempt from public disclosure.

Sincerely,

BOARD OF COUNTY COMMISSIONERS  
SKAGIT COUNTY, WASHINGTON

Sharon D. Dillon, Chair

Ron Wesen, Commissioner

Kenneth A. Dahlstedt, Commissioner

BCC/db:mm

Enclosure

Mr. Knight  
Page 2  
April 9, 2013

cc: Steve Sakuma, Skagitonians to Preserve Farmland  
John Roozen, Skagitonians to Preserve Farmland  
Curtis Johnson, Western Washington Agricultural Association  
Mike Stevens, The Nature Conservancy  
Daryl Hamburg, Dike and Drainage Partnership  
Stanley Nelson, Dike and Drainage Partnership  
David Olson, Dike and Drainage Partnership  
Lorna Ellestad, Dike and Drainage Partnership  
Bob Everett, Washington State Department of Fish & Wildlife  
National Oceanic & Atmospheric Administration