US Army Corps
of Engineers®
Seattle District

Skagit River Flood Risk Management General Investigation

Skagit County, Washington

Draft Feasibility Report and Environmental Impact Statement

Appendix I – Public Involvement

May 2014

Public Involvement Appendix

- 1. Notice of Intent for the Skagit River Flood Damage Reduction Study, 20 November 1997
- 2. Skagit River GI Scoping Summary Report, October 2011, revised February 2012
- 3. April – June 2012 Public Outreach Report
- 4. Public Comments and Responses on the Draft FR/EIS (pending)

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1) Notice of Intent for the Skagit River Flood Damage Reduction Study, 20 November 1997 (62 FR 62019)

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DEPARTMENT OF DEFENSE

Department of the Army

Corps of Engineers

Intent To Prepare a Draft Environmental Impact Statement (DEIS), Skagit River Flood Damage Reduction Study, Skagit County Washington

AGENCY: U.S. Army Corps of Engineers, DoD.

ACTION: Notice of Intent.

SUMMARY: Seattle District, U.S. Army Corps of Engineers is proposing to prepare an Environmental Impact Statement (EIS) for the Skagit River Flood Damage Reduction Study. This study was requested by Skagit County, Washington because of significant flooding on the Skagit River. Skagit County will provide fifty percent of the funding for this study. An EIS is being prepared because of the potential for impacts on environmental resources, particularly salmonid habitat, and the intense public interest already demonstrated in addressing the flooding problems of the Skagit River. The study is expected to take approximately four years to complete.

DATES: Persons or organizations wishing to submit scoping comments should do so by December 30, 1997. Public comment may also be made at the scoping meeting (date and location to be announced later). Notification of scoping meetings times and locations will be sent to all agencies, organizations and individuals on the project mailing list.

ADDRESSES: Requests for inclusion on the mailing list, future documents, and all comments on the proposed project should be sent to: Michael Scuderi, NEPA Coordinator, Seattle District, U.S. Army Corps of Engineers, P.O. 3755, Seattle, Washington 98124–2255, ATTN: CENWS–EN–PL–ER, telephone (206) 764–3479, FAX (206) 764–4470, or e-mail Michael.R.Scuderi@usace.army.mil.

FOR FURTHER INFORMATION CONTACT: Contact General questions concerning the proposed action and the Draft EIS can be directed to: Michael Scuderi, Study Environmental Coordinator (see address above) or Forest Brooks, Project Manager, Seattle District, U.S. Army Corps of Engineers, P.O. 3755, Seattle, Washington 98124–2255, ATTN: CENWS–EN–PL–CP, telephone (206) 764–3456, FAX (206) 764–4470, or e-mail Forest.C.Brooks@usace.army.mil.

SUPPLEMENTARY INFORMATION:

Background

The purpose of the Skagit River Feasibility Flood Control study is better identify the Skagit River flood problems and opportunities that exist to relieve flooding and reduce flood damages, and to develop a flood damage reduction plan that fits Federal law and policy, and is within the capability of the local sponsor to support their required share of the project costs. The Skagit River Basin is located in northwestern Washington state and encompasses 3,140 square miles. The major cities on the Skagit River delta, Mt. Vernon, Burlington, and Sedro Woolley, lie about 60 miles north of Seattle. The study area for the feasibility study will be the Skagit River floodplain downstream of Concrete (river mile 54), with prime emphasis on the Skagit River delta west of Sedro Woolley (river mile 22). Authority for this study is contained in Section 209 of the 1962 Flood Control Act, Pub. L. 87–874. That section authorized a comprehensive study of Puget Sound, Washington and adjacent Waters, including tributaries, in the interest of flood control, navigation, and other water uses and related land resources.

Alternatives

In the reconnaissance phase for the Skagit Study, the Corps identified two alternative courses of action for further analysis in the feasibility study:

(1) No Action. Allow the current levee system to remain in place without a major system wide upgrade. Individual diking districts would continue to operate, maintain, and repair the existing levee system.

(2) Construct a coordinated levee improvement project that would provide a higher level of flood protection (100-year or greater) for the Burlington and Mt. Vernon urban areas through a system of new and raised levees with overflow sections at critical locations in rural areas designed to overtop without failure (during 25-year or greater events). Sections of the rural levees would also be upgraded to provide a uniform level of protection in rural areas.

Variations to alternative 2 will be examined in detail during the feasibility study and additional alternatives may be created for comparison purposes.

The study could be expanded to include environmental restoration opportunities if a suitable non-Federal sponsor wished to provide funding for considering these elements as part of the Skagit Study.

Scoping

Public involvement will be sought during scoping, plan formulation, and preparation of the EIS in accordance with NEPA procedures. A public scoping process has been started: (1) to clarify which issues appear to be major public concerns, (2) to identify any information sources that might be available to analyze and evaluate impacts, and (3) to obtain public input on the range and acceptability of alternatives. This Notice of Intent formally commences the scoping process under NEPA. As part of the scoping process, all affected Federal, State and local agencies, Indian Tribes, and other interested private organizations, including environmental groups, are invited to comment on the scope of the EIS. Comments are requested concerning issues of concern, project alternatives, potential mitigation measures, probable significant environmental impacts, and permits or other approval that may be required by any project.

The following key areas have been identified so far to be analyzed in depth in the draft EIS:

(1) Flooding Characteristics (existing and with any project)
(2) Impacts to Fish Habitat
(3) Impacts to Riparian Habitat
(4) Impacts to Wetlands
(5) Impacts to Cultural Resources

Scoping Meeting

Opportunity to comment on the planned study will also be available at the study scoping meeting which has yet to be scheduled. Details of the meeting time and location will be announced in the local media. Notices will be sent to all agencies, organizations and individuals on the mailing list.

Availability of Draft EIS

The Corps expects to complete preparation of the draft EIS and have review copies of its available by May 2001.

James M. Rigsby,

Colonel, Corps of Engineers, District Engineer.

[FR Doc. 97–30489 Filed 11–19–97; 8:45 am]

BILLING CODE 3710–ER–M

DEPARTMENT OF DEFENSE

Department of the Navy, DOD

Notice of Intent To Grant Exclusive Patent License; Prime Capital Group, Inc.

SUMMARY: The Department of the Navy hereby gives notice of its intent to grant

2) Skagit River General Investigation Study Scoping Summary Report for the Draft Feasibility Study and Environmental Impact Statement October 2011, revised February 2012

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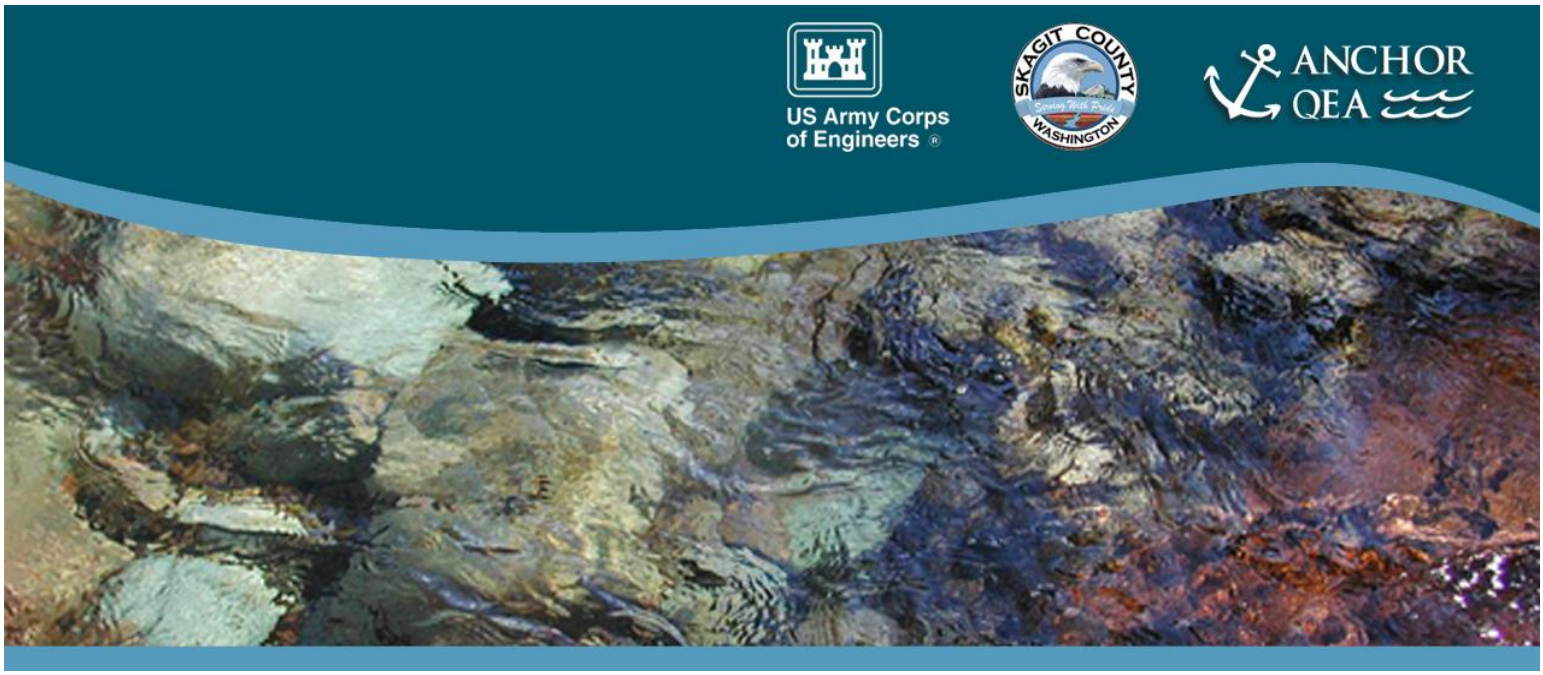

SKAGIT RIVER GENERAL INVESTIGATION STUDY
SCOPING SUMMARY REPORT FOR THE
DRAFT FEASIBILITY STUDY AND ENVIRONMENTAL IMPACT STATEMENT

Prepared for

U.S. Army Corps of Engineers

Skagit County

Prepared by

Anchor QEA, LLC

October 2011, *revised February 2012*

SKAGIT RIVER GENERAL INVESTIGATION STUDY

SCOPING SUMMARY REPORT

FOR THE DRAFT FEASIBILITY STUDY AND ENVIRONMENTAL IMPACT STATEMENT

Prepared for

U.S. Army Corps of Engineers

Skagit County

Prepared by

Anchor QEA, LLC

October 2011*, revised February 2012*

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This final Scoping Summary Report for the Skagit River General Investigation Study has been revised to include a comment letter from the U.S. Environmental Protection Agency (EPA) that was inadvertently excluded from the October 2011 Scoping Summary Report. Revised text is italicized.

1 INTRODUCTION

1.1 Report Purpose

The U.S. Army Corps of Engineers, Seattle District (USACE), in cooperation with Skagit County, is preparing a Draft Environmental Impact Statement (DEIS) under the National Environmental Policy Act (NEPA) for a proposed flood-risk management General Investigation (GI) Study for the Skagit River Basin from Ross Lake to the river mouth at Skagit Bay. This study was requested by Skagit County because of the potential for significant flooding on the Skagit River.

An initial notice of intent (NOI) for this project was originally published in the Federal Register on November 20, 1997, for a Skagit River Flood Damage Reduction Study (62 FR 62019). Since the original NOI was issued in 1997, the study has evolved to meet new challenges and include ecosystem considerations associated with Puget Sound Chinook salmon and bull trout species listed as threatened under the Endangered Species Act (ESA). On July 29, 2011, an additional NOI was published, recommencing the scoping process (76 FR 45543) (see Appendix A). The purpose of this most recent NOI was to provide opportunity for additional public input and ensure that the study still accurately reflects stakeholder resource issues and concerns.

This scoping report describes and summarizes comments received during the 2011 scoping process. This report includes a brief project history, the project purpose, a scoping process summary, documents related to the scoping process, and a summary and copies of all comments received. Previous comments received during the initial scoping process are also provided.

1.2 Project History

USACE flood-risk management planning has occurred periodically in the Skagit River basin for the past two decades. A USACE Reconnaissance Report was prepared in 1993, identifying a federal interest in pursuing a feasibility investigation of flood-risk management measures. In 1997, Skagit County and the USACE approved an agreement to initiate feasibility studies (Agreement). The study initially focused on improving the existing levee system along the lower Skagit River with new off-channel levees or dikes to increase

protection for urban areas in the Skagit River delta, with lesser protection for rural areas identified, such as levee overflow sections or control structures at selected locations. During early technical studies conducted as part of the overall study, the need for ecosystem planning was also identified as a means to address new environmental challenges, including recent listings of Puget Sound Chinook salmon, steelhead, and bull trout as threatened and Southern Resident killer whale as endangered under the ESA. Through those early technical studies, USACE and Skagit County determined that projects that potentially provide ecosystem improvements and benefits would receive increased consideration.

In 2003 and 2004, the Agreement was amended to include a more extensive analysis of using existing hydroelectric dams in the upper basin to provide additional flood control storage, to re-evaluate the hydrology and hydraulics (H&H) analysis for the basin, and to fund studies to evaluate considered measures and alternatives, including ecosystem restoration. Funding constraints limited the amount of work completed during this timeframe. The Agreement was amended again in 2007 and the project was re-scoped to include all the remaining work, an augmented project budget, and a revised timeline needed to complete the feasibility phase, including completing a Future without Project Condition Report and evaluation of measures and alternatives.

The Skagit River GI DEIS is being conducted under the authority of Section 209 of the Flood Control Act of 1962, Public Law 87-874. That section authorized a comprehensive study of Puget Sound, Washington, and adjacent waters, including tributaries, in the interest of flood control, navigation, and other water uses and related land resources.

1.3 Project Purpose

The purpose of the feasibility study is to formulate and recommend a comprehensive flood-risk management plan for the Skagit River basin that will reduce flood hazards and damages in the project area. The feasibility study will also give increased consideration to flood management measures that improve ecosystem functions and processes to benefit fish and wildlife in the project area or reduce potential negative environmental effects of the plan. The feasibility phase of project development involves technical studies to assess the effectiveness, efficiency, acceptability, and completeness of a range of alternative solutions

for serious flooding problems, potential early action flood damage reduction measures, and ecosystem restoration opportunities in the study area.

The goal of this project is to identify the National Economic Development (NED) flood-risk management alternative that provides the maximum net economic benefits. In accordance with USACE policy, minimization of ecosystem, cultural, and socioeconomic impacts will be a significant project consideration (ER 1105-2-100, Planning Guidance Notebook). The local sponsor may request the recommendation of a plan other than the NED alternative, which would be the Locally Preferred Plan (LPP).

The intent of the project is that the recommended plan will have broad federal and non-federal support, provide critically needed flood-risk management benefits at an affordable cost and in a reasonable time frame, and subsequently be authorized and implemented.

1.4 Study Area

The Skagit River basin is located in northwest Washington State and has a total drainage area of 3,115 square miles. The Skagit River originates near the 8,000-foot level of the Cascades Mountains in British Columbia, Canada, and flows south and then west to the Skagit delta, where it discharges through two distributaries—the North Fork and South Fork—to Skagit Bay. The major cities on the Skagit River delta—Mount Vernon, Burlington, Sedro-Woolley, and La Conner—lie about 60 miles north of Seattle, Washington. The basin extends about 110 miles in a north-south direction, reaching 28 miles into British Columbia, and approximately 90 miles in an east-west direction between the crest of the Cascade Mountains and Puget Sound. The entire United States portion of the basin is within Washington Congressional District No. 2. The project area for the feasibility study encompasses the Skagit River watershed from Seattle City Light's Ross Dam reservoir (Ross Lake) to Skagit Bay. The Skagit River floodplain contains about 22,000 acres east (upstream) of Sedro-Woolley (river mile [RM] 22.4) and 74,000 acres west (downstream). Principal tributaries of the Skagit River are the Sauk, Baker, and Cascade rivers. Seattle City Light operates three hydroelectric dams on the Upper Skagit River (Ross, Diablo, and Gorge), and Puget Sound Energy (PSE) operates two hydroelectric dams on the Baker River (Upper Baker

and Lower Baker). USACE has a federally authorized flood-risk management project at the Upper Baker Dam and coordinates flood storage at Ross Lake.

1.5 Study Overview

In the reconnaissance phase for the Skagit River GI study, USACE identified the following two alternative courses of action for further analysis:

- **Alternative 1 – No Action:** Allow the current levee system to remain in place without a major system-wide levee system upgrade. Individual diking districts would continue to operate, maintain, and repair the existing levee system, and dams on the Baker River and Skagit River would continue present operations for flood reduction.
- **Alternative 2:** Construct a coordinated flood-risk management project that would provide critically needed flood-risk management measures at an affordable cost in a reasonable time frame and that would subsequently be authorized and implemented.

Skagit County and USACE have developed an array of structural and non-structural measures for addressing problems and opportunities and for achieving project objectives. In recent years, these measures have been presented to the public at several workshops in Skagit County and also to resource groups, tribal nations, and agencies.

Some or all of the measures will be combined to form the range of alternatives to be evaluated in the DEIS. The preferred alternative will be selected in the final EIS based on screening and evaluation of the range of alternatives in the DEIS.

The following key areas have been initially identified for in-depth analysis in the DEIS:

1. Flooding characteristics (existing and with any project)
2. Impacts to fish habitat and fisheries resources
3. Impacts to riparian habitat
4. Impacts to wetlands
5. Impacts to cultural resources
6. Impacts to surrounding communities
7. Impacts to geomorphic processes

2 SCOPING PROCESS

2.1 Scoping Overview

USACE is preparing the EIS to meet NEPA requirements. NEPA and the USACE implementation regulations require a formal scoping process when initiating work on an EIS. Scoping is a part of the EIS process through which a federal agency describes a proposed action and possible alternatives. The agency then seeks input from other agencies, organizations, and the public on potentially affected resources, environmental issues to be considered, and the agency's planned approach to analysis.

On July 29, 2011, an additional NOI was published, recommencing the scoping process (76 FR 45543). The purpose of this most recent NOI was to provide opportunity for additional public input and to ensure that the study still accurately reflects resource issues and concerns important to the public and affected stakeholders. As part of the scoping process, all affected federal, state, and local agencies; Native American tribes; private organizations; and the public were invited to comment on the scope of the EIS.

2.2 Public Involvement Process

Public involvement has been sought during scoping, and this will continue during plan formulation and preparation of the DEIS in accordance with NEPA procedures. The aim of the public scoping process is as follows:

- Clarify which issues appear to be major public concerns
- Identify any information sources that might be available to analyze and evaluate impacts
- Obtain public input and determine acceptability for the range of measures to be included within potential alternatives

Comments were requested regarding issues of concern, project alternatives, potential mitigation measures, probable significant environmental impacts, and permits or other approvals that may be required by any project.

2.2.1 Opportunity for Comment and Public Meeting

USACE published the NOI for public comment in the July 29, 2011 Federal Register and through legal advertisements and notifications. The scoping comment period originally was scheduled to end on August 29, 2011, but was extended to September 9, 2011. Notice of the comment period extension was published on September 1, 2011 (76 FR 54453; Appendix A). Additionally, the following activities were conducted:

- A public meeting notice was published in the Skagit Valley Herald on August 9, 2011
- A postcard was both mailed and emailed in advance of the meeting to a distribution list that included private citizens and local, state, federal, and tribal officials
- A meeting notification press release was issued in August 8, 2011, and a comment extension press release was issued on August 30, 2011
- An online notice was provided at www.skagitcounty.net

A public meeting was held at the Skagit Station at 105 E. Kincaid Street in Mount Vernon, Washington, on August 10, 2011. The meeting was held from 5:00 to 8:00 p.m. and included a presentation of the project history, a formal public hearing with comments captured by a court recorder, and an open house where members of the public could ask questions in a one-on-one setting. USACE and Skagit County personnel shared information, received comments, and addressed questions from meeting attendees. The meeting was attended by 40 people with 11 individuals providing oral comment during the public hearing. Three individuals provided written comments at the meeting. The meeting notifications and press releases on the meeting and comment period, meeting materials, sign-in sheet, and transcript of public comments are provided in Appendices B through E.

In addition to the comments received at the public meeting, several organizations and individuals provided written scoping comments, as described in more detail in Section 3 (see also Appendix F).

3 PUBLIC SCOPING COMMENTS

3.1 Comment Statistics

3.1.1 Comments Received

Scoping comments on the project were submitted in varying ways by organizations and individuals, as summarized in Table 1, and provided in Appendix F.

Table 1

Scoping Comments Summary Table

Comment Submittal Format	Number
Oral comments at public hearing	11
Written comments at public hearing	3
Emails during scoping period	7
Written comments during scoping period	*9*

The following organizations submitted comments:

- Swinomish Tribal Community
- City of Burlington
- Seattle City Light
- Skagit County Dike District No. 17
- City of Mount Vernon
- City of Sedro-Woolley
- U.S. Department of the Interior, North Cascades National Park Service Complex
- Washington Department of Fish and Wildlife
- *U.S. Environmental Protection Agency*

3.1.2 Comment Topics

Many of the oral, written, and e-mail comments received included comments on multiple and different topics. To organize the variety of topics received, comments received during scoping were categorized into three main topics based on the content of the comments and then further divided into subtopics, as shown in Table 2.

Table 2

Scoping Comments Topics

Topic	Number of Comments
Flood Management Measures	**64**
Bypass Options	2
Conveyance Capacity	4
Dikes/Levees	22
Facilities/Infrastructure	6
Ring Dikes	6
Storage	15
Study Objectives	2
Other Measures	7
Environmental Analyses and Effects	***41***
Air Quality	*1*
Baseline Information	6
Climate Change	*4*
Cumulative Impacts	*2*
Economics	2
Ecosystem Protection/Restoration and Fisheries	*11*
Environmental Justice	*1*
Historic Resources	*1*
Hydrology	3
Infrastructure	1
Land Use	2
Multiple Effects	3
Noxious Weeds and Invasive Plants	*1*
Recreation	1
Sediment Effects on Channel Morphology	1
Threatened and Endangered Species	*1*
Study Process	***19***
Funding	3
Feasibility Study	*7*
Involvement	*9*

3.2 Scoping Comments Overview

Sections 3.2.1 through 3.2.3 summarize the scoping comments, organized by the topics in Table 2.

3.2.1 Flood Management Measures

3.2.1.1 Bypass Options

- Consider the Avon Bypass or other similar bypass solution that would move water through the Skagit Valley without inundating farms, homes, businesses, schools, roads, and other areas
- Request the Swinomish Bypass option be returned to the original name Avon Bypass

3.2.1.2 Conveyance Capacity

- Address high water concerns upstream caused by restricting and confining the flows downstream
- Determine ways to increase conveyance or divert water volumes during a major 100-year flood event as the existing Skagit County dike and levee systems cannot convey this amount of water
- Focus on conveying water downstream instead of armoring banks
- Carefully evaluate the saltwater dikes and Interstate 5 (I-5) constrictions; I-5 is a significant barrier to accommodating a flood

3.2.1.3 Dikes/Levees

- Consider a spill or levee at Sterling, which seems feasible and could have significant additional downstream benefit; recent hydraulic modeling indicates that this flood measure would allow water to leave the system in this location with limited damage
- Place structures at the bay dikes to allow floodwater to recede instead of being trapped behind levees; this would help to prevent future damages like those caused by the 1990 flood, when floodwater backed up and caused substantial damage
- Improve the existing levee system in certain areas to reduce risk during major flood events; improvements could include increased levee tops, back slopes designed for overtopping, keyways, and levee face slope-backs

- Develop levee setbacks and designs to meet Federal Emergency Management Agency (FEMA) accreditation requirements, which would have significant impacts in the urban areas and on critical infrastructure
- Support the full implementation of the Dike 12/City of Burlington Levee FEMA Accreditation Project to mitigate flood events
- Widen the three bridge corridor, setback levees off the river bank, and provide better risk management for critical infrastructure
- Support downtown Mount Vernon flood wall and re-development, which would help provide FEMA-certified flood risk management to the downtown Mount Vernon area; the project includes implementing a system of approximately 9,300 lineal feet of flood walls, levees, and stop log openings
- Set levees back instead of strengthening and reinforcing existing levees
- Recommend no more new dikes on the Skagit River; if new dikes are necessary, construct them in already disturbed and armored parts of the river
- Design the Nookachamps floodplain storage to function like a temporary flood control reservoir by storing water during the peak flow period and releasing the stored water after the peak passes; implementation would include construction of levees and gate flow release structures to control flows in and out of the area
- Study interior drainage alternatives that would allow the release of flood waters off the floodplain in rural areas where inundation results from major flood events
- Study how flood water will access the floodplain near Dikes 22, 17, 3, 12, and 1; some of these diked areas trap water inside them, creating a "bathtub" effect

3.2.1.4 Facilities/Infrastructure

- Address flooding in the town of Hamilton by relocating the town out of the floodway
- Recommend that replacement of the BNSF Skagit River Railroad Bridge be included in the EIS as an alternate measure, as it is a significant constriction to flood flows and is a flood hazard; the potential for failure of a levee adjacent to this bridge is a significant flood risk to I-5

3.2.1.5 Ring Dikes

- Create a ring dike around the sewage treatment plant in Sedro-Woolley to keep the

raw sewage in the plant and keep Sedro-Woolley's city sewage system functioning
- Create a ring dike around United General Hospital to keep the hospital functioning during an emergency
- Create a ring dike around the Anacortes Water Treatment Plant, a vital facility for the water supply of Anacortes oil refineries
- Create a ring dike around the city of La Conner to keep flood waters out of the city

3.2.1.6 Storage

- Focus on additional flood storage that can be made available in the Baker River system (both Upper and Lower Baker), Ross Dam storage, and Nookachamps storage, including additional hard storage and useful management of the PSE-operated dams to allow for additional storage on an event-by-event basis
- Related to supporting upstream storage:
  - Incorporate flood drawdown protocols for the upstream hydroelectric projects into a comprehensive and coordinated flood risk management project
  - Provide additional flood storage targeted to the few days in advance of a very large flood
  - Contract with local power dams to provide additional flood storage; implement agreements such as a reimbursement agreement for lost power revenue attributable to that additional flood control protection (similar to the Sacramento, California, area flood control methods)
  - Further consider analyses provided over the past several years, as well as the opportunities presented in the new license for the Baker Hydroelectric Project to maximize the ability of the upstream hydroelectric projects to provide flood storage, including storing water earlier in the fall
  - Consider the Lower Baker Dam for storage
- Keep the flood storage and flows at the Baker Project (Baker Lake and Lake Shannon) within the scope and parameters of the Baker River Hydroelectric Project Federal Energy Regulatory Commission (FERC) license; do not favor amending the license or Baker River Hydroelectric Project settlement agreement for additional flood storage unless it improves habitat and flows for the desired fish and wildlife
- Consider that a flood reduction measure that would create additional storage in Ross

Reservoir would also require modification to power generation operations and have a high financial cost; this measure would have significant impacts to ESA-listed Chinook salmon

3.2.1.7 Study Objectives

- Clarify what anticipated level of flood protection will result from this analysis (e.g., will the level of protection merely be one that results in a positive benefit/cost ratio, or will 100-year flood protection be an underlying constraint of any alternative?)
- Consider that it is essential that work in the GI assures and improves the level of flood protection to Mount Vernon's existing urbanized areas, which includes many important and essential local and regional public services and infrastructure

3.2.1.8 Other Measures

- Allow drainage in the basin to help environmental resources and the farmers; a recently established wetland bank may add to the problem
- Tailor a systematic method for communication about preparation and steps for emergency response for the Skagit River, including shaping existing communications (including social networking) resources into an integrated protocol familiar to both local and regional jurisdictions; motor vehicle routes should be prioritized to facilitate safe passage and access to flood-free grounds
- Focus strategies on adapting to inevitable flooding, such as relocating structures from the floodplain, maintaining open space in the floodplain, and using new technologies capable of withstanding big flood events (e.g., floatable and elevated structures); learn from other areas where new technologies have been applied
- Address areas upriver of the levees and include non-structural measures for flood damage reduction

3.2.2 Environmental Analyses and Effects

3.2.2.1 Air Quality

- *Analyze air quality impacts including emissions from internal combustion engines during construction and incorporate appropriate best management practices*

3.2.2.2 Baseline Information

Several information sources were referenced or provided in comments. A list of these sources is provided in Appendix G. Other comments related to baseline information are as follows:

- Consider concerns regarding a "shifting environmental baseline" and how this could affect how baseline impacts will be measured, how mitigation and restoration efforts will be determined, and how funding allocations will be tracked; it is important to clearly and quantitatively determine existing baseline conditions
- Consider that if the study "resets" or relies on another baseline, then everything that has happened in the past may be gone
- Consider that river cross-section data used in analysis of areas upstream of the State Route (SR) 9 bridge (RMs 22 to 27) is outdated; consider collecting new and more accurate cross-sectional data as some information is nearly 50 years old
- Collect meteorological mapping and data, which is lacking
- Verify the accuracy of the Sterling and Nookachamps Creek Vicinity Map provided at the August 10, 2011, scoping meeting; on this map, the Phase 2 river flooding area is under water every winter for approximately 6 months of the year and therefore may be mislabeled

3.2.2.3 Climate Change

- Consider sustainable ways to protect the North Cascades Highway and bridge infrastructure leading to the North Cascades National Park, while protecting wild and scenic river values in the face of climate change and the subsequent predicted increases in the frequency and magnitude of flooding
- Fully incorporate into the alternatives analyses the projected hydrologic changes and sea-level rise caused by climate change, such as findings that report more severe extreme hydrologic events (floods and low flows) in the Skagit River basin in the future due to shifts in precipitation and higher freezing elevations during winter storms that increase runoff production in moderate elevation areas

3.2.2.4 Cumulative Impacts

- Consider that what may be the most valuable part of this study—in-depth cumulative

impacts assessment—has not taken place; for example:

- Widening the three bridge corridor may alleviate flooding within the corridor; however, it may also increase flows downstream, putting downstream landowners and infrastructure at greater risk
- Immediate downstream protection may be to increase the heights of existing levees, which in turn could have adverse impacts on the Skagit floodplain and salmon habitat

3.2.2.5 Economics

- Recommend that an economic impact assessment be performed of the measures and all alternatives, including the status quo (no action) alternative

3.2.2.6 Ecosystem Protection/Restoration and Fisheries

- Ensure flood damage reduction efforts result in improvements to the natural assets of Skagit Valley by incorporating ecosystem protection, restoration, and natural resource considerations into flood hazard management solutions
- Identify alternatives in the GI that build upon and complement ongoing listed fish species recovery programs in the Skagit watershed, namely for Chinook salmon, bull trout, and steelhead
- Include a concerted effort of engineers and ecology experts to address flood problems with a more analytical look at design solutions amenable to the complexities of salmon habitat
- Account for critical spawning habitats and ecology of a presently unnamed species of anadromous smelt in flood option discussions; study methodologies to obtain smelt data are recommended
- Ensure that flood management alternatives proposed in sections of the Skagit River federally designated Wild and Scenic River (WSR) comply with Section 7(a) of the Wild and Scenic Rivers Act; accordingly, any action undertaken for the purposes of flood-risk management should protect the outstandingly remarkable values of the Skagit River, particularly as they relate to iconic species like salmon and bald eagles, which could be adversely affected by flood control in the lower Skagit River
- Consider that proposed actions may impact federal- and state-listed anadromous fish that inhabit Ross Lake National Recreation Area (including Chinook salmon,

steelhead trout, and bull trout) and two federal species of concern (Coho salmon and coastal cutthroat)
- Pursue riparian and wetland restoration activities within the Skagit River watershed to mitigate long-term adverse impacts.
- Consider that development within the floodplain (e.g., dikes, removal of riparian vegetation, river armoring, etc.) reduces fish and wildlife habitat quality
- *Consider implementing watershed or aquatic habitat restoration activities to compensate for past impacts to water resources*

3.2.2.7 Environmental Justice

- *Address environmental justice in the EIS*

3.2.2.8 Historic Resources

- *Address all cultural resources, even those that might not meet the definition under National Historic Preservation Act*

3.2.2.9 Hydrology

- Incorporate changes in hydrology and sea level in any flood-related environmental analyses conducted by USACE (i.e., with projected sea-level rise, there is a greater likelihood that backwater effects from high tide during flooding will be greater than they are today)
- Ensure that flood management alternatives proposed in sections of the Skagit River federally designated WSR comply with Section 7(a) of the Act; therefore, any action undertaken for the purposes of flood-risk management should maintain the flow regime and the free-flowing character of the Skagit River

3.2.2.10 Infrastructure

- Consider the oil petroleum pipelines in the Avon Bypass (Swinomish Bypass) option

3.2.2.11 Land Use

- Stop logging and building in the floodplain, which limits floodplain dispersion

capacity

- Undertake a build-out analysis to evaluate how future development will take place as a result of flood damage reduction efforts; address how future build-out will affect floodplain management required pursuant to the National Oceanic and Atmospheric Administration biological opinion associated with the FEMA flood insurance program

3.2.2.12 Multiple Effects

- Consider environmental analyses effects (e.g., effects of riprap, turbidity, and sedimentation resulting from over bank flooding; estimate of fish loss due to project operation; etc.) in evaluating alternatives
- Consider environmental impacts related to existing tide gates and pump houses for providing fish passage as certain alternatives are implemented; salinity/outlet structure, fish losses, land use, etc., as they pertain to the Swinomish Diversion, overtopping, setbacks, and the Samish Diversion; and environmental effects for diking options, hydraulic and channel changes, and non-structural actions
- Consider the impact of human population in environmental analysis (e.g., estimating consumption behaviors through water units per capita, to address the overlapping habitats of humans, fish, and free-ranging animals); compatibilities and conflicts should be clearly outlined

3.2.2.13 Noxious Weeds and Invasive Plants

- Address noxious weeds and invasive plants, possible treatment methods, and a vegetation management plan in the EIS

3.2.2.14 Recreation

- Maintain access along the North Cascades Highway for both visitor access and North Cascades National Park operations and for the economic vitality of local communities

3.2.2.15 Sediment Effects on Channel Morphology

- Undertake a more robust sedimentation analysis that evaluates each of the alternatives under consideration for consequences to channel morphology and salmon

habitat related to the various alternatives (i.e., effects should be modeled based on the most recent climate change scenarios developed specifically for the Skagit Watershed)

3.2.2.16 Threatened and Endangered Species

- *Identify the endangered, threatened, and candidate plan and animal species, and other sensitive species within the project area; describe critical habitat; identify impacts on species and their critical habitats; and how the project would meet all ESA requirements*

3.2.3 Study Process

3.2.3.1 Funding

- Identify costs and funding sources for all planned actions
- Note that funding is not identified in the 2012 and 2013 federal budgets; there may be federal money in 2014
- End the study now and use remaining resources to complete a project in the basin

3.2.3.2 Feasibility Study

- Note that it is not feasible to control or manage flooding of an entire river basin (Mississippi River cited as an example)
- Note skepticism about how effectively a study of this magnitude can be completed
- Consider the history (and folly) of doing flood studies
- *Identify the Purpose and Need Statement, which is required in the development of the NEPA EIS*
- *Consider a natural processes alternative as one of the alternatives in your range of reasonable alternatives*
- *Incorporate adaptive management into the project and develop an Adaptive Management Plan*
- *Develop and disclose project specific standards of significance*

3.2.3.3 Involvement

- Consider specific technical information on Skagit River hydrology in the Independent

External Peer Review

- Select technical experts that will prepare discipline reports to support the study collaboratively with resource managers; this coordination in advance of the study will decrease the likelihood of disputes regarding the adequacy of environmental studies
- Complete the USACE Skagit River GI Study in coordination with the development of Skagit County's Comprehensive Flood Hazard Management Plan (CFHMP) for the Skagit River
- Make the GI Study process less fragmented and include more dialogue and coordination
- Utilize the input (e.g., comments, suggestions, questions, and thoughts on individual measures/projects) obtained from the 2009 CFHMP Advisory Committee meetings in the Skagit River GI Study narrowing process
- Include proactive community involvement (e.g., open and candid community dialogue about proposed projects) on a regular basis
- Involve the dike district commissioners and the dike districts more, and consult them in the study process
- Coordinate with members of the watershed community about decisions for their environment
- *Consult with the potentially affected tribes specific to their interests and concerns*

3.3 Previous Scoping Comments

USACE received two sets of public comment prior to this latest NOI and scoping comment period (provided in Appendix H). The first occurred in response to the 1997 NOI to prepare an EIS for the Skagit River Flood Damage Reduction Feasibility Study. Scoping comments were received in writing and at a December 1997 public scoping meeting and were subsequently summarized in a March 1998 document. Comments and USACE responses were provided on the following topics:

- Large-scale flood damage reduction alternatives
- Smaller-scale flood damage reduction measures
- Fish and wildlife impacts
- Water quality and wetlands
- Hydraulic impacts
- Cumulative impacts

- Financial impacts
- Planning process

A second set of public comments was provided in association with an August 2008 public meeting. The meeting purpose was to receive public input on potential flood damage reduction measures for formulating future alternatives to be evaluated in the feasibility study and EIS process.

Comments were categorized and responses were provided. Comment topics were as follows:

- Planning process
- Additional information to consider in the study
- Alternatives development and impacts
- Approval or disapproval of individual measures
- Concerns on resources expended and progress made
- Measure modifications
- Lack of detail presented
- Levee certification
- H&H
- Economics analysis
- Measures screening
- Potential alternative outcomes based on benefit/cost analysis approach (NED)
- Local governments should not wait for study results
- How measures would be implemented
- Data availability
- Burlington Northern Santa Fe bridge replacement
- Overtopping levees
- Property relocations
- Sedimentation associated with levee setbacks
- Rural lands inundation
- Emergency project at 3-Bridges area to widen corridor
- Excavation effects on levees
- "Bath tub effect" from ring dikes
- More attention to restoration measures
- Investigate dam storage
- USACE authority versus local authority for constructing flood control project
- Previous Hamilton Section 205 study (1982)
- Dredging
- Mount Vernon bypass and bypasses in general
- Levee construction using interlocking sheet piles

3.4 Next Steps

Considering the comments provided in 2011 and previous scoping comments, USACE will begin preparing the DEIS and conduct supporting studies as funding becomes available.

The next steps in the process include:

- Refining the proposed action and selecting the alternatives to be analyzed in the DEIS
- Gathering data, conducting analyses, and identifying environmental effects of the proposed action and alternatives
- Preparing and publishing a DEIS containing all reasonable alternatives and associated effects for public and agency review and soliciting comments
- Publishing a final EIS containing the preferred alternative and effects for public and agency review
- Publishing a Record of Decision identifying the alternative selected for implementation

The schedule for completing this work is dependent upon funding for the project.

APPENDIX A
NEPA FEDERAL REGISTER NOTICE OF INTENT AND NOTICE OF COMMENT PERIOD EXTENSION

FOR FURTHER INFORMATION CONTACT: Mr. Jonathan Bunger, SERDP Office, 901 North Stuart Street, Suite 303, Arlington, VA or by telephone at (703) 696–2126.

Dated: July 26, 2011.

Aaron Siegel,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

[FR Doc. 2011–19249 Filed 7–28–11; 8:45 am]

BILLING CODE 5001–06–P

DEPARTMENT OF DEFENSE

Office of the Secretary

[Docket ID: DOD–2011–OS–0082]

Privacy Act of 1974; System of Records

AGENCY: Office of the Secretary of Defense, Personnel and Readiness, Department of Defense.

ACTION: Notice to delete a System of Records.

SUMMARY: The Office of the Secretary of Defense (Personnel and Readiness) is deleting systems of records notice from its existing inventory of record systems subject to the Privacy Act of 1974, (5 U.S.C. 552a), as amended.

DATES: This proposed action will be effective without further notice on August 29, 2011 unless comments are received which result in a contrary determination.

ADDRESSES: You may submit comments, identified by docket number and title, by any of the following methods:

* *Federal Rulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments.

* *Mail:* Federal Docket Management System Office, 1160 Defense Pentagon, Washington, DC 20301–1160.

Instructions: All submissions received must include the agency name and docket number for this **Federal Register** document. The general policy for comments and other submissions from members of the public is to make these submissions available for public viewing on the Internet at *http://www.regulations.gov* as they are received without change, including any personal identifiers or contact information.

FOR FURTHER INFORMATION CONTACT: Mrs. Cindy Allard, Privacy Act Officer, Office of Freedom of Information, Washington Headquarters Services, 1155 Defense Pentagon, Washington, DC 20301–1155, or by phone at (703) 588–6830.

SUPPLEMENTARY INFORMATION: The Office of the Secretary of Defense systems of records notices subject to the Privacy Act of 1974, (5 U.S.C. 552a), as amended, have been published in the **Federal Register** and are available from the address in **FOR FURTHER INFORMATION CONTACT**.

The Office of the Secretary of Defense proposes to delete one system of records notice from its inventory of record systems subject to the Privacy Act of 1974 (5 U.S.C. 552a), as amended. The proposed deletion is not within the purview of subsection (r) of the Privacy Act of 1974, (5 U.S.C. 552a), as amended, which requires the submission of a new or altered system report.

Dated: July 25, 2011.

Aaron Siegel,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

Deletion:

DPR 28

SYSTEM NAME:

Military Deployment Issues Files (April 20, 2001, 66 FR 20276).

REASON:

Based on a recent review of DPR 28, Military Deployment Issues Files of the Special Assistant to the Under Secretary of Defense, it has been concluded that DPR 28 is duplicative of DHA 05 Military Deployment Issues Files (March 29, 2006, 71 FR 15701), and can therefore be deleted.

[FR Doc. 2011–19248 Filed 7–28–11; 8:45 am]

BILLING CODE 5001–06–P

DEPARTMENT OF DEFENSE

Department of the Army

Notice of Availability for Exclusive, Non-Exclusive, or Partially-Exclusive Licensing of U.S. Inventions

AGENCY: Department of the Army, DoD.

ACTION: Notice.

SUMMARY: Announcement is made of the availability for licensing of the invention set forth in U.S. Patent No. 7,799,536, which issued on September 21, 2010, entitled ''Endothelial-Monocyte Activating Polypeptide II, a Biomarker for Use in Diagnosis of Brain Injury,'' and U.S. Patent Application Serial No. 12/806,725, entitled ''Endothelial-Monocyte Avtivation Polypeptide II, a Biomarker for Use in Diagnosis and Treatment of Brain Injury,'' filed August 19, 2010. The United States Government, as represented by the Secretary of the Army, has rights to these inventions.

ADDRESSES: Commander, U.S. Army Medical Research and Materiel Command, ATTN: Command Judge Advocate, MCMR–JA, 504 Scott Street, Fort Detrick, Frederick, MD 21702–5012.

FOR FURTHER INFORMATION CONTACT: For patent issues, Ms. Elizabeth Arwine, Patent Attorney, (301) 619–7808. For licensing issues, Dr. Paul Mele, Office of Research and Technology Applications (ORTA), (301) 619–6664, both at telefax (301) 619–5034.

SUPPLEMENTARY INFORMATION: The inventions relate to the use of a polypeptide, Endothelial-monocyte activating polypeptide II (EMAP–II) and/or p43/endothelial monocyte-activating polypeptide II (p43/EMAP–II) as a biomarker to determine the presence and type of brain injury.

Brenda S. Bowen,

Army Federal Register Liaison Officer.

[FR Doc. 2011–19205 Filed 7–28–11; 8:45 am]

BILLING CODE 3710–08–P

DEPARTMENT OF DEFENSE

Department of the Army

Board of Visitors, Defense Language Institute Foreign Language Center

AGENCY: Department of the Army, DOD.

ACTION: Notice; cancellation.

SUMMARY: The Board of Visitors, Defense Language Institute Foreign Language Center meeting scheduled for August 3 and 4, 2011 published in the **Federal Register** on Tuesday, July 5, 2011 (76 FR 39076) has been cancelled.

FOR FURTHER INFORMATION CONTACT: Mr. Detlev Kesten, ATFL–APO, Monterey, CA 93944, *Detlev.kesten@us.army.mil,* (831) 242–6670.

SUPPLEMENTARY INFORMATION: None.

Brenda S. Bowen,

Army Federal Register Liaison Officer.

[FR Doc. 2011–19207 Filed 7–28–11; 8:45 am]

BILLING CODE 3710–08–P

DEPARTMENT OF DEFENSE

Department of the Army; Corps of Engineers

Notice of Intent To Prepare a Draft Environmental Impact Statement for the Skagit River General Investigation Study (Previously Advertised as the Skagit River Flood Damage Reduction Study), Skagit County, WA

AGENCY: Department of the Army, U.S. Army Corps of Engineers, DoD.

ACTION: Notice of Intent.

SUMMARY: The Seattle District, U.S. Army Corps of Engineers (USACE) will prepare a Draft Environmental Impact Statement (DEIS) pursuant to Section 102(2)(C) of the National Environmental Policy Act (NEPA) of 1969, as amended, for a proposed flood-risk management project in the Skagit River Basin from Ross Dam to the river mouth at Skagit Bay. This study was requested by Skagit County, Washington, because of the potential for significant flooding on the Skagit River.

A DEIS is being prepared because of the potential for impacts on environmental resources, particularly salmonid habitat, and the intense public interest already demonstrated in addressing the flooding problems of the Skagit River.

The Skagit River General Investigation (GI) DEIS for the Skagit River Basin is being conducted under the authority of Section 209 of the Flood Control Act of 1962, Public Law 87–874. That section authorized a comprehensive study of Puget Sound, Washington, and adjacent waters including tributaries, in the interest of flood control, navigation, and other water uses and related land resources.

This notice of intent (NOI) was originally published in the **Federal Register** on November 20, 1997 for the Skagit River Flood Damage Reduction Study (62 FR 62019). A public meeting was held and comments were solicited from the public. Due to the amount of time that has lapsed since the issuance of the original NOI, USACE is reissuing the NOI.

DATES: Persons or organizations wishing to submit scoping comments should do so by August 29, 2011. Public comment may also be made at the scoping meeting August 10, 2011. Notification of scoping meeting times and locations will be sent to all agencies, organizations, and individuals on the project mailing list.

ADDRESSES: Requests for inclusion on the mailing list, future documents, and all comments on the proposed project should be sent to: Hannah Hadley, Study Environmental Coordinator, Seattle District, U.S. Army Corps of Engineers, P.O. 3755, Seattle, WA 98124–3755, ATTN: CENWS–PM–PL–ER; telephone (206) 764–6950; fax (206) 764–4470; or e-mail *Hannah.F.Hadley@usace.army.mil.*

FOR FURTHER INFORMATION CONTACT: General questions concerning the proposed action and the DEIS can be directed to: Hannah Hadley, Study Environmental Coordinator (see **ADDRESSES**) or Daniel Johnson, Project Manager, Seattle District, U.S. Army Corps of Engineers, P.O. 3755, Seattle, WA 98124–3755, ATTN: CENWS–EN–CM–CJ; telephone (206) 764–3423; fax (206) 764–4470; or e-mail *Daniel.E.Johnson@usace.army.mil.*

SUPPLEMENTARY INFORMATION:

Background. The Skagit River Basin is located in northwestern Washington State and encompasses 3,140 square miles. The major cities on the Skagit River delta—Mt. Vernon, Burlington, and Sedro Woolley—are located approximately 60 miles north of Seattle. The study area for the DEIS will be from Ross Dam to the river mouth at Skagit Bay.

The purpose of the Skagit River GI study is to better identify the problems and opportunities that exist to relieve flooding and reduce flood risks and to develop a flood-risk management plan that fits Federal law and policy and is within the capability of the local sponsor to support their required share of the project costs.

This is a single-purpose flood-risk management study. The goal of this project is to identify the National Economic Development (NED) plan, the flood-risk management alternative that provides the maximum net economic benefits. In accordance with USACE policy, minimization of ecosystem, cultural, and socio-economic impacts will be a significant project consideration (Reference: ER 1105–2–100, Planning Guidance Notebook). The local sponsor may request the recommendation of a plan other than the NED, the Locally Preferred Plan (LPP).

Since the issuance of the original NOI in 1997, the study has evolved to meet new challenges. The purpose of this NOI is to ensure the study still accurately reflects resource issues and concerns.

Alternatives. In the reconnaissance phase for the Skagit River GI study, USACE identified two alternative courses of action for further analysis which are outlined below.

Alternative 1—No Action: Allow the current levee system to remain in place without a major system-wide levee system upgrade. Individual diking districts would continue to operate, maintain, and repair the existing levee system, and dams on the Baker River and Skagit River would continue present operations for flood reduction.

Alternative 2: Construct a coordinated flood-risk management project that would provide critically needed flood-risk management measures at an affordable cost in a reasonable timeframe and that will subsequently be authorized and implemented.

Skagit County and USACE have developed an array of structural and nonstructural measures for addressing problems and opportunities and for achieving project objectives. In recent years, these measures have been presented to the public at several workshops in Skagit County and to resource and Tribal groups and agencies.

Some or all of the measures will be combined to form the range of alternatives. In the DEIS, the preferred alternative will be selected based on screening and evaluation of the range of alternatives.

Scoping. Public involvement will be sought during scoping, plan formulation, and preparation of the DEIS in accordance with NEPA procedures. A public scoping process has been started: (1) To clarify which issues appear to be major public concerns, (2) to identify any information sources that might be available to analyze and evaluate impacts, and (3) to obtain public input and determine acceptability for the range of measures to be included within potential alternatives.

This NOI formally commences the scoping process under NEPA. As part of the scoping process, all affected Federal, state, and local agencies; Tribes; the public; and other interested private organizations, including environmental groups, are invited to comment on the scope of the DEIS. Comments are requested regarding issues of concern, project alternatives, potential mitigation measures, probable significant environmental impacts, and permits or other approvals that may be required by any project.

The following key areas have been identified so far to be analyzed in depth in the DEIS:

1. Flooding characteristics (existing and with any project).
2. Impacts to fish habitat and fisheries resources.
3. Impacts to riparian habitat.
4. Impacts to wetlands.
5. Impacts to cultural resources.
6. Impacts to surrounding communities.
7. Impacts to geomorphic processes.

Scoping Meeting. Opportunity to comment on the planned study will also be available at the study scoping meeting and open house which is scheduled for 5 p.m. on August 10, 2011 at Skagit Station, 105 E. Kincaid St., Mt. Vernon, WA. Details of the meeting time and location will be announced in the local media. Notices will be sent to all

agencies, organizations, and individuals on the mailing list.

Availability of DEIS. USACE expects to complete preparation of the DEIS and make it available for public review by the fall of 2013.

Dated: July 21, 2011.

Anthony O. Wright,

Colonel, Corps of Engineers, District Commander.

[FR Doc. 2011–19208 Filed 7–28–11; 8:45 am]

BILLING CODE 3720–58–P

DEPARTMENT OF EDUCATION

Foreign Institutions—Federal Student Aid Programs

AGENCY: Office of Postsecondary Education, Department of Education.

ACTION: Announcement of submission date for calendar year 2010 U.S. Medical Licensing Examination (USMLE) and citizenship data by foreign graduate medical schools participating in the Title IV, HEA programs.

SUMMARY: We announce the submission date for the required submission to the Secretary by foreign graduate medical schools that participate in programs authorized under title IV of the Higher Education Act of 1965, as amended (the Title IV, HEA programs), of their students' scores on the U.S. Medical Licensing Examination (USMLE), and the school's citizenship rate (*i.e.,* the percentage of its students and recent graduates who are not U.S. citizens, nationals, or eligible permanent residents) for calendar year 2010. Foreign graduate medical schools must submit scores on the USMLE, earned during calendar year 2010 by each student and recent graduate, on Step 1, Step 2—Clinical Skills (Step 2–CS), and Step 2—Clinical Knowledge (Step 2–CK), together with the dates the student has taken each test, including any failed tests. In addition, unless they are statutorily exempt, foreign graduate medical schools must submit a statement of the foreign graduate medical school's citizenship rate for 2010, together with a description of the methodology used in deriving the rate.

DATES: Submission to the Secretary of scores on the USMLE and the statement of an institution's citizenship rate for the 2010 calendar year must be made no later than September 30, 2011.

FOR FURTHER INFORMATION CONTACT: For information contact: Wendy Macias, U.S. Department of Education, 1990 K Street, NW., room 8017, Washington, DC 20006. Telephone: (202) 502–7526. You may also e-mail your questions to: *Wendy.Macias@ed.gov.*

If you use a telecommunications device for the deaf (TDD), call the Federal Relay Service (FRS), toll free, at 1–800–877–8339.

Individuals with disabilities can obtain this document in an accessible format (*e.g.,* braille, large print, audiotape, or computer diskette) by contacting the person responsible for providing further information.

SUPPLEMENTARY INFORMATION: On November 1, 2010, the Department of Education (Department) published final regulations that included amendments to 34 CFR 600.55(d), which became effective on July 20, 2011 (75 FR 67170). Under 34 CFR 600.55(d), a foreign graduate medical school must submit the following data to the identified entities, including the Department, no later than April 30 of each year, unless the Secretary specifies a different date through a notice in the **Federal Register**:

(1) To its accrediting authority and, on request, to the Secretary, the scores on the Medical College Admission Test (MCAT) or successor examination, of all students admitted during the preceding calendar year who are U.S. citizens, nationals, or eligible permanent residents, together with a statement of the number of times each student took the examination.

(2) To its accrediting authority and, on request, to the Secretary, the percentage of students graduating during the preceding calendar year (including at least all graduates who are U.S. citizens, nationals, or eligible permanent residents) who obtain placement in an accredited U.S. medical residency program.

(3) To the Secretary, all scores, calculated in accordance with 34 CFR 600.55(f), disaggregated by step/test—*i.e.,* Step 1, Step 2—Clinical Skills (Step 2–CS), and Step 2—Clinical Knowledge (Step 2–CK), or the successor examinations—and attempt, earned during the preceding calendar year by each student and graduate on Step 1, Step 2–CS, and Step 2–CK, or the successor examinations, of the U.S. Medical Licensing Examination (USMLE), together with the dates the student has taken each test, including any failed tests (an institution may instead agree to allow the Educational Commission for Foreign Medical Graduates (ECFMG) or other responsible third party to calculate the rate and provide it directly to the Secretary, if such an option is available).

(4) To the Secretary, a statement of its citizenship rate for the preceding calendar year, calculated in accordance with 34 CFR 600.55(f)(1)(i)(A), together with a description of the methodology used in deriving the rate that is acceptable to the Secretary, unless the institution meets the statutory exemption from meeting the 60 percent citizenship threshold.

The Secretary is announcing in this notice a September 30, 2011, date for the submission to the Secretary of scores on the USMLE and the statement of an institution's citizenship rate for the 2010 calendar year. The Department will send a letter to foreign graduate medical schools providing information regarding the method of submission of the 2010 scores on the USMLE and the citizenship rate information.

The first submission of MCAT and residency placement data will be for data from the 2011 calendar year. For calendar year 2011 and subsequent calendar years, the submission date for USMLE scores and the statement of an institution's citizenship rate, as well as MCAT and residency placement data, is April 30 of the subsequent year, unless the Secretary specifies a different date through a notice in the **Federal Register**.

Electronic Access to This Document: The official version of this document is the document published in the **Federal Register**. Free Internet access to the official edition of the **Federal Register** and the Code of Federal Regulations is available via the Federal Digital System at: *http://www.gpo.gov/fdsys.* At this site you can view this document, as well as all other documents of this Department published in the **Federal Register**, in text or Adobe Portable Document Format (PDF). To use PDF, you must have Adobe Acrobat Reader, which is available free at the site.

You may also access documents of the Department published in the **Federal Register** by using the article search feature at: *http://www.federalregister.gov.* Specifically, through the advanced search feature at this site, you can limit your search to documents published by the Department.

Program Authority: 20 U.S.C. 1098a.

Dated: July 26, 2011.

Eduardo M. Ochoa,

Assistant Secretary for Postsecondary Education.

[FR Doc. 2011–19265 Filed 7–28–11; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF DEFENSE

Department of the Army; Corps of Engineers

Availability of the Proposed Report of the Chief of Engineers and the Final Joint Environmental Impact Statement/ Environmental Impact Report Within the City of San Clemente Extending 3,412 ft (1,040 m) From Linda Lane to T Street

AGENCY: Department of the Army. U.S. Army Corps of Engineers, DoD.

ACTION: Notice of availability.

SUMMARY: This announces the availability of the Proposed Report of the Chief of Engineers and the Final Joint Environmental Impact Statement/ Environmental Impact Report (FEIS/R) which analyzes the potential environmental effects associated with the proposed action and alternatives for providing shoreline protection to approximately 3,412 feet ([ft], 1,040 meters [m]) of the San Clemente shoreline from coastal storms. Maintaining the beach is needed to prevent the beach erosion that results from winter storms and to prevent damage to adjacent commuter and national defense rail line that runs along the beach through the City. In addition, the loss of sand at the beach would have an impact on City beachfront structures and beach recreation, which contributes to the local economy, and would reduce the ecological functioning of the sand beach/littoral zone.

FOR FURTHER INFORMATION CONTACT: Andrea E. Walker, CECW–PC–3H21, Headquarters, U.S. Army Corps of Engineers, 441 G Street, NW., Washington, DC 20314.

SUPPLEMENTARY INFORMATION:

1. Without-Project Conditions and Damages. Prior to urban development in the 1990s, the beaches within the study area remained relatively stable because of a balanced sediment supply delivered from the San Juan Creek to the Oceanside littoral cell. However, documented historical beach widths above the Mean Sea Level (MSL) line between T Street and Mariposa Point were as narrow as 82 ft (25 m) in the winter months during this time period. As a consequence, storm damages occurred in the past (*e.g.* 1964, 1983, 1988 and 1993), as the protective buffer beach width was narrow, particularly in the winter season.

Since the 1990s, the project area has experienced chronic, mild, long-term erosion. Shoreline retreat is a result of the decrease of fluvial sand supply resulting from the concreting of creeks and rivers, upstream dams, and urban development. Continued future shoreline retreat is expected to result in storm waves breaking directly upon the railroad ballast, which significantly threatens the operation of the rail corridor. Continued future shoreline retreat also will subject public facilities to storm wave-induced damages. These facilities, maintained by the City of San Clemente, include the Marine Safety Building, public restroom facilities located on the beach, and lifeguard stations. If no action is taken, public properties and structures are expected to be susceptible to damages caused by erosion (including land loss and undermining of structures), inundation (structures), and wave attack (structures, railroad).

2. Railroad Damages. The Los Angeles to San Diego (LOSSAN) railroad line, separating the active coastline from the coastal bluff and adjacent backshore development, has experienced railway traffic service delays as a result of the narrowing shorelines. These delays occur when storm wave run-up exceeds the elevation of the Southern California Regional Railroad Authority (SCRRA) protective revetments or the crest of the railroad ballast in the without-revetment segments. Two service disruption incidents of approximately 24 hours occurred in the 1960s and 1970's at Mariposa Point (north of the Pier) and at a location south of the Pier, respectively. In response, the SCRRA and Orange County Transportation Authority have constructed un-engineered riprap revetment in areas where the railroad ballast and tracks are vulnerable to storm wave-induced damages. Over the past ten years, storm wave attack in the study area has restricted train services periodically and during the 1998 El Nino, the protective revetment structure sustained severe damage that significantly slowed train speeds. The railroad line is used to service various national defense facilities between Los Angeles and San Diego.

3. Coastal Storm Damages. Public beach facilities located have experienced damages from storms, as the existing beach has historically acted as a buffer against storm wave attack but has been narrowed. These facilities include the Marine Safety Building, public restroom facilities located on the back beach, lifeguard stations, parking areas, and paving near the Pier. The 1983 El Nino storm season resulted in an estimated damage of $3,277,000 to public beach facilities in the study area. If no action is taken, the City of San Clemente's properties and structures will be susceptible to future damages caused by erosion (including loss of land and of properties), inundation, and wave attack. The majority of the National Economic Development (NED) damages/costs are related to LOSSAN railroad protection/construction and O&M costs. On an annual basis, the LOSSAN costs are $1,280,000 and the annualized value of all damage is $1,424,000.

4. Internet. The FEIS is also available for review on the following Web sites: Corps of Engineers, Los Angeles District Internet site: *http://www.spl.usace.army.mil/cms/index.php.* City of San Clemente's Web site is: *http://san-clemente.org/sc/News.aspx?PageID=1.*

5. *The Record of Decision (ROD)* will be issued no sooner than 30 days after publication of the notice of availability in the **Federal Register** by the U.S. Environmental Protection Agency.

Brenda S. Bowen,

Army Federal Register Liaison Officer.

[FR Doc. 2011–22386 Filed 8–31–11; 8:45 am]

BILLING CODE 3720–58–P

DEPARTMENT OF DEFENSE

Department of the Army; Corps of Engineers

Request for Comments on the Notice of Intent To Prepare a Draft Environmental Impact Statement for the Skagit River General Investigation Study (Previously Advertised as the Skagit River Flood Damage Reduction Study), Skagit County, WA

AGENCY: Department of the Army, Army Corps of Engineers, DoD.

ACTION: Extension of comment period.

SUMMARY: The Corps of Engineers is extending the comment period for the Notice of Intent (NOI) to prepare a Draft Environmental Impact Statement for the Skagit River General Investigation Study (previously advertised as the Skagit River Flood Damage Reduction Study), Skagit County, Washington. This extension will provide interested persons with additional time to prepare comments on the NOI.

DATES: Consideration will be given only to comments that are received on or before September 9, 2011.

ADDRESSES: Comments on the proposed project should be sent to: Hannah Hadley, Study Environmental Coordinator, Seattle District, U.S. Army Corps of Engineers, P.O. 3755, Seattle, WA 98124–3755, *Attn:* CENWS–PM–ER; telephone (206) 764–6950; fax (206) 764–4470; or e-mail *Hannah.F.Hadley@usace.army.mil.*

FOR FURTHER INFORMATION CONTACT: General questions concerning the proposed action and the DEIS can be directed to: Hannah Hadley, Study Environmental Coordinator (see **ADDRESSES**) or Daniel Johnson, Project Manager, Seattle District, U.S. Army Corps of Engineers, P.O. 3755, Seattle, WA 98124–3755, ATTN: CENWS–EN–CM–CJ; telephone (206) 764–3423; fax (206) 764–4470; or e-mail *Daniel.E.Johnson@usace.army.mil.*

SUPPLEMENTARY INFORMATION: The NOI to prepare a Draft Environmental Impact Statement for the Skagit River General Investigation Study (previously advertised as the Skagit River Flood Damage Reduction Study), Skagit County, Washington was published in the July 29, 2011 **Federal Register** (76 FR 45543) for review and comment. Comments regarding the NOI were required to be received on or before August 29, 2011. During the comment period, requests to extend the comment period were received.

In response to these requests, the comment period for the NOI has been extended through September 9, 2011.

Brenda S. Bowen,

Army Federal Register Liaison Officer.

[FR Doc. 2011–22389 Filed 8–31–11; 8:45 am]

BILLING CODE 3720–58–P

DEPARTMENT OF ENERGY

Issuance of Loan Guarantee to Genesis Solar, LLC, for the Genesis Solar Energy Project

AGENCY: U.S. Department of Energy.

ACTION: Record of Decision.

SUMMARY: The U.S. Department of Energy (DOE) announces its decision to issue a loan guarantee under Title XVII of the Energy Policy Act of 2005 (EPAct 2005) to Genesis Solar, LLC, for construction and startup of the Genesis Solar Energy Project (GSEP), a 250-megawatt (MW) nominal capacity solar power generating facility on approximately 1,950 acres, all of which is administered by the U.S. Department of the Interior, Bureau of Land Management (BLM), in Riverside County, California. The environmental impacts of constructing and operating this project were analyzed pursuant to the National Environmental Policy Act (NEPA) in *Plan Amendment/Final Environmental Impact Statement for the Genesis Solar Energy Project, Riverside County, California* (75 **Federal Register** [FR] 52736; August 27, 2010) (Final EIS), prepared by the BLM Palm Springs-South Coast Field Office with DOE as a cooperating agency. BLM consulted DOE during preparation of the EIS, DOE provided comments, and BLM addressed those comments in the Final EIS. DOE subsequently determined that its own NEPA procedures had been satisfied and adopted the Final EIS. (75 FR 78993; December 17, 2010)

ADDRESSES: Copies of this Record of Decision (ROD) and the Final EIS may be obtained by contacting Matthew McMillen, NEPA Compliance Officer, Environmental Compliance Division, Loan Programs Office (LP–10), U.S. Department of Energy, 1000 Independence Avenue, SW., Washington, DC 20585; telephone 202–586–7248; or e-mail *Matthew.Mcmillen@hq.doe.gov.* The Final EIS and this ROD are also available on the DOE NEPA Web site at: *http://nepa.energy.gov,* and on the Loan Programs Web site at: *http://www.loanprograms.energy.gov.*

FOR FURTHER INFORMATION CONTACT: For further information about this ROD, contact Matthew McMillen, as indicated in the **ADDRESSES** section above. For general information about the DOE NEPA process, contact Carol Borgstrom, Director, Office of NEPA Policy and Compliance (GC–54), U.S. Department of Energy, 1000 Independence Avenue, SW., Washington, DC 20585; telephone 202–586–4600; leave a message at 800–472–2756; or e-mail *AskNEPA@hq.doe.gov.* Information about DOE NEPA activities and access to DOE NEPA documents are available through the DOE NEPA Web site at *http://nepa.energy.gov.*

SUPPLEMENTARY INFORMATION:

Background

The GSEP is a proposed concentrating solar electrical generating facility using parabolic trough technology with a dry-cooling system and associated facilities located on approximately 1,950 acres of BLM-administered Federal land in Riverside County, California, approximately 27 miles east of the unincorporated community of Desert Center and 25 miles west of the Arizona-California border city of Blythe. The GSEP will consist of two independent solar electric generating facilities with a net electrical output of 125 MW each, resulting in a total net electrical output of 250 MW. In addition to the generating facility, the project includes a distribution line, a 14-mile electrical transmission line, fiber-optic lines, a natural-gas pipeline, and a 6.5-mile access road. A double-circuit 230-kilovolt (kV) transmission line will be constructed to connect to the Southern California Edison Colorado River substation via the existing Blythe Energy Project Transmission Line between the Julian Hinds and Buck substations. The linear facilities will encompass approximately 90 acres outside the proposed project site.

On January 31, 2007, BLM's Palm Springs-South Coast Field Office received an application pursuant to Title V of the Federal Land Policy and Management Act (43 United States Code [U.S.C.] 1761) for a right-of-way (ROW) to construct, operate, maintain, and decommission a project identified as the NextEra Ford Dry Lake Solar Power Plant on BLM-administered Federal land in Riverside County, California. In June 2009, the applicant notified BLM that the company name was being changed to Genesis Solar, LLC, and the project became known as the Genesis Solar Energy Project (GSEP). The BLM California Desert Conservation Area (CDCA) Plan requires that all sites associated with power generation or transmission not identified in the CDCA Plan be considered through the plan amendment process. BLM approved the Proposed Plan Amendment to the CDCA Plan to allow the GSEP and approved a solar energy ROW to Genesis Solar, LLC, for the project; on November 4, 2010, the Secretary of the Interior approved these decisions.

In June 2010, Genesis Solar, LLC applied to DOE for a loan guarantee under Title XVII of EPAct 2005, as amended by Section 406 of the American Recovery and Reinvestment Act of 2009. (Recovery Act) On September 1, 2010, DOE invited the applicant to submit a Part II application in accordance with the DOE Federal Loan Guarantee Solicitation for Commercial Technology Renewable Energy Generation Projects under the Financial Institution Partnership Program, No. DE–FOA–0000166. On November 17, 2010, Genesis Solar, LLC submitted its Part II application for an $800 million loan guarantee to support the financing of the GSEP.

NEPA Review

BLM was the lead Federal agency in the preparation of the Genesis Solar Energy Project EIS, and DOE was a cooperating agency pursuant to a Memorandum of Agreement between DOE and BLM signed in January 2010. DOE reviewed the content of the draft EIS and provided comments to BLM to ensure that the DOE NEPA regulations (10 Code of Federal Regulations part 1021) were satisfied.

On November 23, 2009, the BLM published the ''Notice of Intent to Prepare an Environmental Impact

APPENDIX B
SCOPING ANNOUNCEMENT POSTCARD/EMAIL MEETING INVITE

US Army Corps of Engineers
Seattle District

Skagit River General Investigation Study

Come and provide your input on the project

The U.S. Army Corps of Engineers and Skagit County invite you to an open house immediately followed by a presentation and formal public hearing to get your comments on the Skagit River General Investigation (GI) Study, which will address flood risk management in the Skagit River Basin.

The purpose of the GI is to identify the problems and opportunities that exist to relieve flood and reduce flood risks and to develop a flood-risk management plan. A Notice of Intent (NOI) was originally published in the Federal Register in November 1997 and public meeting was held. Due to the amount of time that has lapsed since the issuance of the original NOI, we have reissued the NOI and are soliciting comments.

Join us for the open house and formal public hearing to learn more about the study, and provide your comments on:

- Issues of Concern
- Project Alternatives
- Potential Mitigation
- Possible Environmental Impacts

Join us at the Open House and Scoping Meeting:

Wednesday,
August 10, 2011

Skagit Station
105 E. Kincaid Street
Mt. Vernon, WA

5:00 – 6:00 PM: Open House

6:30 -7:00 PM: Presentation

7:00 – 8:00 PM: Formal Public Hearing

Date: Aug 9, 2011; Section: Nation; Page: A5

US Army Corps of Engineers ®
Seattle District

PLEASE PARTICIPATE!

Skagit River General Investigation – NEPA Scoping Meeting

The public is invited to attend a flood management meeting on Wednesday, August 10, between 5:00 p.m. and 8:00 p.m. at the Skagit Station's Community Room, 105 E. Kincaid, Mount Vernon, Washington. The purpose of the meeting is to solicit comments on the Skagit River General Investigation, also known as the GI. The agenda is as follows:

5:00 p.m. – 6:00 p.m.	**Open House**
6:30 p.m. – 7:00 p.m.	**Presentations**
7:00 p.m. – 8:00 p.m.	**Formal Public Hearing**

The purpose of the GI is to better identify the problems and opportunities that exist to relieve flooding and reduce flood risks and to develop a flood-risk management plan.

The U.S. Army Corps of Engineers published a Notice of Intent (NOI) to prepare a Draft Environmental Impact Statement (DEIS) for the Skagit River GI in the July 29, 2011 Federal Register. A DEIS is being prepared because of the potential for impacts on environmental resources, particularly salmonid habitat, and the intense public interest already demonstrated in addressing the flooding challenges of the Skagit River.

Public involvement will be sought during scoping, plan formulation, and preparation of the DEIS in accordance with National Environmental Policy Act (NEPA) procedures. A public scoping process has been started: (1) To clarify which issues appear to be major public concerns, (2) to identify any information sources that might be available to analyze and evaluate impacts, and (3) to obtain public input and determine acceptability for the range of measures to be included within potential alternatives.

Persons or organizations wishing to submit scoping comments should do so by August 29, 2011. Public comment may also be made at the scoping meeting.

Requests for inclusion on the mailing list, future documents, and all comments on the proposed project should be sent to: Hannah Hadley, Study Environmental Coordinator, U.S. Army Corps of Engineers, Seattle District, ATTN: CENWS–PM–PL–ER, P.O. 3755, Seattle, WA 98124–3755; Telephone (206) 764–6950; Fax (206) 764–4470; E-mail Hannah.F.Hadley@usace.army.mil.

From: Press_Releases@skagitcounty.net
To: Kara E. Symonds
Subject: Skagit River General Investigation - NEPA Scoping Meeting, August 10, 2011
Date: Monday, August 08, 2011 3:28:59 PM
Attachments: image001.png
image003.jpg
image005.jpg
image004.png

Press Release

For Immediate Release: August 8, 2011

Hannah Hadley, U.S. Army Corps of Engineers, Seattle District
hannah.f.hadley@usace.army.mil · 206-764-6950

Skagit River General Investigation – NEPA Scoping Meeting, August 10, 2011

SKAGIT COUNTY – On August 10, 2011, Skagit County and the U.S. Army Corps of Engineers will hold a public scoping meeting from 5:00 p.m. – 8:00 p.m. in the Skagit Station's Community Room located at 105 E. Kincaid, Mount Vernon. The purpose of the meeting is to solicit comments on the Skagit River General Investigation, also known as the GI. The agenda includes:

- Open House 5:00 p.m. – 6:00 p.m.
- Presentations 6:30 p.m. – 7:00 p.m.
- Formal Public Hearing 7:00 p.m. – 8:00 p.m.

The purpose of the GI is to identify the problems and opportunities that exist to relieve flooding and reduce flood risks, and to develop a flood-risk management plan.

The U.S. Army Corps of Engineers published a Notice of Intent (NOI) to prepare a Draft Environmental Impact Statement (DEIS) for the Skagit River General Investigation in the July 29, 2011 Federal Register. A DEIS is being prepared due to the potential for impacts on environmental resources and the intense public interest already demonstrated in addressing the Skagit River flooding problems.

A NOI was originally published in the Federal Register in November 1997 and a public meeting was held. Due to the amount of time that has lapsed since the issuance of the original NOI, the Corps has reissued the NOI and is soliciting comments.

Public involvement will be sought during scoping, plan formulation, and preparation of the DEIS in accordance with National Environmental Policy Act (NEPA) procedures. A public scoping process has been started to: (1) clarify which issues appear to be major public concerns, (2) identify any information sources that might be available to analyze and evaluate impacts, and (3) obtain public input and determine acceptability for the range of measures to be included within potential alternatives.

This NOI formally commences the scoping process under NEPA. As part of the scoping process, all affected Federal, state, and local agencies; Tribes; the public; and other interested private organizations, including environmental groups, are invited to comment on the scope of the DEIS. Comments are requested regarding issues of concern, project alternatives, potential mitigation measures, probable significant environmental impacts, and permits or other approvals that may be required by any project.

People or organizations wishing to submit scoping comments should do so by August 29, 2011. Public comment may also be made at the scoping meeting on August 10, 2011.

Please send mailing list inclusion requests, future documents, and all comments on the proposed project, to:

Hannah Hadley, Study Environmental Coordinator
U.S. Army Corps of Engineers, Seattle District
ATTN: CENWS–PM–PL–ER
P.O. 3755, Seattle, WA 98124–3755
Fax: (206) 764–4470
E-mail: hannah.f.hadley@usace.army.mil.

For more information, contact Hannah Hadley, at hannah.f.hadley@usace.army.mil or at (206) 764-6950.

###

www.skagitcounty.net/news

APPENDIX C
SCOPING MEETING MATERIALS

Welcome
to the
Skagit River General Investigation Study
Open House/
Formal Scoping Meeting

Tonight's Agenda

5:00—6:00 pm	**Open House**
6:30—7:00 pm	**Welcome and Introductions** **Project Overview and Status** **NEPA Process**
7:00—8:00 pm	**Formal Public Hearing**

We look forward to receiving your comments and input!

US Army Corps of Engineers ®
Seattle District

SKAGIT COUNTY
Serving With Pride
WASHINGTON

Information Sheet for Skagit River GI

Hannah Hadley, U.S. Army Corps of Engineers, Seattle District
hannah.f.hadley@usace.army.mil · 206-764-6950

The Skagit River General Investigation (GI) is investigating basin-wide measures to reduce flooding to the study area. Measures under consideration include levees, bypasses, additional flood storage, urban levees, modifications to existing dams, and non-structural measures.

The primary intent of the flood risk management feasibility study is to evaluate flooding problems in the Skagit River basin from the Ross Dam reservoir (Ross Lake) to Skagit Bay; to formulate, evaluate, and screen potential solutions to these problems; and to recommend an alternative that has a federal interest and are supported by the local entities. The recommended plan must be technically viable, economically sound, and supported by the local jurisdictions and local sponsor. The study will result in an integrated Feasibility Study Report/Environmental Impact Statement (FR/EIS).

The U.S. Army Corps of Engineers published a Notice of Intent (NOI) to prepare a Draft Environmental Impact Statement (DEIS) for the Skagit River General Investigation in the July 29, 2011 Federal Register. A NOI was originally published in the Federal Register in November 1997 and a public meeting was held. Due to the amount of time that has lapsed since the issuance of the original NOI, the Corps has reissued the NOI and is soliciting comments. A DEIS is being prepared due to the potential for impacts on environmental resources and the intense public interest already demonstrated in addressing the Skagit River flooding problems.

Public involvement will be sought during scoping, plan formulation, and preparation of the DEIS in accordance with National Environmental Policy Act (NEPA) procedures. A public scoping process has been started to: (1) clarify which issues appear to be major public concerns, (2) identify any information sources that might be available to analyze and evaluate impacts, and (3) obtain public input and determine acceptability for the range of measures to be included within potential alternatives.

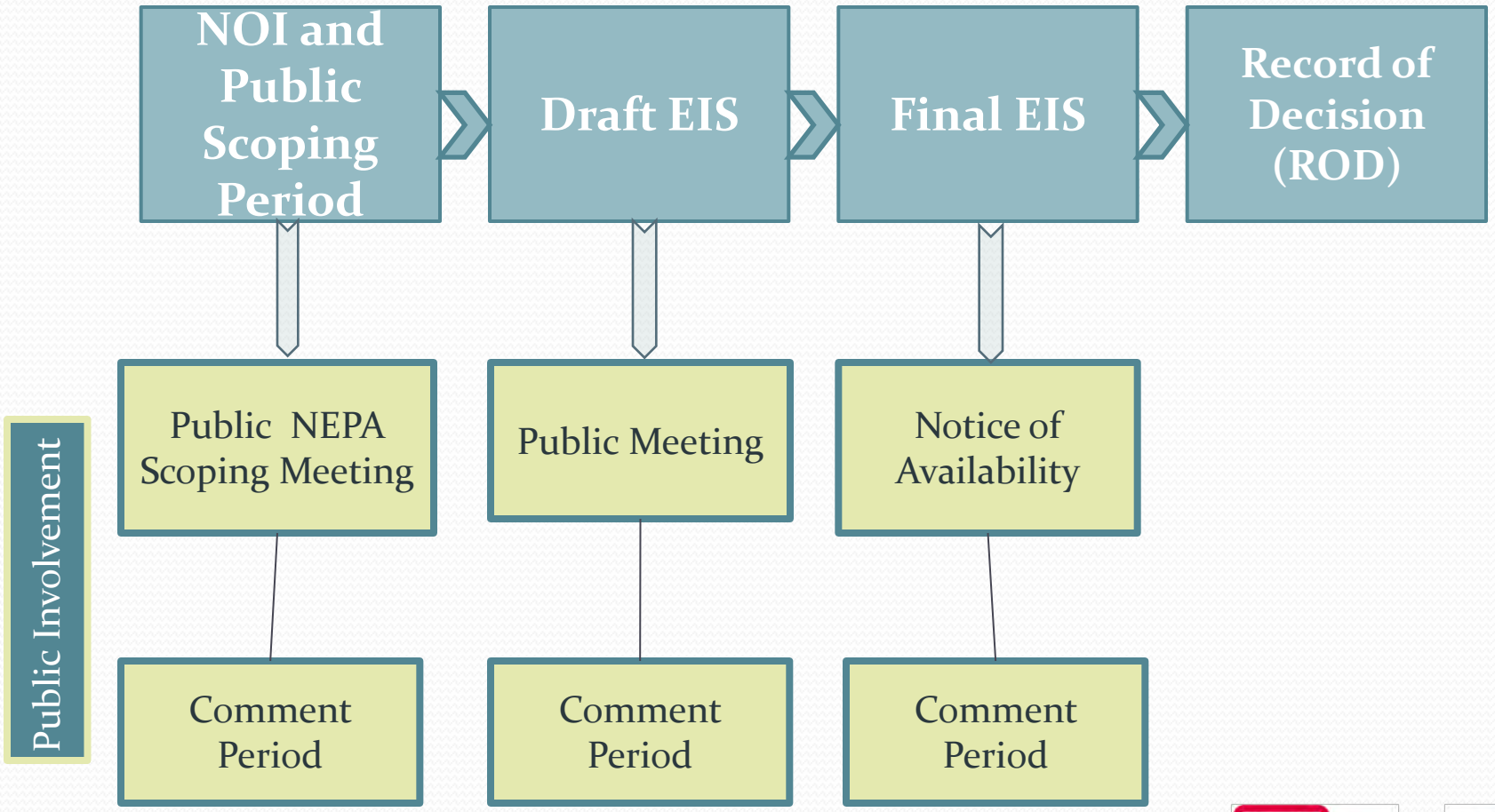
This NOI formally commences the scoping process under NEPA. As part of the scoping process, all affected Federal, state, and local agencies; Tribes; the public; and other interested private organizations, including environmental groups, are invited to comment on the scope of the DEIS. Comments are requested regarding issues of concern, project alternatives, potential mitigation measures, probable significant environmental impacts, and permits or other approvals that may be required by any project.

People or organizations wishing to submit scoping comments should do so by August 29, 2011.

Please send mailing list inclusion requests, future documents, and all comments on the proposed project, to:

Hannah Hadley, Study Environmental Coordinator
U.S. Army Corps of Engineers, Seattle District
ATTN: CENWS–PM–PL–ER
P.O. 3755
Seattle, WA 98124–3755
Fax: (206) 764–4470
hannah.f.hadley@usace.army.mil

NEPA EIS Steps



US Army Corps of Engineers ®
Seattle District

SKAGIT COUNTY
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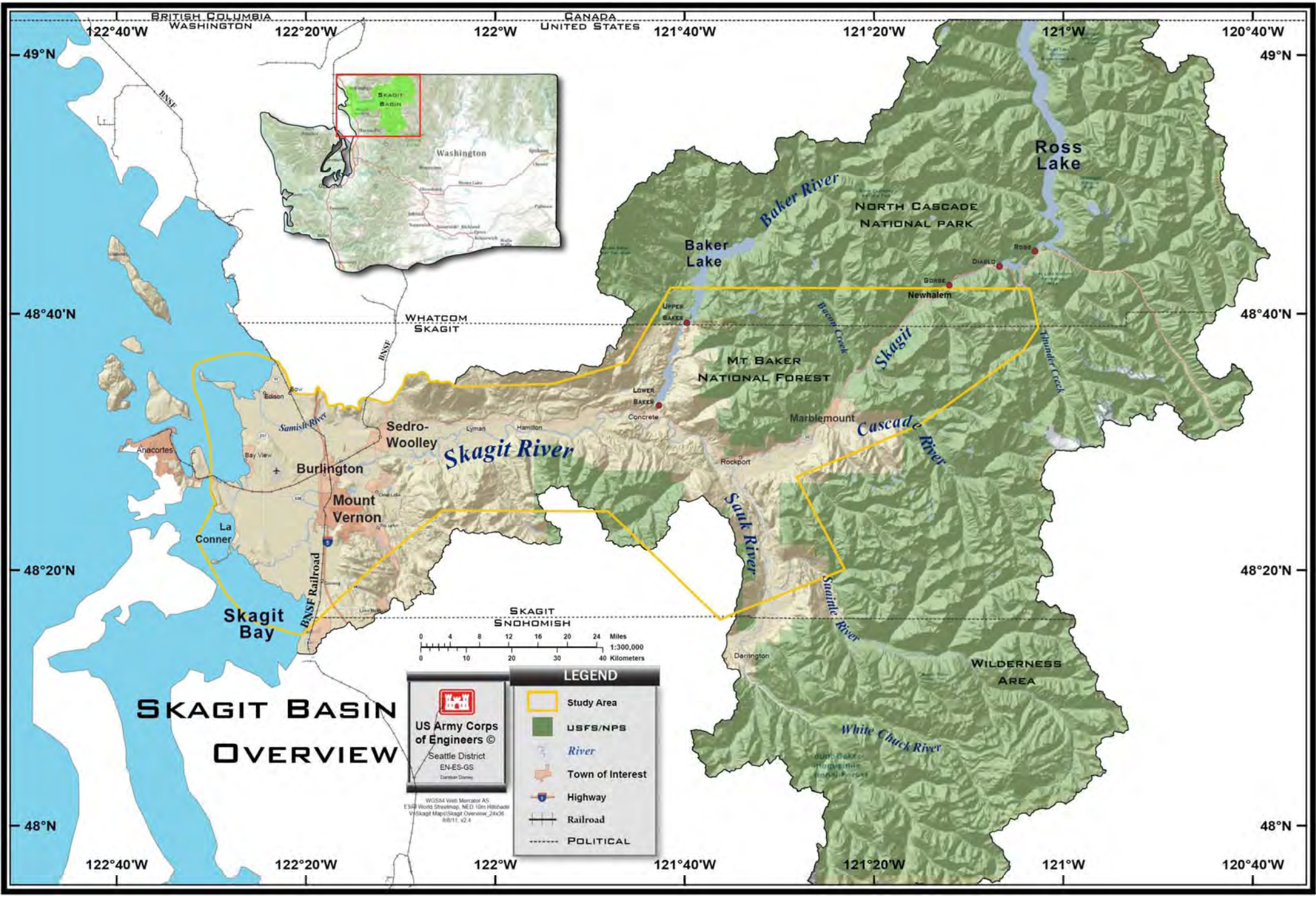
WASHINGTON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United States
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122°20'W
122°W
121°40'W
121°20'W
121°W
120°40'W
49°N
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48°20'N
48°N
Skagit Basin
Washington
BNSF
Whatcom
Skagit
Skagit
Snohomish
Ross Lake
Baker River
North Cascade
National Park
Baker Lake
Upper Baker
Lower Baker
Diablo
Ross
Gorge
Newhalem
Bacon Creek
Thunder Creek
Mt Baker
National Forest
Concrete
Marblemount
Rockport
Cascade River
Skagit River
Sauk River
Suiattle River
Darrington
Wilderness
Area
White Chuck River
Sedro-
Woolley
Lyman
Hamilton
Edison
Bow
Samish River
Anacortes
Bay View
Burlington
Mount
Vernon
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Bay
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US Army Corps
of Engineers ©
Seattle District
EN-ES-GS
LEGEND
Study Area
USFS/NPS
River
Town of Interest
Highway
Railroad
POLITICAL
WGS84 Web Mercator AS
ESRI World Streetmap, NED 10m Hillshade
V:\Skagit Maps\Skagit Overview_24x36
8/8/11, v2.4
Skagit Basin
Overview

What is NEPA Scoping?

Scoping is part of the EIS process through which a federal agency describes a proposed action and possible alternatives. The agency then seeks input from other agencies, organizations, and the public on potentially affected resources, environmental issues to be considered, and the agency's planning approach to the analysis.

What it the Purpose of this Public Scoping Meetings?

This public scoping meeting is design to solicit public and agency comments regarding the issues the EIS should consider. This scoping meeting aims to:

- Provide an overview of the Skagit River General Investigation Study
- Describe the NEPA process

The U.S. Army Corps of Engineers and Skagit County request input from interested people, organizations, and agencies on:

- Issues of Concern
- Project Alternatives
- Potential Mitigation
- Possible Environmental Impacts

We encourage you to provide your input during the public scoping and public review periods

How Do I Provide My Comments?

- Use the comment form provided tonight
- Provide a verbal comment to the court reporter tonight
- Mail comments to Hannah Hadley at:

  U.S. Army Corps of Engineers
  P.O. 3755
  Seattle, WA 98124-3755

- Email comments to:

  Hannah.f.Hadley@usace.army.mil

Please provide comments by August 29, 2011

Thank you for coming!

We look forward to receiving you input!

US Army Corps of Engineers ®
Seattle District

SKAGIT COUNTY
Serving With Pride
WASHINGTON

What is NEPA...

...and the Public Scoping Process?

What is NEPA?

NEPA stands for the "**National Environmental Policy Act**" and is:

- A statutory requirement triggered by major federal actions that could significantly affect the quality of the human environment.
- A federal law that requires the identification and analysis of potential environmental effects before those actions take place
- A "full disclosure" law with provisions for public access to and public participation in the federal decision-making process
- A mechanism for evaluating potential environmental impacts and incorporating public involvement into the federal decision-making process

Legislative, Regulatory, and Interagency Framework Governing NEPA

- NEPA of 1969: Public Law 91-190
- 40 CFR 1500-1508: Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA
- U.S. Army Corps of Engineers (USACE) Engineering Regulation 200-2-2, Procedures for Implementing NEPA
- Based upon the legislative, regulatory, and interagency framework governing NEPA, the USACE, in cooperation with Skagit County is preparing an Environmental Impact Statement (EIS) for Skagit River Basin

What is an EIS?

An **EIS** stands for "**Environmental Impact Statement**" and :

- Presents the results of analysis of the potential environmental effects of a proposed action and alternatives
- Is prepared when a proposed action could cause significant environmental effects or if the proposed action would generate significant public interest
- Includes a description of baseline conditions for all resource areas against which effects of the proposed action and alternatives are evaluated
- Identifies potential consequences and any appropriate mitigation (measures to reduce adverse impacts)
- Includes opportunities for public involvement

Steps in Preparing an EIS

- Define the proposed action, alternatives, and decisions to be made
- Identify what needs to be analyzed (scoping); refine the proposed action and alternatives
- Gather data, conduct analysis, and identify environmental effects of the proposed action and alternatives
- Publish a Draft EIS for public and agency review

Public Involvement Opportunities

- Public Scoping Meeting (oral or written comments)
- Draft EIS Public Review Period (written comments)
- Draft EIS Public Meeting (oral or written comments)
- Final EIS Public Review Period (written comments)

Public notices will be published when the Draft and Final EISs are released for public review.

Skagit River General Investigation Study

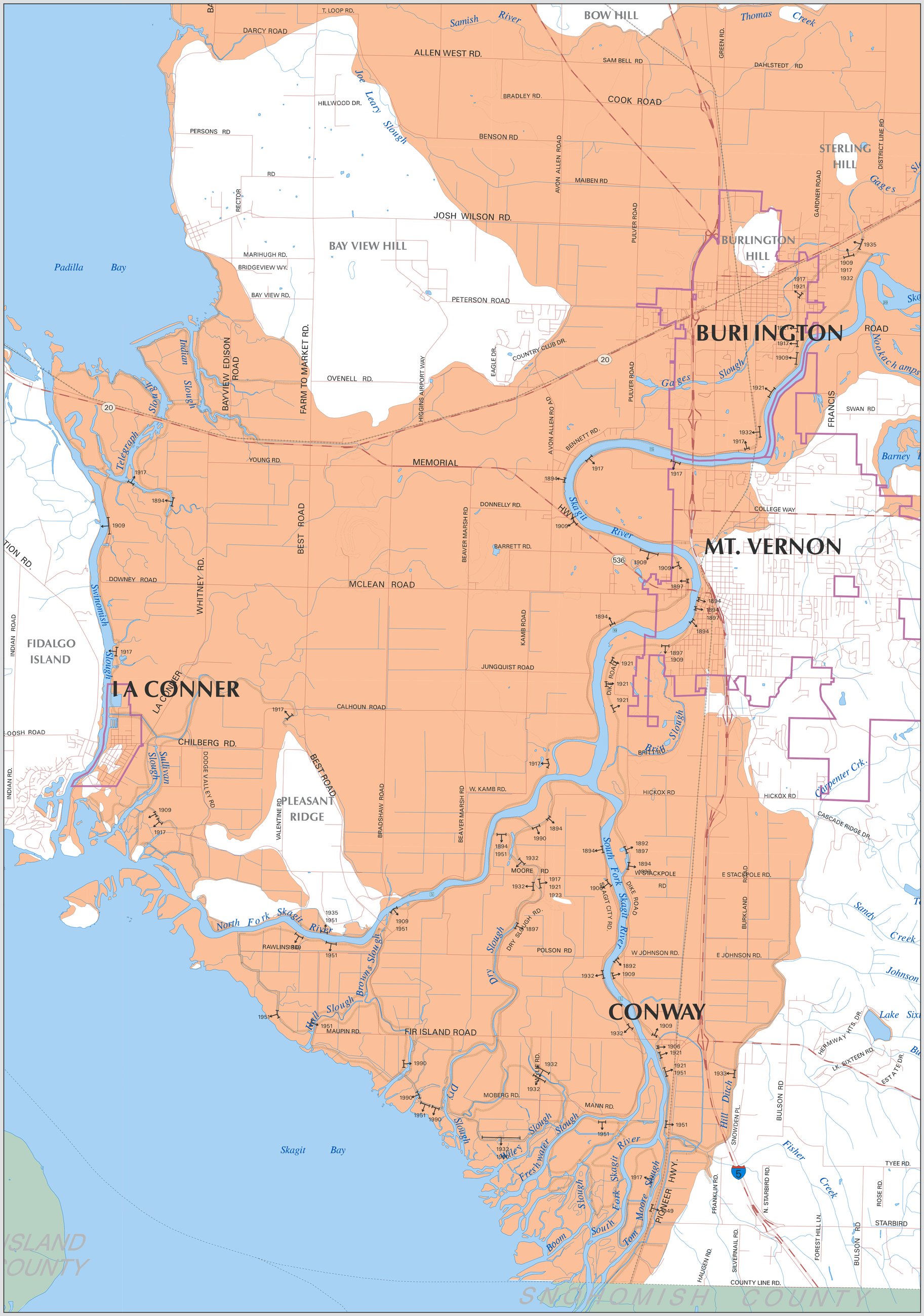
Project Purpose:

The purpose of the Skagit River General Investigation (GI) Study is to identify the problems and opportunities that exist to reduce flood risks and to develop a flood risk management plan

Public Scoping Meeting Objectives:

- Inform interested community members and stakeholders about the Skagit River GI Study and the National Environmental Policy Act (NEPA) process
- Engage the public in the NEPA scoping process through a formal public hearing
- Gather comments from the community

Major Dike Failures
Lower Skagit River Basin
Washington



LEGEND:

- Flood Plain
- Outside of Flood Plain
- River Miles
- City Limits
- Dikes

DATA SOURCE

Data Source for dike failure location and year are from "Floods in the Skagit River Basin, Washington", U.S. Geological Survey, Water Supply #1527, 1961.

Historic dike failures are shown and other failures will likely occur during future events less than a 100 year flood. These failures will result in inundation of flood plain areas.

Isolated (non flooded) areas will occur during the 100 year flood, but generally speaking, the entire flood plain shown will be inundated.

100 YEAR FLOOD

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

Some FEMA mapped areas within the 500 year flood have been included within the flood plain shown.

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

Under extreme conditions a flood greater than the 100 year flood can occur.

Data Source: U.S. Census Bureau TIGER Files & Data Developed By Skagit County Mapping Services.

Contours Generated From U.S.G.S. 7.5 min Quad DEM Files.

Note: This map was developed in 1996 by the U.S. Army Corps of Engineers and Skagit County Officials. For further information contact Skagit County Public Works, Surface Water Management Division.

Produced By: Skagit County Mapping Services.

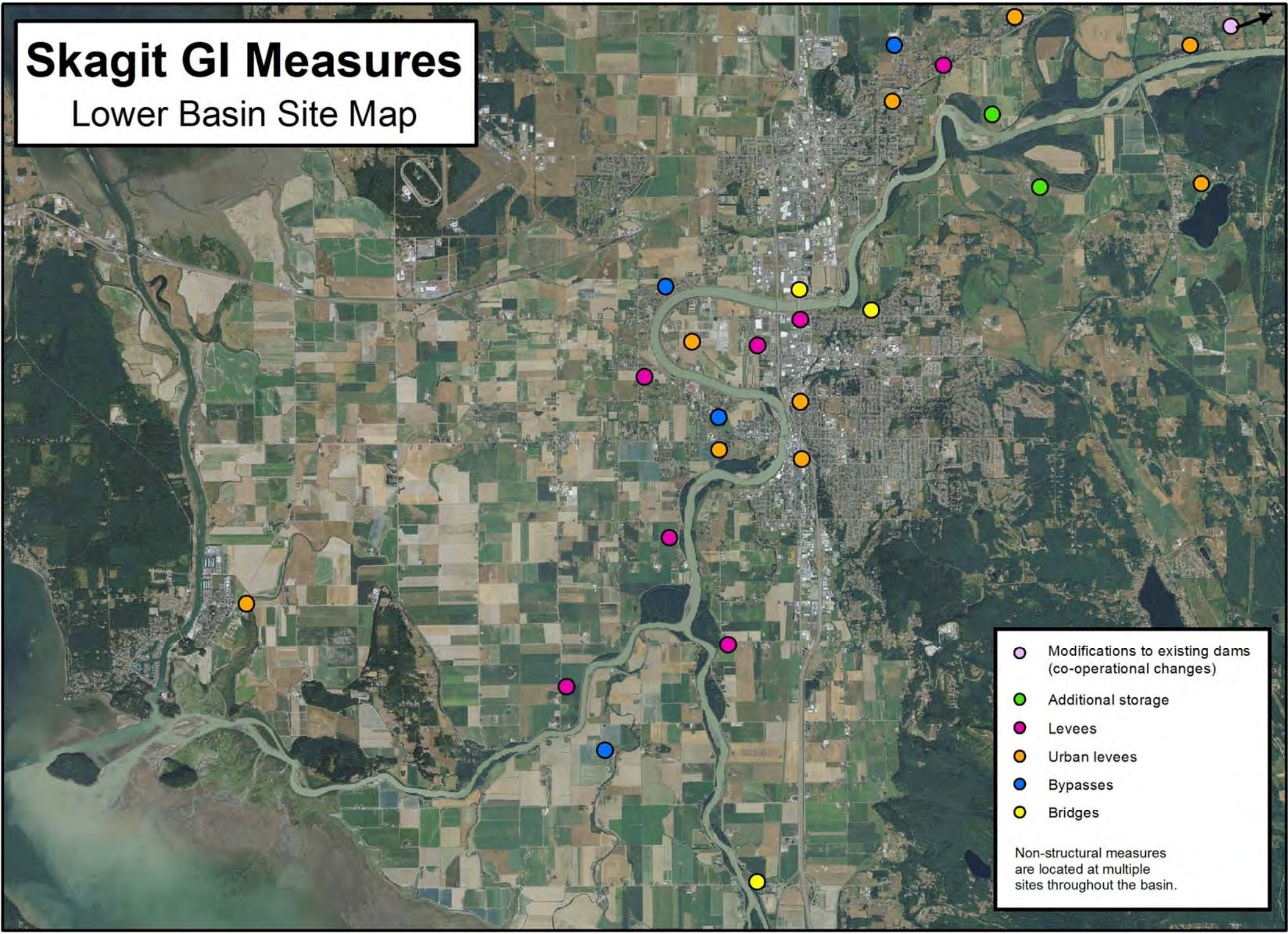
Date: 09-15-1996 By: jb

N NW NE W E SW SE S

SCALE IN MILES

0 1/2 mile 1 mile

Skagit County Mapping GIS Geographic Information System


Skagit GI Measures
Lower Basin Site Map
Modifications to existing dams (co-operational changes)
Additional storage
Levees
Urban levees
Bypasses
Bridges
Non-structural measures are located at multiple sites throughout the basin.

Skagit River General Investigation Study

National Environmental Policy Act Public Scoping Meeting

August 10, 2011

We want to hear from you!!

Please take the time to respond to the questions below. You can provide your comments by:

- ✓ Leaving this form with us tonight or at Skagit County Public Works
- ✓ Putting a stamp on this form and sending by regular mail
- ✓ Contacting Hannah Hadley at hannah.f.hadley@usace.army.mil or at (206) 764-6950

What are the problems and what are the solutions for flooding in the Skagit River Basin?

What are the concerns with the Basin's environmental resources and what are some possible solutions?

US Army Corps of Engineers
Seattle District

SKAGIT COUNTY WASHINGTON

Skagit River General Investigation Study

National Environmental Policy Act Public Scoping Meeting
August 10, 2011

Is there anything additional that should be addressed or considered during this study? Please be specific.

_____

_____

_____

Do you reside within the Skagit River Basin? ☐ Yes ☐ No

Would you like to be added to the Skagit River General Investigation Study mailing list? ☐ Yes ☐ No

If yes, provide us with your contact information so we can add you to the project mailing list (please print):

Name: _____ Affiliation (Optional): _____

Address: _____

City: _____ State: _____ Zip: _____

Email: _____

For more information or to submit other comments, please contact Hannah Hadley, U.S. Army Corps of Engineers at hannah.f.hadley@usace.army.mil or at (206) 764-6950. To be included in the official scoping report, we must receive your comments no later than August 29, 2011. Thank you!

Affix Postage Here

Hannah Hadley
U.S. Army Corps of Engineers
P.O. Box 3755
Seattle, WA 98124-3755

Please fold form in half and tape closed to mail

APPENDIX D
SCOPING MEETING ATTENDANCE SIGN-IN SHEET

Skagit River General Investigation Study

National Environmental Policy Act Public Scoping Meeting

August 10, 2011

US Army Corps of Engineers ®
Seattle District

Name	Affiliation (if applicable)	Mailing Address	E-mail Address	Phone Number	I would like to make a public comment (place check)
Polly Fischer	WK Grp NOAA-MARFC	1106 4th St 98221-1513 Anacortes WA		360 293-4098	
Dada Hind		10459 SAMISH LP R. Bow 98232		360 766 4000	
KATHY MITCHELL		1155 CHUCKANUT RIDGE DRIVE BOW 98232	KSmitchell@Startouch.net		✓
Carol Ehlers		3998 Wind Crest Ln 98221 Anacortes WA		360-293-7108	✓
BROCK APPLEGATE	WDFW	PO BOX 1100 LA CONNER, WA 98257	brock.applegate@dFW.WA.GOV	360-466 4345 X254	
DAVE MINDS		10459 SAMISH Is Rd BOW, WA 98232		360 333 6275	
JAN FLAGAN	SKAGIT CO	1800 CONTINENTAL PL MV WA 98273	Janicef@co.skagit.wa.us	306 336-9400	
Vickie Crook	Local Realtor Assoc.	120 E. George Hopper Rd #112 Burlington WA 98233			
Elly Burke	North Cascades National Park	7280 Ranger Station Rd Marblemount WA 98267	elizabeth_burke@nps.gov	360.854.7320	

Skagit River General Investigation Study

National Environmental Policy Act Public Scoping Meeting

August 10, 2011

US Army Corps of Engineers ®
Seattle District

Name	Affiliation (if applicable)	Mailing Address	E-mail Address	Phone Number	I would like to make a public comment (place check)
Sylvia Matterand	Clear Lake Comm. Connection		matterand@wavecable.com		
Ken Dahlstedt	Skagit County Commissioner				
Christine Troyer	Skagit City Rd Mt Vernon				
Tonya Bieche					
Tom [illegible]	SKAGIT County				
Eric Hall		25193 River Vista Ct	ehall@whalls.com		
Konrad KUERP					
Larry Wasserman	Swinomish Indian Tribe		lwasserman@skagitcounty.net		
Maynard Axelson	Fir Island Resident				

Skagit River General Investigation Study

National Environmental Policy Act Public Scoping Meeting

August 10, 2011

US Army Corps of Engineers ®
Seattle District

Name	Affiliation (if applicable)	Mailing Address	E-mail Address	Phone Number	I would like to make a public comment (place check)
Stanley Green, P.E.		PO Box 95 College Place, WA 99324			
Bill McCord					✓
Kate Martin	Skagit Valley Herald	1215 Anderson MV 98274	kmartin@skagit publishing.com	416-2145	
Vivian Muzuta		PO Box 2416 Mt Vernon 98273			
Stan Walsh	Skagit River System Cooperative	P.O. Box 368 La Conner WA 98233	swalsh@skagitcoop.org	360 466-1512	
HENRY HASH	P.W.				
Dan O'Donnell	CITIZEN	PO BOX 644 LAC 98257	laconnordan@gmail.com	466-3057	STORAGE
Bob Helton	CITIZEN	PO MT. VERNON	poetsmart@msn.com		
Ron Worthen	NPSAR (REALTORS)		RLW@fidalgo.net	360 661-1500	

Skagit River General Investigation Study

National Environmental Policy Act Public Scoping Meeting

August 10, 2011

US Army Corps of Engineers ®
Seattle District

Name	Affiliation (if applicable)	Mailing Address	E-mail Address	Phone Number	I would like to make a public comment (place check)
Cory Eriel	Puget Sound Energy	1660 Park Lane Burlington WA 98233	cory.eriel@pse.com	360-766-5847	
BRIAN LIPSCOMB		27765 W CIRCLE DR SEDRO-WOOLLEY WA	BRIAN@AQUAINRX INC.	360-856-3040	
BENJAMIN LARRY		PO BOX 71 HAMILTON WA 98255	EMCSSWAW@YAHOO.COM	3605551-9725	
LEONARD HALVERSON		11558 STERLING RD SEDRO-WOOLLEY WA 98284		360 708-0759	L
JEANNE HALVERSON		"		"	
JONI DEAL		618 S. SECTION ST BURLINGTON, WA 98233	JDEAL0678@AOL.COM	360 755-1230	

Skagit River General Investigation Study

National Environmental Policy Act Public Scoping Meeting

August 10, 2011

US Army Corps of Engineers ®
Seattle District

Name	Affiliation (if applicable)	Mailing Address	E-mail Address	Phone Number	I would like to make a public comment (place check)
Daryl Hamburg	D.D 17	dhamburgs@msn.com	P.O. Box 2926 Mount Vernon 98273	360 ~~408~~ 7670	
John Shultz	DD1 & DD12	jshvuae comcast.net	160 Cascade Pl. Burlington, WA	360 540-1949	✓
Dan Berentsen	Skagit Co. SkCo.	danb@co.skagit.wa.us	1800 Continental Pl. Burlington, WA 98233	336-9419 3461	
Betsy Robblee	Rep. Larsen	betsy.robblee @mail.house.gov		202-494-8291	
Sharon Dillon	SC				
GARY T. JONES	DD#22	gjones@ jonesandsmith.com	P.O. Box 1245 M.V. WA 98273	(360) 336-6608	✓

Skagit River General Investigation Study

National Environmental Policy Act Public Scoping Meeting

August 10, 2011

US Army Corps of Engineers ®
Seattle District

Name	Affiliation (if applicable)	Mailing Address	E-mail Address	Phone Number	I would like to make a public comment (place check)
Ron Wesen					

APPENDIX E
SCOPING MEETING COMMENT TRANSCRIPT

REPORTER'S TRANSCRIPT OF PROCEEDINGS

SKAGIT COUNTY FLOOD STUDY MEETING

DATE TAKEN: AUGUST 10, 2011

PLACE: MOUNT VERNON, WASHINGTON

TIME: 6:31 P.M.

REPORTED BY: EMILY K. NILES, RMR, CRR

WA CCR #2794, NV CCR #782

WEDNESDAY, AUGUST 10, 2011; 6:31 P.M.

MOUNT VERNON, WASHINGTON

-oOo-

MR. LEWIS: We're ready to begin the public hearing portion of the meeting. My name's Evan Lewis. I'm the supervisor of the part of the Seattle district responsible for overseeing preparation of environmental documentations, like environmental impact statements. And it just so happens that this meeting is to seek comments on the scope of the Environmental Impact Statement for the Skagit River General Investigation Study.

Right now we've issued a notice of intent to prepare an Environmental Impact Statement on the project and a key part of that Environmental Impact Statement preparation is defining the scope of our evaluation. I'm going to leave it to the people following me to provide more information about the project and the purpose of the meeting, but I want to start with some information on ground rules before I introduce Colonel Estok. So here are the basic ground rules.

This meeting is to solicit input from you. So we're going to get input on the scope of the EIS, and we'll consider those scoping comments as we formulate the draft EIS. We're not going to respond to questions or comments in this part of the meeting. It's really to get input from you

verbally or via the comment cards. Your comments will become part of the public record and will be recorded by the public -- or the court reporter here. After the scoping comment period is over, we'll prepare a scoping summary report that summarizes the comments that were received today or sent to us during the comment period, which ends on August 29th, and that report will be posted online on the Corps' Web site and possibly also on the County's Web site as well.

If you'd like to give a verbal comment, I know -- I see we already have some people who have signed up. We'll go through that list. You'll have roughly six minutes to speak. Kara here will be giving you warnings when you reach a minute for that time and then concluding your time as well. Please be respectful of the time to afford everybody the chance to speak. When we get through speakers, if we have additional time and you decide that you have something that you'd like to say and you did not sign up, we may have additional time for it at that time to have additional speakers.

So those are the ground rules, and, with that, I'm pleased to introduce Colonel Bruce Estok. Colonel Estok assumed command of the Seattle district on July 29th, 2011, and he's really hit the ground running. He's spent the last year as a National Security Fellow at Harvard University's

Kennedy School of Government. Recent prior assignments include Engineer Plans and Operations Chief at U.S. Army Pacific in Hawaii. He was the commander of Albuquerque District with the Corps of Engineers. And he has deployed for operations Iraqi Freedom, Desert Storm, and Desert Shield. He's got a slew of awards and decorations that I won't go into now, but you can look at his uniform. And he holds degrees in aeronautical and civil engineering.

So, with that, I'll turn the meeting over to Colonel Estok.

MR. ESTOK: Okay. And, now, Kara, you got to cut me off too. You know, you can give me the time expired.

Hey, I'm Colonel Bruce Estok as Evan said, and I'm the commander of the Seattle District Corps of Engineers. I want to welcome you all to tonight's public meeting on the Skagit River General Investigation.

I want to thank Betsy Robblee of Representative Larsen's office who's here with us, as well as the county commissioner's, county, city, tribal officials that are here in attendance tonight, and all the members of the public that have taken the time to participate.

As we pulled into the parking lot tonight, you know, we kind of came -- we kind of took the long way around, but eventually we made it to the right place. Pulled in here. We were like, There are a lot of people

here for this. And, you know, what that tells me, you know, based on the number of people that are here, as well as -- you know, I was briefed on a bit of the history of this study and your -- you know, your commitment to it over time. This is very important to the community here. You know, beyond that, you know, I recognize that flooding is a significant issue for Skagit County and the community here.

And, you know, what I want to let you know is that it is important to the Corps of Engineers, and it's important to me personally. Our team here, you know, I think I'll thank them up front. They've done a, you know, lot of good work to get to this point. You know, still plenty to do. But I do want you to know that I've just been in this job for, you know, a short period of time. This is, in fact, you know, the first sort of public engagement I've had. And it's because, you know, kind of from day one, I've heard about Skagit Valley, you know, both this study as well as, you know, some of the flooding you had in the last few years and the levy rehabs we're doing. So I recognize that this is a big issue up here, and we want to, you know, work with you on that.

Beyond it being important, I got to tell you, I appreciate the chance to get out of the office. You know, like I said, I've been on the job seven days, and it's been kind of briefing after briefing after briefing, hearing

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about all the things that the folks at the district do. But the chance to really get out on the ground -- you know, got kind of a windshield tour on the way in, you know, relatively quickly, you know, briefing on the way up and then, you know, some time before this meeting here to talk to, you know, quite a few of you and understand a little bit about who you are and your interest in the project. And that's -- you know, for me, that's invaluable, because ultimately as this -- you know, as this moves forward, the position I'm in, you know, I've got to understand, you know, kind of all the factors at play with it.

As Evan mentioned, our purpose tonight is to give you a brief update on the project and then talk to you a little bit about the NEPA, or National Environmental, you know, Policy Act process. But really the most important reason why we're here tonight is to have an opportunity to listen to you, okay? To understand your -- you know, your concerns, you know, the con -- firsthand what you think about the conditions on the ground here, what problems you face, and what opportunities we have in the basin to try to, you know, take care of the flooding problem, you know, through this study.

You know, this'll -- I think we'll have a good amount of time here tonight to accomplish that once I get done. You can flash the thing here. I'm getting close.

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And then beyond tonight's, you know, activities here, I certainly look forward to in my time in the Seattle district working closely with all of you on other opportunities to get up here, and spend a little bit more time on the ground understanding firsthand, you know, what the situation is.

So thank you very much for having me. Appreciate it.

MR. BERENTSON: Good evening.

My name is Dan Berentson. I'm division manager for Natural Resources, Skagit County Public Works.

As you know, Skagit Valley is a local sponsor of the General Investigation, and we've been working with the Corps of Engineer for some time. We'd really like to show our appreciation for our local partners from our cities, towns, tribes, dike districts, and interested parties. Have been so loyal to paying attention to this important issue.

And just real quickly, I'd like to introduce some of our county staff and then introduce our county commissioners.

Here today we have Henry Hash, our public works director. Henry Hash.

Lorna Ellestad, GI project manager. She's in the back.

Kara Symonds, who's holding up the your-time-is-up card. She's our watershed planner.

Jan Flagan, our water -- or surface water section manager.

Meghan MacMullen, administrative assistant.

And I believe Nikki Davis, our engineering tech, is here.

Also, our Skagit River Flood Control Zone District Advisory Committee. We have a couple members. Leonard Halverson, I believe, is here. Daryl Hamburg, and I'm sure there's -- might be a few others.

But, anyway, we welcome you all here. We appreciate the support.

At this time, I would like to introduce our commissioner Ron Wesen as the chair, and he'll introduce our other two commissioners.

I believe Ken Dahlstedt had to leave a little bit earlier, but he was here a few minutes earlier.

Mr. Wesen?

MR. WESEN: Thank you, Dan.

I'd like to welcome everybody here. I really do appreciate it.

And thank you, Colonel, for coming up here. I know I met you last week down in the Ecosystem board meeting, and he was looking forward to coming up to Skagit County. We had a beautiful day today. So thank you very much.

I know this has been going on for quite a few years. We need to look forward and make sure we come to a resolution of this problem on the Skagit River, and I think we can get there. And we are -- need to all work together. So I just thank you all for being here and being a part of this public comment.

Commissioner Dillon is here, and she has been on the county commission for four and a half years now?

MS. DILLON: Yes.

MR. WESEN: And Commissioner Dahlstedt has been eight and a half or twelve?

MR. DAHLSTEDT: Eleven.

MR. WESEN: Eleven.

So he's the one who's been here the longest, and he's the one who's dealt with the Skagit River study the longest. So he's the one of the three of us that lead -- put in the lead on this Skagit River. So -- he had a personal issue that came up today. So that's why he's not able to stay any longer. He was here for about an hour or so earlier.

So once again, thank you for being here. Please have some good comments, and we do appreciate everyone working on this problem.

Thank you.

MR. JOHNSON: And I'm Dan Johnson. I'm the

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project manager for the Skagit River GI for the Corps of Engineers. Talk a little bit about where we are today, where we came from, where we're headed to next.

I started this job about a year ago, and almost immediately was assigned to the Skagit GI. And I'm here to tell you, it's a pretty amazing place. Actually took a little bit of vacation time with my wife this summer, and of all the places we could go, we came up here for our vacation. But I laid low and didn't let you know I was in town, so....

Skagit River is very complex. You know, between dams and levies and mountains and floodplains and dumping off into the Sound, we have a lot of things we've got to figure out. And we've been at it kind of a long time. I think some folks would agree. But at the moment we're making some pretty good progress. And one of the -- there are a couple of things that have helped a lot with that.

One was, this year we got assigned to something called reset. The term kind of maybe confuses people sometimes. It sounds like we're starting over again, and that's not quite the case. But really it's a -- more of an opportunity for us to get some good attention from the folks that we work for. So above the district level we have a division in Portland, and we have our headquarters back in Washington, D.C., and they've taken a real strong interest

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in how this project is going.

We met with them a couple times this year. Sort of looked at the scope of the project, looked at where -- what things we had done in the past, the things we were trying to accomplish right now, and maybe some of the things in the future that we were a little overplanned for. And we identified a few things that we could probably streamline the process, save ourselves some time, save ourselves some money, which is money for both us and for the counties since there is a cost share, and we both pay for part of this process. And the good thing is, is I think we're on the right track. I think we're going to be headed in the right direction.

The thing we're wrapping up right now -- what we're working on right now, this month, the next couple months, is to complete our report for our baseline condition. That's what we refer to as our fu -- existing and future with our project conditions. So that's: What's it like today? What's it likely to be like in the next 50 years? And how is that going to work for both flooding, for the environment, for future development in and around the basin. I know there's a big issue right now about stuff that's going up -- on up north where you may have big coal cars traveling down the rails every day. And that's the kind of stuff we have to take into account; what -- if that

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was to come into play, how does that affect our project? So we're wrapping that up, and that's going to go off to our headquarters at the end of this fiscal year. Our fiscal year ends in September, and the new one starts in October.

So I also get to bring you some of the -- maybe not necessarily bad news, but I think at first blush it seems like bad news, which is every one of us knows what the congressional climate is right now. A lot of debt. A lot of folks that are trying to figure out how we properly spend our money and where we need to make cuts. In the past, this project has gotten its money from the legislature. And we've got some great legislatures that have helped us. Between Representative Larsen and Senator Murray, we had a great push this last year to get some good funding for this project and move it forward in sort of leaps and bounds from where it's been in the past.

What happened instead was, you know, there was kind of a change of climate. And, you know, what they call earmarks or what we refer to as congressional adds are something that we've been told are going to go away. And that's where our money has come for the last six or seven years, have been through those adds, which gives a very uncertain future right now for where our money's going to come from.

And I really can't give you an answer. That's the

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thing about it, I guess. So it's more uncertain news than bad news necessarily, but at the moment we're not in what's called a president's budget. We are part of the executive branch. And first and foremost, that's where our money comes from. And up at that level, at the Office of Management and Budget, with the executive office of the president, they decide how that budget is going to be spent. And at the moment we're not in that budget for next year, for fiscal year '12.

So at the moment, we're looking at the chance that we may have to stop work. But that's the future, and I can't predict it. And in the past, they've found ways to get us money. So I'm hopefully optimistic that we'll still be making progress when the new year starts in October, but I have no way to promise anything one way or the other.

And that's probably where I need to close. The reason we're here, again, is to take your comments. And our Environmental Services coordinator, Hannah Hadley, is going to come up and discuss a little bit more about the details of what NEPA is and why we're issuing this notice of intent right now.

MS. HADLEY: Hi. So I'm Hannah Hadley, the environmental coordinator for the Skagit GI.

And I'm here to kind of go over NEPA pretty briefly. So NEPA is the National Environmental Policy Act,

which was signed into law in 1969. And NEPA is triggered by major federal action; in this case, the Skagit GI. And it requires -- so NEPA requires all federal agencies to evaluate potential environmental effects of a proposed major federal action and possible mitigation measures.

And for the Corps, we look to the Army Regulation 200-2 for guidance on how to conduct NEPA. And I think it was alluded to earlier, the Corps is the lead agency, lead federal agency in this case, and Skagit County is our local sponsor.

And now to talk a little bit about the NEPA process. So we develop a range -- a range of alternatives are developed and are evaluated. And we present the analysis of the potential effects of those range of alternatives in addition to the preferred alternative in what is called, for this project, the Draft Environmental Impact Statement.

And through -- and throughout -- one -- another aspect of NEPA is -- it's a way to reach out to the public and get public involvement and public outreach and public -- just public comments. What -- it's an opportunity to comment on the project.

And there's different oppor -- there's different stages, or steps, in NEPA, as my poster back there alluded to, where we -- where the public can comment. And right now

where we are is we issued a notice of intent, and it -- which started up the NEPA scoping comment period. And we will -- we're asking -- we're gathering your comments, and then we will take those comments and consider them when we write the draft EIS.

And then at the draft EIS, when it is released for public review, again, we'll do a series of public meetings and have -- there will be a public comment period at which time, once again, we'll ask you all to comment on the document. And then in the final EIS, we write -- we respond to those comments that are -- that we're given during the draft EIS. There is also a short comment period associated with the final EIS for those who did submit comments. And then from there, we hopefully get a record of decision and then we have a project.

So NEPA really does encourage citizen participation via public hearings, scoping meetings, these comment periods where you can send in your written comments. Public involvement is a very important aspect of the NEPA process. It's an opportunity for the public to participate in a federal decision-making process and direct an agency's attention to the community's concerns.

So, different ways that you can comment. Either speak tonight. I notice a few of you have signed up. Also doing written comments. We have some comment forms that

have my e-mail address, and -- address, and you can either send me an e-mail with your comments or write them on the form and give them -- send them in. And that information's -- my e-mail and address are on the informational sheet that we have handed out and on the comment form and on the NEPA brochure that we've handed out. And the NEPA brochure also kind of goes over what is NEPA, what is the scoping process.

And I think that's all I kind of had to say about this NEPA process. So now we'll turn the meeting over to you guys, and so if -- we would ask if you could please state your name, if -- when you give a comment, and also any -- if you're affiliated with any organizations.

And, once again, Kara will let you know. She's our time -- vicious timekeeper. And she'll let you know when you have one minute and when you're done.

And I think -- so without further ado, it's Kathy -- and we'll ask as people just kind of -- whoever's speaking, just come up here, and then that way our court reporter can record your comment.

So if Kathy Mitchell would like to come up?

MS. MITCHELL: My name's Kathy Mitchell [unintelligible], from Bow County. Excuse me. It's in the town of Bow.

I'm a little curious. When I see the maps -- I

saw the announcement just a couple days ago. And very new to this process, but when I see the maps and the large area covered for the project, my comments really go back more to questions for where we're going to ask where we can get more information for the average citizen. When I look at something from this -- from my trainings from a geological perspective, when I look at something of the size of this, it's huge, absolutely enormous, and quite a big undertaking. And if you look at the time frame that's already been spent -- I've been told today it was at least ten years. I can understand why it's taking so long to get things rolling.

You've got so many different areas within this basin that are very, very different from each other. How can something this large be addressed, and what kind of time are we looking at really to make some differences? What kind of impacts are you expecting to make that really are going to be effective?

When you look at some people that are along the hillsides versus people that are right in the middle of the floodplain, huge, huge differences. And further up the river versus down river, out towards -- towards where the main body of water is, it's just huge differences. So really what this comes back down to, my main question leads: Why are we looking at such a huge scope on something, and

really how effective can we be? It's just astronomical to my mind at this point, and I hope somebody can address those questions for us.

Thank you.

MR. LEWIS: Okay. Carol Ehlers is next.

MS. EHLERS: I'm Carol Ehlers. I live on the west side of Fidalgo Island.

And I've watched the flood process for 23 years, but I know it's gone on at least since 1921. Nothing in this county is done quickly. So those of you who expect something to be done in the next year or two are bound to be disappointed, and that is not only because it's bureaucracy, it's because it is complex. And for all that I'm the accumulator of a lot of information, there's basic information I don't see.

For example, there's a map over there which shows the relationship of the entire drainage basin to the much larger scope of the Fraser River Valley and also to the counties to the south of it. But it fails in one basic aspect, which the County's Envision 2060 does not fail in, which is the same geographical area, but the County's planning department map has on it the elevation which shows the snow line.

And since precipitation is very different above the snow line and below in terms of its direct effect, such

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as in November and December, this map begins to show someone like me, who's not an official participant, doesn't have all the information, how you can look at the entire basin and begin to see that when rain comes -- when rain clouds come in, as most of them do, from the southwest to northwest -- I've never heard of them coming from the east. Wind does, but I don't think rain does. It comes in. When it hits a hill, the cloud rises, and as it rises it drops water. And that's the basis of meteorology. This map will help you understand it. So I give it to whoever collects materials here.

The second thing. One of the things -- one of the measures, as you call it, that has been proposed since 1921, is the Avon Bypass, which you have now rebaptized the Swinomish Bypass so that no one can find the two together electronically. May I request that you return it to its original name so that people can see how -- the context of what changes and what doesn't.

I've been complaining about that Avon Bypass ever since I heard about it, because of the oil petroleum pipelines. And I have now found from the fire departments -- the County didn't have a copy. Apparently no city government was given this by the utilities commission. But this is a Washington state pipe land -- pipeline atlas, and it has all of the major pipelines; that is, the ones

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that 250 PSIG and above. And the 250 is because, above that, it's likely to explode. Below that, it'll leak.

Both of these are environmentally significant. And since no one had a copy of it, I have brought a couple of first pages so that you folks can find it. I have the cover, I have the page that tells you how you call these people, and I have maps which show that when you get to this choke point -- the Avon Bypass starts up here in Mount Vernon -- that's too small for you to see. Think in your mind. In your mind's atlas.

It starts on the river bend just below Burlington.

Oh, dear, I only have a minute.

It follows State Route 20 all the way to the Swinomish slough. When it comes out of the river, it will make a turn to the left of its own accord. This water will. It will go down parallel to 20. When it gets to the Swinomish slough, it will be 5,000 feet wide, and it will turn right of its own accord down through the Swinomish slough, across four petroleum pipelines. One huge water pipeline serving Oak Harbor, the Navy base, the refineries, Anacortes, and La Conner. It will go across all the utilities.

It will put into question the south part of the Barrenson [phonetic] Bridge, which was likely to fall when it was first installed in 1971. They put dirt around it to

support it. The dirt might go, you see? And then it'll go past the railway, which is going to have 100-car oil train coming over it. And it will go, since it's still in the floodplain, through the Swinomish gas station/casino and new hotel.

That is the kind of environmental discussion that your maps really need to look at for not just that area. That's the one I'm illustrating. But other people can illustrate other places where it's equally important. And if you don't do it, then you have an environmental problem and a financial problem. Because on the other side of that slough is between 80 and 100,000 people now. You've got Oak Harbor, the Navy base, Anacortes. You've got San Juan County. You've got the ferries coming from Port Angeles. You've got the ferry coming from Canada. You've got every kind of thing. And people here in the central valley forget it, just as we tend to forget Mount Vernon. So....

UNIDENTIFIED SPEAKER: She's right.

MS. EHLERS: I could say other things --

UNIDENTIFIED SPEAKER: But your time is up.

MS. EHLERS: -- but my time is up.

MR. LEWIS: Okay. Next we have Bill McCord.

MR. McCORD: Good evening, everybody.

Again, my name is Bill McCord. I'm a Mount Vernon resident. Been living in Western Washington for the past

40 -- yeah, 40-some years.

A couple of observations. I'll try to follow up in writing some of these observations. And that is, it's -- really striking to me is we're making the river fit our demands instead of our -- adjusting our lives, our communities, and our lifestyles around the river. And obviously it hasn't worked in the Great Plains and Midwest where there have been some severe flooding. And with all of the Corps' great efforts that have been made there, the rivers still come up over the banks and flood the communities and cause incredible damage. And people go back and build right in the same floodplains. So I would encourage the Corps to look more carefully at making some suggestions about adjusting our communities around the river.

Number two. In that regard, I want to encourage innovation, and that is something simple, like floatable structures. They do exist in the Netherlands, and it would be wise to have some of the people involved there, and -- the microphone's trying to tell me something.

MR. LEWIS: Do you want to try to turn the volume down on the right -- left-hand knob there?

MR. McCORD: So in addition to the idea of float -- there are existing technologies working today in the Netherlands for floatable structures. And I'm sure

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there might be some kind of a guest exchange program where we could -- you could get engineers and technicians to come and confer with the Corps and the County people to investigate as a possibility.

The other thing -- there's an old-time farming technique, and that is you build your house on a high place. And if you don't have a high place on your site, you mound up the earth so that your house is not going to be inundated. We have a few, you know, good examples right here in Skagit Valley.

And, lastly, I want to encourage the Corps to look more carefully at all the evacuation plans and emergency permits in terms of, when there is a flood, that there's good communication. Right now it seems to be very scattered and disorganized. And people were completely confused a couple of years ago about where to go and how to get there and how to communicate in that process.

So those are just a few things I want to mention. I'll submit some written comments later.

Thank you.

That wasn't too bad.

MR. LEWIS: Okay. Leonard Halverson is next.

MR. HALVERSON: Leonard Halverson, 11558 Sterling Road.

I guess I must be the senior member of this flood

committee thing. Been at this since 1975. And things have gotten continually worse instead of better.

A good example of that tonight is, on the way here they were still dumping riprap in the river. Tightening it up just below my house. Next time it floods, I get more water. We're in a reservoir in Sterling in Nookachamps. We need mitigation for it. We need more water taken down the river, not stacked up on us again.

Thank you.

MR. LEWIS: Okay. John Shultz.

MR. SCHULTZ: Good evening.

My name is John Shultz, and I'm a -- been the attorney for Dike 1 and Dike 12, and along with the Skagit County Dike District Partnership for about 25 years. So I've got a long history in dealing with the dike districts and flood control.

I'd like to first thank Colonel Estok for coming. I talked to you down in Edmonds, and we had a good discussion, and really looking forward to working with you. And it says a lot that you come up and talk to us, because that doesn't happen too often. So we do appreciate that.

Also like to thank Dan Berentson and Lorna Ellestad for essentially triggering this meeting, for the reset. The GI study has had problems. It's been going on for about 13 years. A reset's necessary, and you guys have

taken the lead to get that done, and that's one of the reasons we're here tonight.

Just went back to Washington, D.C., with these guys about three weeks ago -- or about three months ago. And I remember sitting in meetings for three days straight in headquarters with these two guys, Lorna and Dan, beating on them and telling them we need money and we need to have flood control in Skagit County. So, you know, I'm a real cheerleader for these guys.

Last thing I'd like to say is that the Corps has been the dike districts' best friends. I mean, you know, I've been dealing with the dike districts for 25 years. Every time there's a flood, these guys are here. They jump in their cars and they come up and help us. They, you know, sandbag. They pay for repairs. They pay for emergency repairs afterwards. So we've been great friends for many years, and I -- and it's a new day because we got a new colonel. I'm really looking forward to, you know, working with the Corps, and along with the County, because we're finally a real partnership here, the County, the cities, and the Dike Districts. So it's a new day, and I'm really looking forward to this.

The GI study has had some problems, and the problems, as far as I'm concerned, are past. I think we're moving forward here. And so I wanted to talk not about

individual projects. I'll be submitting written comments, and I think it would belabor it too much to talk about individual projects, and we don't have, you know, big charts and whatnot to look at those. So I want to talk about policy and process.

And the first thing I want to say is that even in the notice to the -- you know, to this meeting tonight, it says -- and I'll quote -- The purpose of the GI is to identify problems and opportunities that exist to relieve flooding, to reduce risks, and to develop a flood risk management plan. This is about flooding. This is about protection of communities from flooding.

The second prong, of course, of the GI study is to enhance habitat, and we've been working on that considerably with the district. We've got probably -- if you drive along the river you'll see 5 miles of projects now that we're doing right now.

And so I asked one of my commissioners -- I said, you know, I'm going to speak at this thing tonight. What should I say? And he says, You tell them that all the money they've spent the last 13 years, if they would have given that to me, we'd have new levies along the entire river. So that's -- we're not going to do that. That's not going to work because we have process to go through. But the point is, we feel that the dike district commissioners and the

dike districts should be more involved in this process. They've been marginalized in the past. They haven't been consulted.

They're the guys that know what's going on here. I mean, Daryl Hamburg's here. He's a good friend. And, you know, he's been a dike commissioner for -- what? -- 15 years. His dad was for about 20 years before that. So we have history. These guys know what to do. And when a flood comes, they don't call Washington, D.C. You know, they call the Corps in Seattle. They come up, and we do our thing, declare an emergency, and we save the County, which is promptly forgotten after the flood. We've saved the County many times, in 2003 and 2006.

So I think that for this partnership, the County, the cities, you'll find the dike districts can be your very best partners, and they need to be consulted more. Their expertise and their technical knowledge need to be relied upon more. And it would be real valuable to keep this process moving forward.

I want to talk briefly on the benefits of the GI and the problems with the GI, because a lot of times people won't talk about this. The benefits are that it's a study that quantifies flood risk. It gets all parties together to make decisions to analyze flood risk, including tribes, environmental groups, everybody involved in the profession.

It's a planning tool for flood control. It cannot end because it's now institutionalized.

For example, the PSE litigation. I was involved in that. We have a settlement agreement for storage. Part of that is completion of the GI study. And that's part of what we have to do to implement flood control. FEMA and the BiOp, that's a big thing now. And part of that is doing what the GI study would do, analyze flood risks, analyze habitat, analyze a lot of these other issues. So it's become institutionalized. I would hate to see the GI study go away. It's time for a reset, and I think the reset is great.

But the last thing is that the process provides for federal funding. We go to D.C. and we see the legislators there. We have a problem with funding now, granted, because of the times, but in the past when we're a united front and we pursue the GI, we'll get some funding. It's the vehicle from which we will get federal funding, when the economy improves.

Problems with the GI study. And I consider these past problems. I consider it a new day. That we're going to go forward. This reset's a great thing because we can reset it, decide what we're going to do. Hopefully have dike districts in the consultation. Get leaner, meaner, know what we did wrong, and then -- and move forward.

The problem, of course, is funding. We're not in the 2012 budget or the 2013 budget. We may get money in 2014. But that's a problem. Lorna and Dan, we went to D.C. They were working on that money, and we got some residual -- or some -- I can't remember the name, but some residual funding after the prior funding. So there is a little bit of money.

The other problem is it's been inefficient. We've gone on for 13 years. It's cost about $15 million. It's one of the longest studies in the United States, and I think that was a good reason we got a reset. It's been fragmented. There are a number of meetings where -- meetings in Seattle, but they don't come up here. You know, some technicians in Seattle. They don't see what's on the river, what the on-the-ground conditions are. So if we could have more dialogue and coordination, that would be very -- very helpful.

So the results are -- the GI study, 13 years later, we've gone through five colonels. I mean, I think you're a breath of fresh air, but we've had four other ones that -- they tried their darndest, but it didn't work. No funding from Congress. No conclusions of the study. No specific projects approved. And so after 13 years, a reset is necessary.

I think, though, the community can ask the

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legitimate questions. How is it that the dike districts can be doing repairs right now? The dike districts have negotiated with the Corps for three and a half years. We got the money. We identified the projects. We consulted with the tribes and the environmental agencies. We got our certifications. We complied with DSA, and the BiOp.

One more minute? Okay.

We complied with the BiOp, and we're doing projects. So, again, I think the dike districts can be good partners in this process. They know how to get things done, and it didn't take them 13 years to do it. So I'm looking for moving forward, having a new day on this, and having a real partnership with the Corps. So I think this is a good meeting.

Glad you're up here. I appreciate it. Thank you for your service.

MR. LEWIS: Okay. Conrad is next.

MR. QUIP: Conrad Quip [phonetic], Fidalgo Island.

Not prepared to speak, but he wants to say something anyhow.

I was -- I'm 40 years in the county. This process goes on before that and will be going on in the future. I was involved heavily for 20 years, and I wonder with this personnel change -- I haven't seen any of the old timers here. They must be still existing. How we can keep what's

going on for so long. Which was all good stuff so far, but it didn't lead to anything. Like it disturbs me that we have to put a new baseline in, because that means everything what happened is down the river, gone. Maybe that's good. I don't think so.

Then the dike districts, they bother me. They're building the dikes and the bigger picture is not taken care of. Every dike district has a certain area they want to keep up, and the dikes get higher and the river is going to say I'm not going to stay within these limits.

That's what I really liked about Bill McCord's comment. We need to adapt our lives to the river, not the river to our lives. It's not going to work.

And -- yeah. The -- I was after this real estate lady a moment ago, and, excuse me, but it really bothers me that we are still building in the floodplain and that there's still insurance available for those people. I mean, it's known for a long time that you will be flooded out eventually. It's not a question if; it's just when. And houses still go up.

The scope of the project cannot be big enough. Some lady had problems there because it's a big thing. And the big rivers give problems. We will not avoid flooding. Europe is way ahead of us in -- with their big rivers, and every so often you'll read about the big floods there. We

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will not control the floods. So we can see that we survive the floods; that's all. And I hope the new faces get something accomplished soon.

Thank you.

MR. LEWIS: Okay. I have one more speaker, Gary Jones. And so if you're getting up the courage after Gary, you've got some more time. So we can open it up for other folks if they're interested after Gary.

MR. JONES: Thank you.

Good evening. My name is Gary Jones. I'm an attorney in Mount Vernon.

I just came from the Fir Island dike district meeting. They had their annual meeting this evening, and had a number of issues on their agenda.

The thing that I wanted to say, that they endorsed at that meeting was the idea that any General Investigation Study and any solution for property owners in the Skagit must include resiliency. It must include the ability to get water off the floodplain. The -- any assumption that a project will avoid all flooding is really futile. I mean, whatever you do, there's always going to be a risk of failure, and if it's a failure of a dike or a failure because there's overtopping or a failure because of some unusual circumstance, it still floods people and it still does a lot of damage.

And the way that I would suggest should be thoroughly investigated and added to the agenda of the people investigating in this round in the Environmental Impact Statement is looking carefully at the saltwater dikes and at I-5. Because I see I-5 as one of the big barriers to accommodating a flood. And look for ways to get water off the floodplain that will be stopped at the saltwater dikes and stopped at Interstate 5. I think if that problem alone, if either or both of those problems were resolved as a result of careful environmental impact assessment and planning that took account of the need to get the water off the floodplain, we'd be ahead of where we have been in the past, and I would urge that as a priority.

MR. LEWIS: So do we have any other speakers?

Okay.

MR. O'DONNELL: I'm Ol' Dan from La Conner, and I'd like to talk -- Dan O'Donnell. I'd like to talk about two things.

The first one is, God has granted me the serenity to accept the fact that we cannot change the hydrology. That hydrology is dictated by a lady who works in Tacoma. She's a Ph.D. Her name is Cynthia Barton. You will not change her mind, and I don't care what FEMA says, we're going to have to live with that hydrology.

So what I'd like to say is please look at storage.

Please look at the Water Control Manual from 1977. The Corps uses that as a copout, but we know from experience in 2003 and 2006 that Lower Baker Dam saved us. It's 29,000 acre-feet available at that dam, and by the end of 2012, those old wooden gates on top are going to be replaced and they're going to be automated. So please consider in your EIS the environmental impact on human beings from water that could be saved and stored in advance of a flood.

Now, Chal Martin will speak about his plan to contest the report that the PSE folks just put out. So I won't steal his thunder. But, clearly, that should be addressed in this EIS.

And, finally, as a La Conner resident, I object to being called a conveyance area. Honestly, when you look at La Conner, on the south side of La Conner and on the east side, there are old agricultural sea dikes. We can't convey. We're a pond. So please support Measure No. 9 on the nine measures approved by the advisory committee, which is to close the old ring dike along the drainage ditch.

I thank you.

MR. LEWIS: Okay. Do we have any other speakers?

MR. MARTIN: I'm Chal Martin, public works director for the City of Burlington.

The City will be submitting comments. So I'll submit written material too, but I wanted to talk about

three things tonight just real briefly.

But I'd also like to mention that Council Member Tonya Bieche is here tonight.

Tonya, if you could raise your hand so we can see it.

Burlington's had a long interest, of course, in flood control in the valley. There is -- the GI to this point, you know, it has generated a lot of good information, and it continues to generate good information. And we use that information.

In fact, just recently some new hydraulic analysis was done, and I'd like to point out three things that that hydraulic analysis is inputting into the process.

The first thing, and probably most important thing, is that from the perspective of Burlington and also from my perspective having worked on this issue for years and years, the upstream storage in the system is absolutely critical, and we can make more storage available. There's ways to do that in addition to the hard storage that's already authorized, and I really would encourage the GI study process to get creative in looking at ways to put that storage in use only when it's needed. We don't need it all the time. Only need it when it's flooding. And so there are ways to achieve that that I think ought to be pursued. And the City will be submitting additional information about

that.

There's an issue at Sterling. The hydraulic modeling that was recently completed, assuming that the levies don't fail -- and, in fact, I think it's likely that even in a large flood the levies would hold for quite a while -- there's going to be a big problem at Sterling. In a Skagit 100-year event, the hydraulic modeling indicates at about 50,000 cubic feet per second -- those of you who are familiar with the Skagit flow know that when it's running at 50,000, it's more than bank full -- it's -- you know, it's approaching flood stage probably 26 feet or so. That's about -- that's a bunch of water, folks, and it's going to be going north across Highway 20 at Sterling. There is nothing we can do to stop that.

We have a -- kind of a handshake agreement among folks -- Leonard, you know, you've lived out in that area for years and years -- to sandbag along the railroad grate there in Sterling. And the idea was -- the concept was that the sandbag top would go no higher than -- than the high point, which is along one of those roads there. At least that's the theory. I'm not sure Leonard agrees with it.

But the point is, the hydraulic modeling shows that the water levels at 49 feet NAVD and the sandbag level is 45 feet. So that ain't going to work. So that water's going to go. There's nothing we can do about it to -- under

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the current conditions. And it's a real issue for the project. You know, that's upstream in the system, and it's going to have to be addressed somehow in the GI. Do you try to keep all that water in the system and send it to -- on downstream to the storage area in La Conner --

UNIDENTIFIED SPEAKER: Thank you.

MR. MARTIN: -- or do you try to take it out of the river as quickly as you can upstream?

And the last thing is the BNSF Skagit River bridge. That bridge was constructed in 1916.

And after the 1921 flood event, the engineer indicated that, oops, we may have made a mistake with that bridge. So the problem there is that the 100-year water surface level is 47.4 feet. The mid-channel bottom chord elevation is 46.4 feet. That's a foot lower. And the over bank bottom chord elevation is 42.8 feet. So the water stacks up on the bridge. In addition to the debris, it creates a condition that hydraulic engineers call pressure flow, which is very bad for bridges, which are supposed to support a vertical load and they're trying to support a horizontal load. It doesn't work very well.

And, finally, there was some mention made -- this really is not Burlington's issue, but it certainly is a regional issue -- of how that water is going to go out into the floodplain. This is a very important issue. And if you

look at the configuration of the dike districts, you know, really Dike 22 can't take any water. I mean, if they take any water, they're -- they fill up like a bathtub. Dike 17 is the same way, and to a lesser extent, so is Dike 3. And so really it's up to Dike 12 and 1, as well as the drainage districts that serve those areas, to handle the water that's going to flow out of the channel and onto the floodplain towards La Conner. It actually -- it goes to the north too of Bayview Ridge.

Thank you very much.

MR. LEWIS: Okay. Another speaker.

MR. HILTON: Bob Hilton, 21032 Little Mountain Road.

That address is at 309-foot altitude because as a lad at age twelve, I went over the I-5 bridge and saw all the housing in Vanport flooding and floating around like apples. And that was the second largest city in Portland at the time.

Now, in addition to adverse flooding and what you've heard here tonight, I have an additional comment which further compliments -- or complicates other people's concerns. And that is, about two years ago the Army Corps of Engineers finally put out a report on sea level rise problems. And these problems are not disappearing. In fact, we can expect by all scientific guesstimation at this

point in time that by the year 2100 sea level rise out here backing up all the flowing Skagit will be at least 1 meter higher. And there's quite a bit of evidence that will come out in the IPCC report here in another two years.

And so in the Environmental Impact Statement, this is going to be the biggest environmental change that this county will see, and so I hope that there is a good section in here on how this is going to foul everything up, and everybody's opinions know that can't possibly happen.

Thank you.

MR. LEWIS: Any other speakers?

MR. AXELSON: My name is Maynard Axelson. I live on Fir Island right down by the mouth of the river where the river meets the bay. I'm a third generation farmer there. My grandpa came from Sweden in 1896, and so he homesteaded there.

And over the years I've heard a lot of stories about the flooding, and there's a lot of old photos of the ladies out there with wheelbarrows and the guys with the -- with horses and mules and all kinds of things trying to mound up some dirt. And the first dikes they built were just little tiny things about this high.

And so for years and years and years I've wondered what was the difference then. Why didn't we need, you know, 10-foot tall dikes or whatever? And it seemed like

everybody agreed that the -- when it rained heavy the river didn't rise near as fast, and so I don't know if that's because the hills were covered with old growth trees or just what the difference was.

But when we're down there on Fir Island, we feel like we're the mice kind of skirting back and forth between the feet of the elephant. And, you know, what happens upstream, we have to pay for down there. And so we feel like, you know, maybe over the years there's a lot of these hills have been logged off a little harder than they should have and, you know, now the river rises real quickly. And maybe it's because there's different weather patterns. Maybe it's warmer now that the snow isn't packing as well. Maybe there's other things. But we're really, really concerned because we live down at the bottom and we have to pay for a lot of these things that happen upstream.

So I agree with the other people that pointed out that the storage behind the dams is absolutely critical. Just a little thing like that can save a lot, a lot of people and damages down here or down in the bottom.

And then I also agree very strongly with what Gary said about -- I went through the flood in 1990 down there, and we left our house right near dark and it was 2 or 3 feet outside and, you know, we -- it was livable. It wasn't in the house. We could navigate. We could do things, but we

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came back the next morning and it was over our heads deep. And it was knee deep in our living rooms, and it just absolutely ruined the insides of our houses. Did a lot of damage. Took us months and months and months to recover. So getting the -- rid of the water once it breaks and comes into our Fir Island area, we're just like a bathtub there. We've got -- our own dikes around us that were supposed to be protecting as are now almost killing us. So it's kind of like being trapped in your own house in a fire kind of thing.

So I really, really want to add to the importance of those points, and I just also want to say that, you know, the flood isn't going to wait for any budget things to get better or worse, and so I would really, really encourage you to keep plodding along and keep progressing at this if you can any way possible, and I appreciate it and I appreciate Dan's efforts.

Thank you.

MR. LEWIS: Anybody else? We have roughly 25 minutes. So we have time. Anyone else care to provide a comment verbally? Once. Twice. Okay.

With that, I guess, well, thank you for coming. We've got a lot of great input that we'll take. I'm sure we'll get more good input through -- the comment period ends August 29th. So get your comments in to Hannah. Hannah's

also available through that same -- those same avenues. If you have questions or anything like that, certainly we can field those and try to answer those as well.

So we'll be picking up here as we exit the room. So if you have any last question, we could probably also be available for that as well. So thanks for coming.

(Whereupon, the proceeding concluded at 7:33 p.m.)

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CERTIFICATE OF REPORTER

STATE OF WASHINGTON)
) ss.
COUNTY OF KING)

I, Emily K. Niles, Certified Court Reporter, do hereby certify:

That I reported in shorthand (Stenotype) the proceedings had in the above-entitled matter at the place and date indicated.

That I thereafter transcribed my said shorthand notes into typewriting, and that the typewritten transcript is a complete, true and accurate transcription of my said shorthand notes to the best of my ability.

IN WITNESS WHEREOF, I have set my hand in my office in the County of King, State of Washington, this 21st day of August, 2011.

_____

EMILY K. NILES, CCR #2794

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APPENDIX F
WRITTEN SCOPING COMMENTS

Note: Ehlers, City of Burlington, Skagit County Dike District No. 17, and Swinomish Tribe comment attachments are found online in Volume II of this Scoping Summary Report at USACE's website:
http://www.nws.usace.army.mil/Public_Template/Display/More_Hot_Topics.cfm?recno=60
and Skagit County's website:
http://www.skagitcounty.net/Common/Asp/Default.asp?d=PublicWorksSalmonRestoration&c=General&p=main.htm

Skagit River General Investigation Study

National Environmental Policy Act Public Scoping Meeting
August 10, 2011

We want to hear from you!!

Please take the time to respond to the questions below. You can provide your comments by:

- ✓ Leaving this form with us tonight or at Skagit County Public Works
- ✓ Putting a stamp on this form and sending by regular mail
- ✓ Contacting Hannah Hadley at hannah.f.hadley@usace.army.mil or at (206) 764-6950

What are the problems and what are the solutions for flooding in the Skagit River Basin?

FLOODING IN THE TOWN OF HAMILTON

- ARE ANY EFFORTS BEING MADE ON RELOCATING THE TOWN OUT OF THE FLOODWAY?

DO TO THE FACT THE TOWN IS SO SMALL & CONTINUES TO SHRINK DUE TO THE FLOODING NO MONEY IS AVALIBLE TO PURCHAS LAND ACROSS THE HIGHWAY

What are the concerns with the Basin's environmental resources and what are some possible solutions?

US Army Corps of Engineers
Seattle District

SKAGIT COUNTY WASHINGTON

Skagit River General Investigation Study

National Environmental Policy Act Public Scoping Meeting
August 10, 2011

Is there anything additional that should be addressed or considered during this study? Please be specific.

Do you reside within the Skagit River Basin? ☒ Yes ☐ No

Would you like to be added to the Skagit River General Investigation Study mailing list? ☒ Yes ☐ No

If yes, provide us with your contact information so we can add you to the project mailing list (please print):

Name: LARRY BENJAMIN Affiliation (Optional): _____

Address: 307 MAPLE ST (PO BOX 71)

City: HAMILTON State: WA Zip: 98255

Email: EMCSSWAW@YAHOO.COM

For more information or to submit other comments, please contact Hannah Hadley, U.S. Army Corps of Engineers at hannah.f.hadley@usace.army.mil or at (206) 764-6950. To be included in the official scoping report, we must receive your comments no later than August 29, 2011. Thank you!

Affix Postage Here

Hannah Hadley
U.S. Army Corps of Engineers
P.O. Box 3755
Seattle, WA 98124-3755

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What are the problems and what are the solutions for flooding in the Skagit River Basin?

Looking @ your Sterling + Nookachamps Creek Vicinity map you aren't showing what really happens - the purple area, phase 2 is under water every winter for about six months of the year. This can't be phase 2 River flooding if it's already flooded

What are the concerns with the Basin's environmental resources and what are some possible solutions?

Drainage should be allowed in that area to help the farmers. the Clearwater (or whatever their name is) wetland bank will add to the problem + should never have been allowed

US Army Corps of Engineers
Seattle District

SKAGIT COUNTY WASHINGTON

Skagit River General Investigation Study

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August 10, 2011

Is there anything additional that should be addressed or considered during this study? Please be specific.

Do you reside within the Skagit River Basin? ☑ Yes ☐ No

Would you like to be added to the Skagit River General Investigation Study mailing list? ☐ Yes ☐ No

If yes, provide us with your contact information so we can add you to the project mailing list (please print):

Name: Sylvia Matteraud Affiliation (Optional): Clear Lake Community Connection and Clear Lake Historical Assn.

Address: P.

City: _____ State: _____ Zip: _____

Email: matteraud@wavecable.com

For more information or to submit other comments, please contact Hannah Hadley, U.S. Army Corps of Engineers at hannah.f.hadley@usace.army.mil or at (206) 764-6950. To be included in the official scoping report, we must receive your comments no later than August 29, 2011. Thank you!

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- ✓ Contacting Hannah Hadley at hannah.f.hadley@usace.army.mil or at (206) 764-6950

What are the problems and what are the solutions for flooding in the Skagit River Basin?

Problem #1: Man will never be able to control/manage flooding of an entire river basin (learn anything from the Mississippi?)

Problem #2: Continual "study" of "possible" solutions has gotten NOWHERE, ever, on this entire Basin. By the time this study is complete, it will have been 14+ years JUST for study. And by the time projects are funded (NEVER so far) they will be obsolete.

Solution: Quit the study now.

What are the concerns with the Basin's environmental resources and what are some possible solutions?

Fish depletion: Well, there sure were more fish during dredging

Logging (clearcuts, etc) & bare hills: Quit logging. Back to forests.

Construction on flood plain dispersing capacity: Quit building (Wal)marts on flood plain. Stop thinking that we can prevent flooding & can build everywhere.

BYPASS for I-5 and RR flood events = BOATS from Sea to Vanc.

US Army Corps of Engineers®
Seattle District

SKAGIT COUNTY WASHINGTON

Skagit River General Investigation Study

National Environmental Policy Act Public Scoping Meeting

August 10, 2011

Is there anything additional that should be addressed or considered during this study? Please be specific.

yes - history of the folly of doing Flood Studies

yes - firm costs & funding sources for any/all plans hatched

yes - use the rest of our money (for this study) to actually DO something, elsewhere - a project, not a study

Do you reside within the Skagit River Basin? ☒ Yes ☐ No

Would you like to be added to the Skagit River General Investigation Study mailing list? ☒ Yes ☐ No

If yes, provide us with your contact information so we can add you to the project mailing list (please print):

Name: Vivian Mizuta Affiliation (Optional): _____

Address: 19526 Skagit City Road

City: Mount Vernon State: WA Zip: 98273

Email: _____

For more information or to submit other comments, please contact Hannah Hadley, U.S. Army Corps of Engineers at hannah.f.hadley@usace.army.mil or at (206) 764-6950. To be included in the official scoping report, we must receive your comments no later than August 29, 2011. Thank you!

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U.S. Army Corps of Engineers
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Seattle, WA 98124-3755

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CITY OF Burlington
SKAGIT COUNTY, WASHINGTON INCORPORATED 1902

September 8, 2011

Hannah Hadley, Study Environmental Coordinator
US Army Corps of Engineers – Seattle District
PO Box 3755
Seattle, WA 98124-3744
Attn: CENWS-PM-PL-ER

RE: City of Burlington Scoping Comments, Skagit River General Investigation

Dear Ms Hadley,

Thank you for the opportunity to provide scoping comments for the Skagit River General Investigation (GI) Study. The City is interested and appreciative of every aspect of the Corps' work on the GI study. The information presented here focuses on those elements of the study Burlington considers most important. Those elements are:

I. Upstream Flood Storage
II. Sterling Spill or Levee
III. Dike 12 / City of Burlington Levee Accreditation Project
IV. BNSF Skagit River Bridge
V. Independent External Peer Review (IEPR)
VI. Economic Impact Assessment

This letter is organized in such a way that these elements are discussed in general, and the documents related to each element are shown in sequential numbers from 1 to 31. Most of these documents are attached to this letter and provided in hard copy format; however, a few very large documents are provided only in electronic format. All of the attachments are provided in electronic format.

I. UPSTREAM FLOOD STORAGE: The City believes, based on experience with past Skagit River floods, experience and interaction with Dike Districts, Skagit County, and Cities and Towns within the County, experience and interaction with Incident Management during a large Skagit flood, and a significant body of analysis and research, that the single most important measure which can be taken to reduce flood risk is to maximize the ability of the upstream hydroelectric projects to provide flood storage, above and beyond that amount of storage currently authorized, immediately in advance of a very large flood-producing weather event. The City and its residents would respectfully characterize the availability of flood storage as an issue of significant public concern.

The current established flood storage provided by Seattle City Light and Puget Sound Energy is optimized based on a cost/benefit study conducted in accordance with Corps guidelines. This "hard" storage can significantly reduce Skagit flood peaks for smaller flood events; however, it is not enough flood storage to capture the respective basins' 100-year flood event. Achieving flood storage to enable this in advance of a Skagit flood event is very important to the downstream communities, as it is the goal of Burlington, the Skagit River Dike Districts, Skagit County, and Cities and Towns within the County to reduce outflow from both Ross and Lower Baker dams to zero 10 hours before and extending 10 hours after the outflow from these dams impacts the Skagit flood peak at Concrete.

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To that end, the City urges the Corps to further consider analyses that have been provided over the past several years, as well as the opportunities presented in the new license for the Baker Hydroelectric Project. Recent analysis indicates the seasonality of the Ross "hard" storage does not start early enough in the flood season (full flood storage of 120,000 acre-feet is not required until December 1st; only half of the full storage is required by November 15th). The Baker project currently provides 115,000 acre-feet of flood storage on October 1st, but this flood storage is provided for the benefit of downstream aquatic resources and will sunset in 2013; after that, the seasonality of the "hard" flood storage will be zero on October 1st and gradually increase until full storage of 74,000 acre-feet is provided at Upper Baker by November 15th.

An innovative and cost-effective way to address this issue is by providing a mechanism to draw down the Project reservoirs, if necessary, in advance of an incoming very large flood-producing weather event. The elements for providing this mechanism are embedded within the license. Negotiations are currently ongoing between Skagit County and Puget Sound Energy to implement protocols for imminent flood drawdown. Burlington urges the Corps to consider incorporating imminent flood drawdown protocols for the upstream hydroelectric projects as part of a basin-wide comprehensive and coordinated flood risk management project. Such an approach, in addition to being cost-effective because additional flood storage will only be provided when absolutely necessary in advance of a large flood-producing weather event, also carries significant potential benefit to salmonids by reducing Skagit River peak flood flows, thereby increasing egg-to-migrant survival during a large Skagit flood event. This concept to draw down the reservoirs in advance of a flood is efficient (in that the additional flood storage is only provided when necessary, leaving higher normal pool levels and therefore more generating potential), reduces fish mortality, and reduces downstream water surface levels for large flood events. The concept can also be applied at Ross Reservoir in the Upper Skagit basin.

Documents submitted as the basis for further study of imminent flood reservoir drawdown protocols, as well documents submitted as the basis for correcting the seasonality of currently-authorized flood storage, are listed here:

1) Valentine, Marian, P.E. Presentation, "Skagit River Flood Control" to the City of Burlington Council, December 11, 2003.
2) Pacific International Engineering. Technical Memorandum, "Analysis of Flood Control Storage at Baker River Project," August 27, 2004.
3) Northwest Hydraulic Consultants. Technical Memorandum, "Skagit River GI Study – Seasonality Assessment of Flood Storage." 15 June 2010.
4) R2 Resource Consultants. Draft presentation, "Environmental Effects of High Water Events, Middle Skagit River, Washington." October 13, 2009.
5) Baker Hydroelectric Project Settlement Agreement Article 107. Provided to Aquatics Working Group, Baker River Coordinating Committee, 2011.
6) Smith, Jay, P.E., Tetra Tech, Inc. Presentation "Imminent Flood Analysis Article 107(c)." Aquatic Resources Group Meeting January 11, 2011.
7) Smith, Jay, P.E., Tetra Tech, Inc. Presentation "Imminent Flood Analysis Article 107(c)." Aquatic Resources Group Meeting March 8, 2011.
8) Martin, Chal, P.E., Public Works Director, City of Burlington. Letter to Lorna Ellestad, Project Manager, Skagit County. Comments related to the Tetra Tech presentation "Imminent Flood Analysis Article 107(c). April 20, 2011.
9) Synopsis provided by Puget Sound Energy to the Aquatic Resources Group meetings in Spring/Summer 2011, "License Articles applicable to Article 107 c or Flooding"
10) Puget Sound Energy. Draft Meeting Notes, Aquatic Resources Group, Article 107(c) Workshop of May 10, 2011.
11) Martin, Chal, P.E., Public Works Director, City of Burlington. Presentation entitled "FERC 2150, Baker Hydroelectric Project, Washington State, Update of Flood Control Provisions, with Emphasis on License Article 107(c), From the Perspective of the Local Communities." June 1, 2011.
12) Puget Sound Energy. "Preliminary Draft, Reservoir Management Related to Imminent Flood Conditions, Settlement Agreement Article 107(c), Baker Hydroelectric Project, FERC No. 2150." July 11, 2011.

13) Bell, Esco, P.E., Public Works Director, City of Mount Vernon; John Doyle, Town Administrator, Town of La Conner; Margaret Fleek, Planning Director, City of Burlington; Mark Freiberger, P.E., Public Works Director, City of Sedro-Woolley; Jana Hanson, Development Services Director, City of Mount Vernon; Chal Martin, P.E., Public Works Director, City of Burlington; Jack Moore, Planning Director, City of Sedro-Woolley; Letter to Lorna Ellestad, Project Manager, Skagit County, Re: Review Comments, Puget Sound Energy's Preliminary Draft Report, "Reservoir Management Related to Imminent Flood Conditions." July 28, 2011.
14) Martin, Chal, P.E. "Outline of Assumptions and Basis of Evaluation; Impact of Imminent Drawdown on Spawning Salmonids and Egg-to-Migrant Survival." Handout provided to Aquatic Resources Group of the Baker River Coordinating Committee August 24, 2011.
15) Martin, Chal, P.E. Spreadsheet handout comparing estimated Baker Project outflow necessary in advance of a Skagit flood event at various intervals from 1 October through 1 January. Handout provided to Aquatic Resources Group of the Baker River Coordinating Committee August 24, 2011.
16) Martin, Chal, P.E. Presentation synopsizing potential for increased salmon survival related to Baker Hydroelectric Project operation for imminent flood drawdown. July 2011.

II. STERLING SPILL / LEVEE: A recent technical memorandum provided by the Corps of Engineers through Northwest Hydraulic Consultants estimated the amount of water leaving the system at Sterling under a variety of Skagit discharges under existing conditions. Of note, a Skagit 100-year event as defined by the Corps would cause approximately 50,300 cubic feet per second of spill in the Sterling area (Table 12), entailing a substantial volume of water. Since hydraulic modeling indicates the water will naturally flow in this direction, it is prudent to develop a flood measure that would enable water to leave the system in this location with as little damage as possible. This seems feasible and could have significant additional downstream benefit. Reference:

17) US Army Corps of Engineers. Draft Report, Hydraulic Technical Documentation, Skagit River Basin, Skagit River Flood Risk Management Study. March 2011.

III. DIKE 12 / CITY OF BURLINGTON LEVEE ACCREDITATION PROJECT: This project, a partnership of Dike, Drainage and Irrigation District 12 and the City of Burlington, is under way and will be completed in phases. The first phase will be from the current NE levee terminus near Lafayette Road, to the cross levee at the BNSF main line. The second phase will continue from the BNSF main line, to include new setback levees along the river corridor, terminating with backwater levees west of Bouslog Road. The last phase is expected to be a partnership with Skagit County and the Corps of Engineers to finalize the optimal action in the Sterling area, whether that action is an additional levee, or an overflow / outlet to the flood plain for very large flood events. Dike District 12 and the City have conducted substantial study on the levee accreditation project. The following technical information is submitted regarding this project:

18) Pacific International Engineering. Skagit Basin Hydrology Report, Existing Conditions. October, 2008. (electronic copy – appendices A through I not included – available on request).
19) Golder Associates. Technical Report, "Geotechnical Investigation and Levee Analysis, City of Burlington and Dike District 12 Levee Certification Project, Burlington, Washington, Final Report. November, 2009. (electronic copy).
20) Reichhardt & Ebe, Inc. Dike 12 Levee Certification Project, design drawings and associated documents. March 4, 2011. (electronic copy).
21) Towell, Inc. Base Map and Topographic Information, Burlington Levees. Ground Survey by USKH. March, 2009. (electronic copy).
22) City of Burlington with Dike District #12 as Co-Lead Agency: "Final Environmental Impact Statement to Adopt a Strategic Program for Comprehensive Flood Hazard Mitigation in the Burlington Urban Area and Adjacent Land with a Range of Structural and Non-Structural Components." July 9, 2010.

IV. BNSF SKAGIT RIVER RAILROAD BRIDGE: This bridge, constructed in 1916, is a significant constriction to flood flows, and is a hazard to itself and the adjacent levees. Because it is a hazard to the adjacent levees, it also represents a significant flood risk to Interstate 5 (I-5 will flood if either the left bank or right bank levee fails). The bridge will likely

acquire a significant debris load during a large Skagit flood event, with unpredictable consequences to the bridge structure, adjacent levees, and downstream transportation and infrastructure facilities. The risk presented by this bridge and the unpredictability it creates, is central to any regional flood risk reduction project and must be addressed. We therefore recommend that the replacement of the railroad bridge be included in the EIS as an alternate measure. The following technical information is submitted regarding the bridge:

23) Pacific International Engineering. Spreadsheet, "Max Warer Surface Elevation." Various Skagit River discharges. February 20, 2009. (electronic copy, filename "090220 Profile Modeling BNSF Bridge").
24) BNSF Profile and Water Surface. PDF document incorporating survey conducted by John B. Semrau, PLS, overlayed with Skagit River water surface elevations for various discharges. 2009.
25) Northwest Hydraulic Consultants. Draft Technical Memorandum, "Hydraulic Effectiveness of Measures, Skagit River Risk Management Study." 19 August 2011.

V. INDEPENDENT EXTERNAL PEER REVIEW (IEPR): Burlington supports the Seattle District's decision to carry forward on the General Investigation utilizing its own hydrologic investigation. The City also understands that the study will undergo an Independent External Peer Review (IEPR) prior to submittal of the completed study for HQ review. The FY 2011 Project Management Plan (see expense line item, page 24 and description, page 27) reserves $650,000 for this effort. In support of this IEPR, the City hereby submits technical information documenting research and analysis related to Skagit River hydrology, with the expectation this information will be provided to the Independent External Peer Review authority at the appropriate time.

26) Shapiro, Scott L. "Summary Report, Appeal of the Revised Digital Flood Insurance Rate Map (rDFIRM) and Revised Flood Insurance Study (rFIS) for Skagit County, Washington, dated July 1, 2010, and Submittal to the Scientific Resolution Panel." March 29, 2011.
27) Pacific International Engineering. "Technical Report – Supporting Data and Analysis for Skagit River RFIS Appeal, prepared for City of Burlington; City of Mount Vernon; City of Sedro-Woolley; Town of La Conner." (With electronic supporting files and data). March 2011.
28) Countryman, Joseph D., P.E., D.WRE, with MBK Engineers. Office Report, "Probability Estimates for Historical Flood Events and Recorded Floods, Skagit River near Concrete." March 10, 2011.
29) Brands, Peter K., PLS, CFedS with Pacific Surveying & Engineering. Memorandum re: "Professional Opinion of Methodology and Results of Upper Dalles Gauge Calibration Survey Performed by James E. Stewart (1922-1923). March 29, 2011.
30) Cities of Burlington and Mount Vernon. Responses to FEMA Region X Memorandum of February 26, 2010 (revised May 19, 2010). March 30, 2011.
31) Cities of Burlington and Mount Vernon. Responses to USGS Memorandum of May6, 2010. March 29, 2011.

VII. ECONOMIC IMPACT ASSESSMENT: We recommend that an economic impact assessment be performed of the measures and all alternatives, including the status quo alternative.

Burlington would like to emphasize again in closing, that the single most important element to study in the Skagit River General Investigation is gaining additional upstream flood storage. The City believes the current Baker Hydroelectric Project license provides the mechanism and framework for developing an innovative and new template for providing additional critically needed flood storage, but only at the time it is needed – in the few days in advance of a very large flood. The City would like the Corps to utilize existing concepts of imminent flood drawdown to achieve additional flood storage, and only when needed.

Thank you for the opportunity to provide scoping information to the Skagit General Investigation. The City of Burlington looks forward to working collaboratively with the Seattle District as this project continues to move forward.

Sincerely,

Edward J. Brunz

Edward J. Brunz
Mayor

Attachments:

1) Valentine, Marian, P.E. Presentation, "Skagit River Flood Control" to the City of Burlington Council, December 11, 2003.
2) Pacific International Engineering. Technical Memorandum, "Analysis of Flood Cont5rol Storage at Baker River Project," August 27, 2004.
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31) Cities of Burlington and Mount Vernon. Responses to USGS Memorandum of May6, 2010. March 29, 2011.

C: Lorna Ellestad, GI Project Manager, Skagit County Public Works Department (W/O Atch)

August 25, 2011

Brian Lipscomb
27765 West Gilligan Creek
Sedro-Woolley, WA. 98284

To:Hannah Hadley
U.S. Army Corps of Engineers
hannah.f.hadley@usace.army.mil

Re: Skagit River General Investigation Study
August 10, 2011 National Environmental Policy Act Public Scoping Meeting

I am a resident and landowner in the Skagit River Basin around river mile 27. I have the usual concerns about higher water upstream caused by restricting and confining the flows downstream that many mid Skagit landowners have. I am more concerned about the quality of the data the Corps will be using for their study upstream of the SR9 bridge however.

The data the Corps produces for the Skagit GI study is utilized by many other agencies in there operations. For example FEMA will use the river modelling to determine the floodplain and floodway boundaries, Skagit County will use the FEMA Flood maps to regulate development in the county, insurance companies will use this data to determine rates, etc.

There are conflicting explanations of how the cross sectional data was determined for the flood maps, for example the 2010 FIS states the data was developed in 1975 using 52 cross sections from the 1984 study *(Pg 37, 2010 FIS).* The 1984 study states the detailed study data for 32 cross sections between Sedro-Woolley and Concrete was developed in 1963, with another 10 cross sections determined in 1977 (*Pg 26, 1985 FIS).* The 2010 FIS appears to be in error as there are only 43 cross sections available in the study between RM 22.4 and RM 55.35 and not 52.

At the 08/10/2011 meeting it was indicated that the GI study would extend to around river mile 27. It also was indicated that there would be no updating of the measured cross sections upstream of the SR9 bridge. This is troubling as the almost 50 year old cross section data has known errors and disregards channel migration, armoured embankments, levies, etc.

Please consider utilizing fresher and more accurate cross section data for the analysis from RM 22 to RM 27.

Respectfully,
Brian Lipscomb

Please add me to the project mailing list.
Name: Brian Lipscomb
Address: 27765 West Gilligan Creek
City: Sedro-Woolley
State: Wa
Zip: 98284
Email: brian.lipscomb@aquaworxinc.com

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Public Works Department

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FAX (360) 336-6299
E-Mail mvengineering@mountvernonwa.gov
www.ci.mount-vernon.wa.us

September 9, 2011

Hannah Hadley, Study Environmental Coordinator
US Army Corps of Engineers – Seattle District
PO Box 3755
Seattle, WA 98124-3744
Attn: CENWS-PM-PL-ER

RE: City of Mount Vernon Scoping Comments Regarding Draft Environmental Impact Statement (DEIS) of Skagit River General Investigation (GI) Study

Dear Ms Hadley,

This letter provides the City of Mount Vernon's scoping comments regarding the project noted above.

Background

The Project is identified in the Notice of Intent Published in the Federal Register Vol. 76m No. 146 as a single purpose flood risk management study. The goal of this project is to identify the National Economic Development plan, that flood risk management alternative that provides maximum net economic benefits. Minimization of ecosystem, cultural, and socio-economic impacts will be a significant project consideration. The area to be studied is the Skagit River Basin encompassing 3,140 square miles, from Ross Dam to the river mouth at Skagit Bay and includes the City of Mount Vernon.

The stated purpose for the scoping process it to invite input to: 1) clarify which issues appear to be a major public concern, 2) to identify any information sources that might be available to analyze and evaluate impacts, and 3) to obtain public input and determine acceptability for the range of measures to be included within potential alternatives.

City of Mount Vernon Comments

Issues of Major Public Concern:

1. Flood protection of the City's Existing Urbanized Areas: Flood protection is the City's number one infrastructure priority. Large developed areas within the City's existing city limits and urban growth area are protected in some measure from Skagit River flooding by existing levees. Work in the GI to assure and improve the level of protection to existing urbanized areas is essential. The City's existing urbanized areas in the 100 year flood plain include many important and essential local and ***regional*** public services and infrastructure such as City Hall, the Superior and District Courts, Skagit County and City police Departments, Federal Post Office, main railway line, City's wastewater treatment plant, the County jail, the regional mulit-modal transportation hub and historic downtown Mount Vernon. Failure to receive adequate protection to the City's existing urbanized

infrastructure will have probable, significant, adverse economic, cultural and social-economic impacts to the greater region. Mount Vernon also retains the greatest population of any City in Skagit County. Mount Vernon urbanized areas located within the floodplain also include residentially zoned or mixed residential- commercial areas. Failure to address the existing urbanized area will have significant impacts to homeowners and residents.

2. Economic Impact Assessment: Given the scope and breadth of the study and probable significant adverse economic impacts including those stated above, the City requests that an economic impact assessment be performed of the measures and all alternatives, including the status quo alternative.

Range of Preferred Measures:

1. Upstream Flood Storage: The City (along with the City of Burlington and others in the community) believes that the most effective and important part of the General Investigation should be to gain additional upstream flood storage, including but not limited to, the provision of additional flood storage targeted to the few days in advance of a very large flood appears both essential and feasible. This is consistent with both the City's experience and interaction with regional emergency incident management teams.

The City urges the Corps to consider analyses that have been provided over the past several years, as well as the opportunities presented in new licenses such as for the Baker Hydroelectric Project and existing licenses.

2. Mount Vernon Flood Protection Project: The City has been working during the past several years to implement a project that will protect its core downtown area from Skagit River floods from the 100 year flood event. The project includes a system of approximately 9300 lineal feet of flood walls, levees, and stop log openings.

Permitting and design is completed for the project along with receipt of FEMA's Conditional Letter of Map Revision. The upstream (approximately 1200 lineal feet long) section of this project was constructed in 2010, and the City is working to complete funding needed to complete the remaining phase(s) of the project. This measure should be considered in the event further funding is needed to be acquired to complete it. Regardless, scoping of the project should include assessment of this measure as it is ongoing. In terms of cost benefits, given the amount of design, permits, process, and construction completed to date without funding through the GI process, the net economic benefits should be considered.

3. BNSF Skagit River Bridge: This bridge, constructed in 1916, is a significant constriction to flood flows, and is a hazard to itself and the adjacent levees. Because it is a hazard to the adjacent levees, it also represents a significant flood risk to Interstate 5 (I-5 will flood if either the left bank or right bank levee fails). The bridge will likely acquire a significant debris load during a large Skagit flood event, with unpredictable consequences to the bridge structure, adjacent levees, and downstream transportation and infrastructure facilities. The risk presented by this bridge and the unpredictability it creates, is central to any regional flood risk reduction project and must be addressed.

4. Sterling: A recent technical memorandum provided by Northwest Hydraulic Consultants estimated the amount of water leaving the system at Sterling under a variety of Skagit discharges under existing conditions. Of note, a Skagit 100-year event as defined by the Corps would cause approximately significant 50,300 cfs discharge of spill in the Sterling area, with a significant volume in acre-feet. Since hydraulic modeling indicates the water will naturally flow in this direction, it seems prudent to develop a flood measure that would enable water to leave the system in this location with as little damage as possible. This seems feasible and could have significant additional downstream benefit.

5. Nookachamps Storage: The Nookachamps floodplain historically has provided various levels of natural storage, depending on the magnitude of the flood peak and shape of the hydrograph, to significantly reduce flood peaks. HEC-RAS model results from previous Skagit River flood reduction feasibility studies indicate that 100 year peak flows could be reduced and additional flood peak flow reduction could be achieved if the Nookachamps floodplain storage were designed to function like a temporary flood control reservoir by storing during the peak flow period and releasing the stored water after the peak had passed. Implementation measures could include construction of levees and gate flow release structures to control flows into and out of the reservoir area.

Information sources available to analyze and evaluate impacts.

1. City's downtown flood mitigation project: Project documents can be made available to the Corps if requested. Documents include as follows:

A. Pacific International Engineering: "Final Environmental Impact Statement, Mount Vernon Downtown Flood Protection Alternatives," prepared for City of Mount Vernon, July 6, 2007.

B. Pacific International Engineering: "Conditional Letter of Map Revision (CLOMR), Application and Supporting Documentation for Mount Vernon Downtown Flood Protection Project," prepared for City of Mount Vernon, submitted to FEMA February 25, 2009.

C. Pacific International Engineering: "Conditional Letter of Map Revision (CLOMR), Application and Supporting Documentation for Mount Vernon Downtown Flood Protection Project," prepared for City of Mount Vernon, submitted to FEMA February 25, 2009.

D. Golder Associates: "Mount Vernon Flood Protection Project, Geotechnical Assessment, Mount Vernon, Washington," prepared for Pacific International Engineering, January 2009.

E. Pacific International Engineering: "Response to FEMA October 8, 2009 Letter and Additional Data to Support Conditional Letter of Map Revision (CLOMR) for Mount Vernon Downtown Flood Protection Project, Case No. 09-10-1122R," prepared for City of Mount Vernon, submitted to FEMA January 4, 2010.

F. Pacific International Engineering: "Response to FEMA April 12, 2010 Letter and Additional Data to Support Conditional Letter of Map Revision (CLOMR) for Mount Vernon Downtown Flood Protection Project, Case No. 09-10-1122R," prepared for City of Mount Vernon, submitted to FEMA June 4, 2010.

G. FEMA: Conditional Letter of Map Revision, Case No. 09-10-1122R, August 24, 2010.

2. Upstream Flood Storage: Documents for further study of imminent flood reservoir drawdown protocols, as well documents submitted as for correcting the seasonality of currently-authorized flood storage, are listed here:

A. Valentine, Marian, P.E. Presentation: "Skagit River Flood Control" to the City of Burlington Council, December 11, 2003.

B. Pacific International Engineering: Technical Memorandum, "Analysis of Flood Cont5rol Storage at Baker River Project," August 27, 2004.

C. Northwest Hydraulic Consultants: Technical Memorandum, "Skagit River GI Study – Seasonality Assessment of Flood Storage." 15 June 2010.

D. R2 Resource Consultants: Draft presentation, "Environmental Effects of High Water Events, Middle Skagit River, Washington." October 13, 2009.

E. Baker Hydroelectric Project Settlement Agreement Article 107: Provided to Aquatics Working Group, Baker River Coordinating Committee, 2011.

F. Smith, Jay, P.E., Tetra Tech, Inc.: Presentation "Imminent Flood Analysis Article 107(c)." Aquatic Resources Group Meeting January 11, 2011.

G. Smith, Jay, P.E., Tetra Tech, Inc.: Presentation "Imminent Flood Analysis Article 107(c)." Aquatic Resources Group Meeting March 8, 2011.

H. Martin, Chal, P.E., Public Works Director, City of Burlington: Letter to Lorna Ellestad, Project Manager, Skagit County. Comments related to the Tetra Tech presentation "Imminent Flood Analysis Article 107(c). April 20,2011.

I. Synopsis provided by Puget Sound Energy to the Aquatic Resources Group meetings in Spring/Summer 2011: "License Articles applicable to Article 107 c or Flooding"

J. Puget Sound Energy: Draft Meeting Notes, Aquatic Resources Group, Article 107(c) Workshop of May 10, 2011.

K. Martin, Chal, P.E., Public Works Director, City of Burlington: Presentation entitled "FERC 2150, Baker Hydroelectric Project, Washington State, Update of Flood Control Provisions, with Emphasis on License Article 107(c), From the Perspective of the Local Communities." June 1, 2011.

L. Puget Sound Energy: "Preliminary Draft, Reservoir Management Related to Imminent Flood Conditions, Settlement Agreement Article 107(c), Baker Hydroelectric Project, FERC No. 2150." July 11, 2011.

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N. Martin, Chal, P.E.: "Outline of Assumptions and Basis of Evaluation; Impact of Imminent Drawdown on Spawning Salmonids and Egg-to-Migrant Survival." Handout provided to Aquatic Resources Group of the Baker River Coordinating Committee August 24, 2011.

O. Martin, Chal, P.E.: Spreadsheet handout comparing estimated Baker Project outflow necessary in advance of a Skagit flood event at various intervals from 1 October through 1 January. Handout provided to Aquatic Resources Group of the Baker River Coordinating Committee August 24, 2011.

P. Martin, Chal, P.E.: Presentation synopsizing potential for increased salmon survival related to Baker Hydroelectric Project operation for imminent flood drawdown. July 2011.

3. BNSF Bridge: The following includes source technical information regarding the bridge.

A. Pacific International Engineering: Spreadsheet, "Max Warer Surface Elevation." Various Skagit River discharges. February 20, 2009. (electronic copy, filename "090220 Profile Modeling BNSF Bridge."

B. BNSF Profile and Water Surface: PDF document incorporating survey conducted by John B. Semrau, PLS, overlayed with Skagit River water surface elevations for various discharges. 2009.

C. Northwest Hydraulic Consultants: Draft Technical Memorandum, "Hydraulic Effectiveness of Measures, Skagit River Risk Management Study." 19 August 2011.

4. General Hydrology: The City hereby submits source of technical information documenting research and analysis related to Skagit River hydrology, with the expectation this information will be analyzed during the GI and environmental review at the appropriate time.

A. Shapiro, Scott L.: "Summary Report, Appeal of the Revised Digital Flood Insurance Rate Map (rDFIRM) and Revised Flood Insurance Study (RFIS) for Skagit County, Washington, dated July 1, 2010, and Submittal to the Scientific Resolution Panel." March 29, 2011.

B. Pacific International Engineering: "Technical Report – Supporting Data and Analysis for Skagit River RFIS Appeal, prepared for City of Burlington; City of Mount Vernon; City of Sedro-Woolley; Town of La Conner." (With electronic supporting files and data). March 2011.

C. Countryman, Joseph D., P.E., D.WRE, with MBK Engineers: Office Report, "Probability Estimates for Historical Flood Events and Recorded Floods, Skagit River near Concrete." March 10, 2011.

D. Brands, Peter K., PLS, CFedS with Pacific Surveying & Engineering: Memorandum re: "Professional Opinion of Methodology and Results of Upper Dalles Gauge Calibration Survey Performed by James E. Stewart (1922-1923). March 29, 2011.

E. Cities of Burlington and Mount Vernon: Responses to FEMA Region X Memorandum of February 26, 2010 (revised May 19, 2010). March 30, 2011.

F. Cities of Burlington and Mount Vernon: Responses to USGS Memorandum of May6, 2010. March 29, 2011.

5. Sterling: The City hereby identifies the following technical information documenting analysis relating to sterling measure identified in prior comments.

A. US Army Corps of Engineers: Draft Report, Hydraulic Technical Documentation, Skagit River Basin, Skagit River Flood Risk Management Study. March 2011.

Thank you for the opportunity to provide scoping information to the Skagit General Investigation. The City of Mount Vernon looks forward to assisting the Seattle District in any way possible.

Sincerely,

Esco Bell, P.E.
Public Works Director

United States Department of the Interior

NATIONAL PARK SERVICE
North Cascades National Park
Lake Chelan National Recreation Area
Ross Lake National Recreation Area
810 State Route 20
Sedro-Woolley, Washington 98284-1239

IN REPLY REFER TO:
L7617

Electronic Correspondence

August 29, 2011

Hannah Hadley, Environmental Coordinator
U.S. Army Corps of Engineers, Seattle District
P.O. Box 3755
Seattle, WA 98124-3755
ATTN: CENWS-PM-PL-ER

RE: COMMENTS – ER-11\0663 Skagit River General Investigation Study (Previous – Skagit River Flood Damage Reduction Study); Skagit County, Washington

Dear Ms. Hadley:

The North Cascades National Park Service Complex (North Cascades National Park, Ross Lake National Recreation Area, and Lake Chelan National Recreation Area; hereafter North Cascades) has reviewed the Army Corps of Engineers' (Corps) Notice of Intent to complete an environmental impact statement for the Skagit River General Investigation Study.

The proposed study is being completed for flood-risk management in the Skagit River Basin from Ross Dam to the river mouth at Skagit Bay. A draft Environmental Impact Statement is being prepared because of the potential impacts on environmental resources, particularly salmonid habitat.

Due to potential impacts to resources along the Skagit River, and their subsequent effect on resources and recreational opportunities within North Cascades, we believe this study may affect four particular areas of concern: Wild and Scenic River designation; fisheries; access and recreation; and ecosystem management efforts within the Skagit River Basin.

Wild and Scenic Rivers
The Skagit River is a federally designated Wild and Scenic River (WSR) from Sedro-Woolley to the boundary of Ross Lake National Recreation Area (NRA). The upper eleven miles of the river in Ross Lake NRA, along with two tributaries Goodell and Newhalem Creeks, are also eligible and suitable for designation, and we are moving to formalize designation of these segments. As you know, WSR designation is intended to protect the free-flowing character of the Skagit River and its tributaries, along with the associated outstandingly remarkable values (ORVs) including fish, wildlife, geology, history, pre-history, recreation, and scenery. As a result, we believe that any flood management alternatives proposed by the Corps should maintain the flow regime and the free flowing character of the river in these designated sections, in compliance with section 7(a) of the Wild and Scenic Rivers Act. Similarly, we believe any action undertaken by the Corps for the purposes of this flood-risk management should protect the ORVs of the Skagit River, particularly as they relate to iconic species like salmon and bald eagles, which could be adversely affected by flood control in the lower Skagit River.

Fisheries
We are concerned about proposed actions that may impact federal and state listed -anadromous fish that inhabit Ross Lake NRA, including: Chinook Salmon, steelhead trout, and bull trout; and two federal species of concern: Coho salmon and coastal cutthroat. As the upper Skagit River in Ross Lake NRA hosts unique local populations of these species, we believe it is essential to protect fish habitat within the entire stretch of the Skagit River Basin and to allow for full migration of fish species from the Skagit Bay to the Gorge Dam in Newhalem. Therefore, while we understand the severity of the flood risk in the Skagit River Basin, we remain concerned about the potential to implement intensive flood protection measures that could adversely affect important fish habitat and ecological processes (such as river channel migration within the floodplain) that create and sustain fish habitat.

Access and Recreation
North Cascades is a popular destination and travel corridor for more than one million people every year, many of whom visit the area via the North Cascades Highway through the Skagit River Valley. Maintaining access along this highway is crucial, not only for visitor access and park operations, but also for the economic vitality of local communities. We request that the Corps consider sustainable ways to protect the major road and bridge infrastructure leading to the park, while protecting wild and scenic river values in the face of climate change and predicted increases in the frequency and magnitude of flooding).

Ecosystem Management
We encourage the Corps to pursue riparian and wetland restoration activities within the Skagit River watershed to mitigate long-term adverse impacts. We would also like to explore opportunities to partner in these restoration or mitigation activities and to serve as a mitigation site for restoring previously impacted areas within our boundaries.

We appreciate your efforts to more systematically address flood-risk management within the Skagit River Basin and greatly appreciate the opportunity to comment on these plans. Please make sure we remain on your mailing list. If you have any questions regarding these comments, please contact Elizabeth Boerke at (360) 854-738 or elizabeth_boerke@nps.gov.

Sincerely,

Palmer (Chip) Jenkins
Superintendent

cc: Patrick Walsh, Environmental Quality Division, National Park Service
Alan Schmierer, Regional Environmental Coordinator, NPS Pacific West Region
Susan Rosebrough, Outdoor Recreation Planner, NPS Pacific West Region
Greta Movassaghi, Natural Resource Specialist, Mount Baker-Snoqualmie National Forest
Mary Raines, Watershed Coordinator, Skagit Watershed Council

City of Seattle

Seattle City Light

September 8, 2011

Hannah Hadley, Study Environmental Coordinator
U.S. Army Corps of Engineers, Seattle District
ATTN: CENWS–PM–PL–ER
P.O. 3755
Seattle, WA 98124–3755

RE: Comments on Skagit River General Investigation Study

Dear Ms. Hadley:

Seattle City Light (SCL) appreciates the opportunity to provide comments on the U.S. Army Corps of Engineers Notice of Intent (NOI) to prepare a Draft Environmental Impact Statement (DEIS) for the Skagit River General Investigation Study. Your NOI formally begins the scoping process under NEPA. As part of the scoping process, Seattle City Light wishes to comment on the scope of the DEIS. Our ongoing interest in the GI study stems from our ownership and operation of the Skagit Hydroelectric Project located in the upper watershed. As you know our project currently contributes greatly to flood reduction throughout the basin. Operation of our project also includes significant and ongoing investments in the protection and restoration of fish and wildlife resources throughout the watershed. In doing this we work closely with other state, federal and tribal organizations.

As we understand it, the primary intent of the flood risk management feasibility study is to formulate, evaluate, and screen potential solutions to flooding problems within the basin and to recommend an alternative. Our comments pertain to the scoping portion of this effort, understanding that public involvement and comment will be offered as well during plan formulation and preparation of the DEIS.

Our comments are of both a general and detailed nature as described below.

1. SCL supports the completion of the U.S. Army Corps of Engineer's Skagit River General Investigation Study provided that it is done in coordination with the development of Skagit County's Comprehensive Flood Hazard Management Plan (CFHMP) for the Skagit River. While Skagit County is proceeding toward the completion of it's CFHMP, the U.S. Army Corps of Engineers needs to remain actively involved in this multi-year process. Ongoing coordination will be essential as these two activities move forward in parallel.

700 Fifth Avenue, Suite 3200, P.O. Box 34023, Seattle, WA 98124-4023
Tel: (206) 684-3000, TTY/TDD: (206) 684-3225, Fax: (206) 625-3709

2. In May of 2009 the Skagit County's Skagit Comprehensive Flood Hazard Management Plan (CFHMP) Advisory Committee (AC) provided input on the Skagit GI measures. This input also included locally identified projects that will be considered for inclusion in the Comprehensive Flood Hazard Management Plan (CFHMP). The input was developed at a workshop the AC held on February 18, 2009 and at several regular AC meetings (March 16 and April 20, 2009). The AC provided its comments, suggestions, questions, and thoughts on whether an individual measure/project should be further considered and evaluated by the Army Corps GI Study. The purpose of this effort was to provide a local perspective on the Skagit GI measures for the Corps to consider as it begins its process of narrowing and combining individual measures into a shorter, more focused list of alternatives. We encourage the Army Corps to utilize the results of this effort in its narrowing process.

3. The mission of the Skagit River Comprehensive Flood Hazard Management Plan is to develop a comprehensive approach to Skagit River flood hazard reduction and management that decreases the flood hazard risk to people, property, infrastructure, fish and wildlife resources, and economic vitality, advances river restoration and other community interests, and reduces long-term costs associated with flood management and infrastructure maintenance. SCL wishes to underscore the need to ensure flood damage reduction efforts result in improvements to the natural assets of Skagit valley by incorporating ecosystem protection, restoration and natural resource considerations into flood hazard management solutions. Here are some specific flood reduction measure criteria.

   - Evaluate opportunities to reduce flood hazards via salmon recovery or other environmental restoration projects.
   - Look for opportunities to restore lost habitat and improve diversity of habitat for all wildlife species.
   - Address impacts to fish and wildlife habitat associated with flood reduction efforts.
   - Undertake cumulative effects analysis associated with multiple flood damage reduction efforts to ensure protection of ecosystem function.
   - Prioritize flood reduction measures that maximize ecosystem restoration opportunities when comparing similar projects.
   - Increase the natural flood water and sediment storage capacity of the floodplain through the protection and restoration of natural river, bank, tidal marsh, off channel, and wetland habitats.
   - Protect and restore natural riverine, riparian and estuarine processes.
   - Incorporate wetland restoration when possible.

4. One of the flood reduction measures being considered is to create additional storage in Ross Reservoir. To accomplish this outcome power generation operations would have to be modified. This concept has been under discussion for more than 20 years. There are many serious concerns about this alternative including that the current operations and flows from the project are set by the FERC License and Settlement Agreement signed by all concerned federal and state agencies and tribes. As proposed, this measure would have high impacts to federally listed Chinook salmon and high financial cost to SCL for which we would need to be compensated.

5. SCL encourages the Army Corps to fully incorporate into the alternatives analyses the projected hydrologic changes and sea-level rise caused by climate change. The Climate Impacts Group (CIG) at the University of Washington has conducted extensive study on this subject and has documented increased variability in peak flows in the Sauk River watershed in recent decades. CIG modeling also projects substantial reductions in snow water equivalent (SWE) and more severe extreme hydrologic events (floods and low flows) in the Skagit River basin in the future due to shifts in precipitation and higher freezing elevations during winter storms that increase runoff production in moderate elevation areas.

6. The Skagit is the most important river in the Puget Sound for three fish species that are listed as Threatened under the Endangered Species Act: Chinook salmon, bull trout, and steelhead. The GI should carefully consider the effects of the proposed flood control alternatives on these species, since improving the abundance, spatial distribution, and life history and genetic diversity of Skagit populations are vital to the species recovery programs. The GI should identify alternatives that build-upon and compliment ongoing listed fish species recovery programs in the Skagit watershed.

Ideally, the recommended alternative would be composed of multiple measures that work synergistically with compounding benefits and the ongoing habitat protection and restoration programs in the Skagit watershed.

Sincerely,

Lynn Best, Ph.D.
Director of Environmental Affairs

LB/DP:ks

700 Fifth Avenue, P.O. Box 34023, Seattle, WA 98124-4023
Tel: (206) 625-3000, TTY/TDD: (206) 684-3225, Fax: (206) 625-3709

Skagit Co. Dike Dist. #17
P.O. Box 2926
Mt. Vernon WA 98273

August 9, 2011

To:
United States Army Corps of Engineers
Seattle District
Skagit River General Investigation Study

From:
Skagit County Dike District 17
P.O. Box 2926
Mount Vernon WA 98273

Skagit County Dike District 17 would like to comment on the GI (General Investigation Study) for the Skagit River basin. The distinct has participated in this process for the past eleven plus years. We have a large investment of time and money into the moving forward of this study towards a usable and affordable set of alternatives for enhance flood control.

Through the evolution of the GI Dike District 17 along with District numbers #12, #1, #3, and #22 have created a perceivable set of goal for flood risk management on the Skagit River delta. Our long term goals are as follows. Provide a minimum of a 1% - 100 year risk management to Skagit County's urban designated and critical infrastructure areas and providing less than 1%-100 year but greater than or equal to present flood risk levels for rural designated areas. These goals are set in order to minimize flood hazard without encouraging urban encroachment onto rural and farmland designated areas.

The Commissioners of Dike District 17 believe there are four areas in which the GI study could focus in order to help allow us to reach these goals. They are as follows (1) increase upstream storage, (2) enhancement and redevelopment of existing infrastructures, (3) Increase conveyance of waters to accommodate a major event, (4) enhance and redeveloped interior drainage to displace inundating flood waters.

(1) Up stream storage…..We believe the Corps needs to study and determine the effectiveness of increasing storage of up stream controlled and uncontrolled storage structures. These measures may include but may not be exclusive to Upper and Lower Baker Dam storage, Ross Dam storage and Nookachamps storage.

(2) Enhancement and redevelopment of existing infrastructure….. We believe our existing levy system can be, in certain areas improved to give better risk management during major flood events. These may include but exclusive to increased levy tops, back slopes designed for overtopping, key ways and levy face slope backs. Redevelopment of levies needs to be studies in other applications. Development of levy set backs and designs to meet FEMA accreditation would have significant impacts in the urban areas and where there is critical infrastructure.

(3) Increased conveyance of waters to handle major events….. Current existing conditions can not convey the significant amount of water generated by the run off into the Skagit River during a major event. The current capacity of Skagit County dike and levy systems is not capable of conveying a 100 year event without breaching or overtopping existing structures. The Corps in our opinion must study potential ways of increasing conveyance or divert water volumes during such an event.

(4) Enhancement and redevelopment of interior drainage to displace inundating flood waters…. The interior drainage systems in the lower Skagit delta are not capable of relieving the inundation of potential flood waters during a major event. As one of the goals of the Dike District, we would not provide for accredited flood risk management to our rural areas. In the case of a major event we expect inundation of flood waters in these areas. At this time there is no infrastructure in place to remove this water in an expedient time frame. We believe the Corps should study interior drainage alternatives. The alternatives would allow the release of flood waters off the flood plain with minimal impact to life and property.

The Skagit County Flood Control District has approved a series of measures to be implemented into the Comprehensive Flood Hazard Management Plan. The measures were looked at by the advisory council as "No Brainers." Dike District 17 Commissioners would like for these measures to be considered for investigation in the GI process. They are attached. These measures are supported by the Skagit County Flood Control District Advisory Council as well as Skagit County, Cities of Mount Vernon, Burlington, Sedro Woolley, LaConnor. This list is also supported by the Skagit County Dike Districts. We do not in any way believe that this is an exclusive list. We do believe how ever these measures are necessary in achieving comprehensive goals.

Dike District believes in a comprehensive flood plan. We believe it needs to be functional, reliable and cost effective. We also believe it will need an element from all four areas of focus as well as others measures to create the balance needed to achieve our goals

Gary Bates Chairman
Dike District 17

Daryl Hamburg Director of Operations
Dike District 17

Phone (360) 466-3163
Fax (360) 466-5309

Swinomish Tribal Community
A Federally Recognized Indian Tribe Organized Pursuant to 25 U.S.C. § 476
P.O. Box 817 • 11404 Moorage Way
LaConner, Washington 98257

Office of Planning
and Community Development

Charles P. O'Hara, Planning Director

Hannah Hadley
Environmental Manager
US Army Corps of Engineers - Seattle District\

RE: Skagit General Investigation Scoping Comments
September 7, 2011

Dear Ms. Hadley:

On behalf of the Skagit River System Cooperative, which represents the fisheries interests of the Swinomish Indian Tribal Community and the Sauk-Suiattle Indian Tribe, I would like to provide the following scoping comments regarding the Skagit General Investigation Study. As you know, we have been involved in these flood related matters since 1993. As we have stated from the onset, the Tribe cannot take a position regarding the acceptability of any the alternatives until adequate environmental studies are done to determine the extent, if any, to Tribal fisheries resources. Our position has been consistent in this regard, as can be observed in the letter (attached) sent to the Corps in 1963 detailing our concerns regarding the Avon Bypass. Therefore, a common concern that has not yet been adequately addressed is the lack of environmental analysis that has been undertaken to date as part of the GI study. Given the financial resources available to the Corps and time frame that you are striving to complete the study, we are concerned that the environmental analysis necessary to make informed decisions will be lacking. Please supplement these scoping comments with those comments we have provided to you in the past regarding our concerns regarding the importance of environmental analyses associated with each alternative. With this broad overview in mind, we would like to provide the following specific comments.

1. We are concerned that there is a shifting environmental baseline. Have current baseline analyses included changes in water surface elevation associated with the Mt. Vernon floodwall built to date, intended to be built, or prior to its construction. It is unclear what the baseline from which we will be measuring impacts associated with each project alternative. In addition, without a clearly

defined baseline, it will be difficult to determine which environmental components included in the final recommendations will be considered mitigation and which ones will be undertaken as part of restoration efforts. It is important to have quantitative information regarding the mitigation burden so that project proponents will fund mitigation with funding that would not otherwise be used to meet salmon recovery needs. A no net loss policy for habitat is important in determining the environmental burden for flood reduction projects, but is inadequate to meet chinook and steelhead recovery needs so important to Tribal communities. We do not want to see funding that would otherwise be used to support salmon recovery be diverted to mitigate the impacts from flood reduction projects. A Planning Aid Report letter sent to you by the US Fish and Wildlife Service in 1997 in response to the efforts to study and implement the Avon Bypass project details the importance of clearly and quantitatively determining existing baseline conditions. We assume you have a copy of this letter in your records. We generally supported the position of the US Fish and Wildlife Service in their 2000 Planning Aid Letter (attached)

2. We believe changes in hydrology and sea level must be incorporated in any flood related environmental analyses conducted by the Corps. . Current predictions from the University of Washington indicate that the magnitude of flooding will be greater as a result of climate change, and the frequency of flooding events will be greater as well. . With projected sea level rise, there is s greater likelihood that back water effects from high tide during flooding will be greater than it is today. These effects should be modeled in any analysis of future flooding scenarios, alternative analyses, and environmental assessments.
3. We believe that in-depth cumulative impacts assessments are required as part of this EIS. In fact, we feel that this type of analysis is the most valuable part of a GI study. It is the integration of a variety of alternatives that hopefully will result in the most cost effect, environmentally responsible project. No such analysis has yet taken place. Inadequate analysis can have significant environmental consequences. One example that illustrates our concern is the support on the part of some for widening the three bridge corridor. While that may alleviate flooding within the corridor, it may increase flows downstream. These increase flows may put downstream landowners and infrastructure at greater risk. If the bridge expansion were to take place without providing for downstream protection, the potential exists that an immediate response would be to increase the heights of existing levees, which in turn could have adverse impacts on the Skagit floodplain and salmon habitat. This is merely an example of what could occur without adequate cumulative effects analysis provided for illustrative purposes. We only want to be certain that each alternative will be considered in context with upstream and downstream impacts that may occur.

4. We believe that the selection of technical experts chosen to undertake these studies should be done collaboratively with resource managers. We would like to point to Puget Sound Energy's Baker River FERC relicensing process. This process was felt by most participants to be a model process that provided collaboration among participants where there was confidence in the consultants chosen and the questions asked, and the approach for answering these questions was fully vetted by interested parties. A similar approach will decrease the likelihood of disputes regarding the adequacy of environmental studies if there is agreement on these issues in advance of study implementation.
5. It is unclear to us the level of flood protection that is anticipated to result from this analysis. Will the level of protection merely be that which results in a positive benefit/cost ratio, or will 100 year flood protection be an underlying constraint of any alternative. We found this to be an important issue in previous discussions regarding Avon Bypass. If the bypass was to be used only to ameliorate the impacts of a 100 year event, the environmental analysis and consequences would be quite different than if it was expected to receive river flows on a more frequent basis, such as a 10 or 25 year event. It is important for some of the alternatives, such as those studies effecting dam operations, bypasses, or the use of flood gates that prior to environment analysis a clear understanding of operational constraints be developed.
6. Please see the email from Mike Scuderi of 11/13/2001 (attached) . It provides a good insight into some of the environmental analyses that should be undertaken. Many of the "Critical Questions" raised in this email apply to the alternatives currently under consideration.
7. A more robust sedimentation analysis that evaluates each of the alternatives under consideration should be undertaken to evaluate consequences to channel morphology and salmon habitat related to the various alternatives. In particular, these effects should be modeled based on the most recent climate change scenarios developed specifically for the Skagit Watershed. It should evaluate sediment routing, and the magnitude and duration of sediment as a result of project implementation
8. A build out analysis should be undertaken to evaluate how future development will take place as a result of flood damage reduction efforts. In particular, how will future buildout effect floodplain management that is required pursuant to the NOAA biological opinion associated with the FEMA flood insurance program.
9. Please see attachment "Tidegates and Pump Houses SOW" that was developed by the Corps during scoping for the GI that was conducted in 2005. Please also see Excel spreadsheet attachment "Skagit Concerns" also developed in 2005 as part of previous scoping studies. Finally, the attached document "Potential topics" also

details concerns that were raised in previous scoping comments that evaluate the proposed alternative that were being considered at the time.

I hope you find these comments helpful. Please feel free to contact me if you have any additional questions, and we look forward to working with you in the development of the Draft EIS.

Thank you for your consideration.

Sincerely,

Larry Wasserman
Environmental Policy Manager

State of Washington
Department of Fish and Wildlife
Renewable Energy Section
P.O. Box 1100, 111 Sherman St. (physical address), La Conner, Washington 98257-9612

September 9, 2011

Hannah Hadley
U.S. Army Corps of Engineers
PO Box 3755
Seattle, WA 98124-3755

Subject: Skagit River General Investigation Study

Dear Ms. Hadley:

The Washington Department of Fish and Wildlife (WDFW) has attended National Environmental Policy Act Scoping Meeting for the Skagit River General Investigation Study. We offer the following comments below. WDFW appreciates the US Army Corps of Engineers (COE) willingness to restart the National Environmental Policy Act (NEPA) process and consider the agencies and other interested parties comments.

Levees and Dikes. In consideration of fish, other aquatic species, and wildlife habitat, WDFW recommends no more new dikes on the Skagit River. If the COE needs to build new dikes, please construct them in already disturbed and armored parts of the river. WDFW also favors setting back dikes over strengthening and reinforcing the current ones. Setting back dikes in the proper areas allows the river to store more water and perhaps create more floodplain habitat.

Flood Storage at Baker Lake and Lake Shannon. WDFW favors keeping the flood storage and flows at the Baker Project within the scope and parameters of the Baker River Hydroelectric Project Federal Energy Regulatory Commission (FERC) license. WDFW and other settlement parties have carefully negotiated the Baker River Hydroelectric Project Settlement Agreement (SA) that resulted in the current FERC license. The SA balances generating power with other uses while protecting, mitigating, and enhancing fish and wildlife and their habitats. WDFW does not favor amending the license or SA for additional flood storage unless it improves habitat and flows for the desired fish and wildlife.

Concerns with the Skagit Basins Environmental Resources. WDFW remains concerned about development within the floodplain. Development, dikes, and removal of riparian vegetation takes away from fish and wildlife habitat. River armoring keeps the river in one

channel and can cause additional erosion downstream and the need for additional armoring, all of which reduces habitat quality. Removal and set back of dikes and restoring the natural river processes help improve the quality of fish and wildlife habitat. The COE would help protect habitat and mitigate impacts by obtaining a Hydraulic Project Approval (HPA) through our agency. The permitting process allows the COE to consult and collaborate with our technical experts in the local area.

Thank you for having a public scoping meeting. WDFW welcomes the opportunity to work further with the COE. As the state permitting agency for work on state bodies of water, we encourage future dialog with our area habitat biologists. If you have any questions or need more information or clarification on the comments from the WDFW, please feel free to call me at (360) 466-4345 x254.

Sincerely,

Brock Applegate
Fish and Wildlife Biologist

Cc: Brett Barkdull, WDFW La Conner
David Brock, WDFW Mill Creek
Brendan Brokes, WDFW La Conner
Wendy Cole, WDFW La Conner
Bob Everitt, WDFW Mill Creek
Annette Hoffman, WDFW Mill Creek
Robert Warinner, WDFW La Conner

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
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Seattle, WA 98101-3140

OFFICE OF
ECOSYSTEMS, TRIBAL AND
PUBLIC AFFAIRS

September 9, 2011

Hannah Hadley
Study Environmental Coordinator
Seattle District, U.S. Army Corps of Engineers
P.O. 3755
Seattle, Washington 98124-3755

Re: U.S. Environmental Protection Agency (EPA) Comments on the U.S. Army Corps of Engineers (Corps) Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) for the Skagit River General Investigation Study (GI). (EPA Project Number: 97-066-COE).

Dear Ms. Hadley:

Our review of the July 29, 2011 NOI was conducted in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. Section 309 specifically directs the EPA to review and comment in writing on the environmental impacts associated with all major federal actions. Under our Section 309 authority, our review of the EIS prepared for the proposed project will consider the expected environmental impacts, and the adequacy of the EIS in meeting procedural and public disclosure requirements of the NEPA. A copy of our rating system is enclosed. The comments that follow are meant to inform you of issues which we believe should be considered in your NEPA analysis.

Thank you for sharing the Skagit River GI Information Sheet with us. This information sheet summarizes the intent of the GI well. Namely, the primary intent of the General Investigation is: evaluate flooding problems in the Skagit River basin from the Ross Dam reservoir (Ross Lake) to Skagit Bay; formulate, evaluate, and screen potential solutions to these problems; and recommend an alternative that has a federal interest and is supported by the local entities. The recommended plan must be technically viable, economically sound, and supported by the local jurisdictions and local sponsor. The study will result in an integrated Feasibility Study Report/Environmental Impact Statement. Measures under consideration include levees, bypasses, additional flood storage, urban levees, modifications to existing dams, and non-structural measures. Altogether, we appreciate your efforts and believe that an adequate Feasibility Study Report/ Environmental Impact Statement will be an important step in improving and sustaining long-term system scale integrity for the Skagit River basin.

The key areas you have identified in the NOI – flooding characteristics; impacts to fish habitat and fisheries resources; riparian habitat; wetlands; cultural resources; and, surrounding communities – are appropriate and we encourage your efforts toward adequate analysis and disclosure of these key areas.

To help facilitate an adequate analysis of the above key areas and other issues, the enclosed comments detail our perspective on: Purpose and Need; Range of Alternatives; Water Resources; Threatened and Endangered Species; Climate Change; Tribal Consultation; Environmental Justice; Adaptive

Management, Mitigation and Monitoring; Standards of Significance; Cumulative Effects; Air Quality; Legacy Pollutants; Noxious Weeds and Invasive Plants; and, Historic Resources.

While our enclosed comments detail our general expectations for NEPA analyses, we note our strong support for actions that restore natural processes and specifically recommend that you consider an EIS alternative which maximizes opportunities to restore natural hydrologic, geomorphic, and, biological processes. Natural process restoration and protection objectives with potential for both flood management and ecosystem benefits include, for example, improved: floodplain connectivity; surface water – groundwater interactions; and, riparian vegetation and wetland development.

We believe that full consideration of a natural processes alternative in the EIS would be consistent with federal agencies', including the Corps,' responsibilities to the Puget Sound Action Agenda, which the EPA has approved as the Comprehensive Conservation and Management Plan for Puget Sound under the Federal Clean Water Act and which also serves as the salmon recovery plan for Puget Sound.

We also believe that a natural processes alternative would be consistent with the Department of the Army's Planning Guidance Notebook, regardless of the study's purpose.[1] First, the Federal Objective for water resources planning gives similar or equal weight to national economic development and protecting the Nation's environment.[2] Second, the Planning Guidance Notebook explicitly confirms the equal importance of ecosystem restoration in the formulation and evaluation of plans, "It is national policy that ecosystem restoration, particularly that which results in the conservation of fish and wildlife resources, be given equal consideration with other study purposes in the formulation and evaluation of alternative plans." (p. C-12).

If you have any questions or concerns, please contact me at, (206)-553-6382 or peterson.erik@epa.gov

Sincerely,

Erik Peterson
Environmental Review and Sediment Management Unit

Enclosures:

- EPA Detailed Comments on the Notice of Intent to prepare an Environmental Impact Statement for the Skagit River General Investigation Study
- EPA Rating System for Draft Environmental Impact Statements

[1] Department of the Army Regulation 1105-2-100

[2] "The Federal objective of water and related land resources planning is to contribute to national economic development (NED) consistent with protecting the Nation's environment, in accordance with national environmental statutes, applicable executive orders, and other Federal planning requirements. (ER 1105-2-100, Planning Guidance Notebook, p. 2-1)"

EPA DETAILED COMMENTS ON THE NOTICE OF INTENT TO PREPARE AN ENVIRONMENTAL IMPACT STATEMENT FOR THE SKAGIT RIVER GENERAL INVESTIGATION STUDY

Purpose and Need

A Purpose and Need Statement is required in the development of the NEPA EIS. The Purpose and Need will be used to guide the development of alternatives, and it will be a fundamental element in developing criteria for selection of alternatives. Where included, goals and objectives, which are related to the project purpose, may also guide alternatives development and the generation of potential screening criteria. The goals and objectives describe other issues that need to be resolved as part of a successful solution to the problem.

The NEPA CEQ regulations at Section 1502.13 state that the Purpose and Need Statement "shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action."

The *Purpose* is the problem to be solved, the "what" of the proposal. It should be stated as the positive outcome that is expected. The Purpose must not be stated so narrowly that only one pre-selected alternative can fulfill the purpose. It should be stated broadly enough so that a range of reasonable alternatives can be considered and alternatives are not dismissed prematurely. The *Need* is the "why" of the proposal. The Need should establish evidence that a problem exists, or will exist, based on valid projections, and should be substantiated by facts and, where appropriate, quantitative analyses.

Range of Alternatives

The EIS should include a range of reasonable alternatives that meet the stated purpose and need for the project and that are responsive to the issues identified during the scoping process and to any identified goals and objectives. The analysis of alternatives in the EIS should compare the alternatives with respect to how well they respond to the stated need, issues, goals and objectives. This will ensure that the EIS provides the public and the decision-maker with information that sharply defines the issues and identifies a clear basis for choice as required by NEPA. The Council on Environmental Quality recommends that all reasonable alternatives be considered, even if some of them could be outside the capability of the applicant or the jurisdiction of the agency preparing the EIS for the proposed project. EPA encourages selection of feasible alternatives that would (1) be environmentally sustainable, (2) maximize environmental benefits, and (3) avoid, minimize, and/or otherwise mitigate environmental impacts.

Refer to the cover letter for our specific recommendation to consider a restoration and protection of natural processes alternative.

Water Resources

To meet the requirements of the Clean Water Act, the EIS must identify all water bodies likely to be impacted by the project, the nature of the potential impacts, and the specific discharges and pollutants likely to impact those waters (addressing both Section 402 and 404 discharges and potential impairments to water quality standards). The EIS must also disclose information regarding relevant Total Maximum Daily Load (TMDL) allocations, the water bodies to which they apply, water quality standards and

pollutants of concern. For example, the EIS should discuss how the GI is accounting for activities associated with meeting the Lower Skagit River Tributaries Temperature Total Maximum Daily Load.[3]

303(d) listed waters should not be further degraded. If additional pollutant loading is predicted to occur to a 303(d) listed stream as a result of a project, the EIS should include measures to control existing sources of pollution to offset pollutant additions.

Consider implementing watershed or aquatic habitat restoration activities to compensate for past impacts to water resources, particularly in watersheds with 303(d) listed waters where development may have contributed to impairments through past channelization, riverine or floodplain encroachments, sediment delivery during construction, and other activities that may have affected channel stability, water quality, aquatic habitat, and designated waterbody uses. Provisions for antidegradation of water quality apply to water bodies where water quality standards are presently being met.

Threatened and Endangered Species

The EIS should identify the endangered, threatened, and candidate plant and animal species, and, other sensitive species within the project area. The EIS should also describe critical habitat; identify impacts the project would have on species and their critical habitats; and how the project would meet all ESA requirements, including consultation with the U.S. Fish and Wildlife Service and National Oceanographic Atmospheric Administration National Marine Fisheries Service. We believe an adequate EIS includes – if relevant to the project - a biological assessment and/or a description of the ESA Section 7 consultation with USFWS and NOAA Fisheries.

Climate Change

Ongoing climate change research as summarized by the United Nations Intergovernmental Panel on Climate Change concludes that climate is already changing; that the change will accelerate; and, that human greenhouse gas emissions, primarily carbon dioxide, are the main sources of accelerated climate change. Effects of climate change particularly relevant for this project includes changes in hydrology (including sea level rise) weather patterns, and, precipitation rates. Accounting for these effects will require adaptation, which is defined by the IPCC as the, "...adjustment in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts."

Recommendations:

We recommend that the EIS describe whether or not and how climate change considerations have influenced decisions (E.g., Project Design Features, mitigation measures, Alternatives development etc.) We are especially interested in your efforts to account for predicted changes in hydrology and sea level rise. Addressing these potential climate change effects appears to be a key part of ensuring that flood management actions minimize risk and maximize benefits from the Skagit River's dynamic processes.

The following resources may be particularly useful.

- University of Washington's Climate Impact Group

[3] http://www.epa.gov/waters/tmdldocs/Lower%20Skagit%20River%20Tribs%20Temp%20TMDL.pdf

- "Hydrologic Climate Change Scenarios for the Pacific Northwest Columbia River Basin and Coastal Drainages"[4]
  - Note that, according to this model, peak flow in the 2040s under the IPCC emission scenario A1B would be substantially more than historical peak flow.[5]
- "The Washington Climate Change Impacts Assessment Evaluating Washington's Future in a Changing Climate"[6]
- "Climate change impacts on streamflow extremes and summertime stream temperature and their possible consequences for freshwater salmon habitat in Washington State"[7]

- Council on Environmental Quality's Draft
  - "National Action Plan: Priorities for Managing Freshwater Resources in a Changing Climate"[8], and,
  - "NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions"[9]

Tribal Consultation

Government-to-government consultation with federally recognized Indian tribal governments is legally required. Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, and the President's executive memorandum of September 22, 2004 are the latest iterations of federal government policy; the latter directed that:

> *Each executive department and agency ... shall continue to ensure to the greatest extent practicable and as permitted by United States law that the agency's working relationship with federally recognized tribal governments fully respects the rights of self-government and self-determination due tribal governments.*

Executive Order 12898 on Environmental Justice is also relevant to Indian tribes, including both federally recognized tribes and tribes that are not formally recognized but that comprise minority and/or low-income populations. Special efforts must be taken to avoid disproportionate adverse environmental impacts on such tribes, and to eliminate barriers to their full participation in the NEPA process and related processes of environmental review.

The lead federal agency responsible for a NEPA analysis is responsible for consulting government-to-government with the governments of federally recognized tribes, and for consulting, though not necessarily on a formal government-to-government basis, with non-recognized tribes. In all cases, efforts must be made to respect tribal cultural interests, values, and modes of expression, and to overcome language, economic, and other barriers to tribal participation.

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[4] http://www.hydro.washington.edu/2860/
[5] http://www.hydro.washington.edu/2860/products/sites/r7climate/subbasin_summaries/6021/floodstats_daily.png
[6] http://cses.washington.edu/db/pdf/wacciareport681.pdf
[7] http://www.springerlink.com/content/5145k80475558w1j/referrers/
[8] http://www.whitehouse.gov/sites/default/files/microsites/ceq/napdraft6_2_11_final.pdf
[9] http://ceq.hss.doe.gov/nepa/regs/Consideration_of_Effects_of_GHG_Draft_NEPA_Guidance_FINAL_02182010.pdf

Special attention should be paid to environmental impacts on resources held in trust or treaty resources. Trust resources include those resources held in trust by the U.S. government on a tribe's behalf (such as tribal lands, minerals, and timber). They also include resources in which a tribe has rights that the U.S. government is obligated to protect. However, there is a rule of treaty construction, established long ago by the Supreme Court, that a right not explicitly ceded by a tribe was reserved, so tribes may have a basis for arguing for consideration of a wide range of traditional land rights, such as the right to use religious places and the right to protect the remains of their ancestors.

For a NEPA analysis, this means that close consideration should be given to all types of resources and aspects of the environment that tribes regard as significant, and that this consideration be carried out in consultation with tribes. Consultation should begin at the earliest stages of NEPA review, when the purpose and need for the action are considered, alternatives are formulated, and approaches to scoping are established. It should continue through the remainder of the NEPA analysis, documentation, and review process and be documented in Environmental Impact Statements and Records of Decision, Environmental Assessments and Findings of No Significant Impact, and the recordkeeping supporting the application of categorical exclusions.

We believe that disclosing in the EIS how your consultation process has addressed the conceptual phases identified in the document, "EPA Policy on Consultation and Coordination with Indian Tribes" would be generally consistent with Executive Order 13175 and full disclosure under the NEPA, and, in line with the spirit of the President's executive memorandum of September 22, 2004. The phases are identification, notification, input, and, follow-up. [10]

The EPA recommends that lead agencies consult with the potentially affected tribes specific to their interests and concerns. Among the issues that in our experience are often of concern to tribes are:

- Reservation lands.
- Formally identified trust and treaty resources.
- Grave and burial sites.
- Off-reservation sacred sites.
- Traditional cultural properties or landscapes.
- Hunting, fishing, and gathering areas (including impacts to ecosystems that support animals and plants that are or once were part of the Tribes and tribal descendants' traditional resource areas).
- Access to traditional and current hunting, fishing and gathering areas and species.
- Changes in hydrology or ecological composition of springs, seeps, wetlands and streams, that could be considered sacred or have traditional resource use associations.
- Water quality in streams, springs, wetlands and aquifers.
- Travel routes that were historically used, and travel routes that may be currently used.
- Historic properties and other cultural resources.

[10] See page 4 at: http://www.epa.gov/indian/pdf/cons-and-coord-with-indian-tribes-policy.pdf

Since the responsibility for government-to-government consultation with tribes is vested by law in the federal government, we recommend that a lead federal agency not delegate its tribal consultation responsibilities to the State or local government unless it has a formal agreement to such delegation with the pertinent tribal government or governments permitting such delegation, as well as a formal agreement with the State or local government as to how such consultation responsibilities will be carried out.

Environmental Justice

In compliance with the NEPA and with Executive Order 12898 on Environmental Justice, actions should be taken to conduct adequate public outreach and participation that ensures the public and Native American tribes understand the possible impacts to their communities and trust resources. We note that the CEQ has developed guidance concerning how to address Environmental Justice in the environmental review process.[11]

The EPA recommends lead agencies address the following points in the EIS, at a minimum:

- Identify low income and minority communities that may be impacted by the project.
- Describe the efforts that have been or will be taken to meaningfully involve and inform affected communities about project decisions and impacts.
- Disclose in the EIS the results of meaningful involvement efforts, such as community identified impacts.
- Evaluate identified project impacts for their potential to disproportionately impact low income or minority communities. Disproportionate impacts should be identified in relationship to a reference community.
- Disclose how potential disproportionate impacts and environmental justice issues have been or will be addressed by the lead agency's decision making process.
- Propose mitigation for the unavoidable impacts that will or are likely to occur.
- Include in the EIS a summary conclusion, sometimes referred to as an 'environmental justice determination', which concisely expresses how environmental justice impacts have been appropriately avoided, minimized or mitigated.

Adaptive Management, Mitigation and Monitoring

Adaptive management is an iterative process that requires selecting and implementing management actions, monitoring, comparing results with management and project objectives, and using feedback to make future management decisions. The process recognizes the importance of continually improving management techniques through flexibility and adaptation instead of adhering rigidly to a standard set of management actions. For adaptive management to succeed there must be agreement to adjust management and/or mitigation measures if monitoring indicates that goals are not being met. Although adaptive management is not a new concept, it may be relatively new in its application to specific projects. As stated in a recent CEQ report, *Modernizing NEPA*, the effectiveness of adaptive management monitoring depends on a variety of factors including:

a) The ability to establish clear monitoring objectives;
b) Agreement on the impact thresholds being monitored;

[11] http://ceq.hss.doe.gov/nepa/regs/ej/justice.pdf

c) The existence of a baseline or the ability to develop a baseline for the resources being monitored.
d) The ability to see the effects within an appropriate time frame after the action is taken;
e) The technical capabilities of the procedures and equipment used to identify and measure changes in the affected resources and the ability to analyze the changes;
f) The resources needed to perform the monitoring and respond to the results.

Recommendations:
We recommend that the EIS describe the potential environmental benefits of a formal Adaptive Management Plan. Such a plan should be designed to ensure the success of mitigation measures and to provide management flexibility to incorporate new research and information.

We recommend that the Adaptive Management Plan include a timeline for periodic reviews and adjustments, as well as a mechanism to consider and implement additional mitigation measures, as necessary, after the project is developed. Monitoring and evaluation should be used to determine if management actions are achieving objectives.

We recognize the Department of the Army's mitigation and monitoring regulations at 32 CFR Part 651.15(b) and agree with the Council on Environmental Quality that these regulations provide a comprehensive approach to ensuring that mitigation proposed in the NEPA review process is completed and monitored for effectiveness. The Planning Guidance Notebook (Department of the Army Regulation 1105-2-100) also includes useful information for mitigation and monitoring planning. The EIS should describe how the action alternatives would achieve consistency with key mitigation and monitoring requirements from 32 CFR Part 651.15(b) and ER 1105-2-100

Standards of Significance
According to 40 CFR Part 1502.1, "Purpose", an Environmental Impact Statement, "...shall provide full and fair discussion of significant environmental impacts and shall inform decision makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the environment.", and, "Agencies shall focus on significant environmental issues...".

In order to facilitate a full and fair discussion on significant environmental issues, we recommend you consider developing and disclosing project specific standards of significance. The U.S. Department of Energy and Western Area Power Administration July 2010 DEIS on the Grapevine Canyon Wind Project provides a conceptual – and generally substantive – example. According to the Grapevine Canyon Wind DEIS, the "Standards of Significance" for Water Resources (Section 3.6.2.1) are as follows:

- Substantially degrade or contaminate surface water quality.
- Substantially deplete groundwater resources, including interfering with groundwater recharge.
- Cause a violation of the terms and conditions of a Federal, State, or local permit, including the loss or degradation of wetlands in violation of a USACE permit.
- Alter surface drainage patterns or stream channel morphology to the extent that vegetation communities and habitats are degraded or productivity is reduced for current resident species.

- Substantially alter the normal flow of a water body or normal drainage patterns and runoff, or impede or redirect flood flows from the placement of a proposed project component within a 100-year flood hazard area. (p. 133)[12]

The associated environmental consequences analysis of the DEIS, then, is directly linked to the standards of significance. We believe this style of disclosure – direct linkages to standards of significance - may help to ensure that this Project's NEPA document sharply defines all of the issues by focusing on a full and fair discussion of potential significant adverse environmental impacts.

Cumulative Effects

The EPA has issued guidance on how we are to provide comments on the assessment of cumulative impacts, Consideration of Cumulative Impacts in EPA Review of NEPA Documents.[13] The guidance states that in order to assess the adequacy of the cumulative impacts assessment, five key areas should be considered. In our review of the DEIS we will assess whether the cumulative effects' analysis adequately:

- Identifies resources, if any, that are being cumulatively impacted.
- Determines the appropriate geographic (within natural ecological boundaries) area and the time period over which the effects have occurred and will occur.
- Looks at all past, present, and reasonably foreseeable future actions that have affected, are affecting, or would affect resources of concern.
- Describes a benchmark or baseline.
- Includes scientifically defensible threshold levels.

Air Quality

Air quality impacts would include emissions from internal combustion engines during equipment operation, and fugitive dust from vehicle travel and site grading activities.

Recommendations:

The EIS should contain an analysis of emissions from construction, vehicle use, and equipment use, including estimated mitigated annual emissions. Emissions associated with on-site generation of electricity during construction should be included in this analysis.

The EPA supports incorporating mitigation strategies to minimize fugitive dust and toxic emissions, as well as emission controls for particulate matter (PM) and ozone precursors for construction-related activity.

Recommendations:

We recommend that best management practices, all applicable requirements under local or State rules, and the following additional measures be incorporated into the EIS, a Construction Emissions Mitigation Plan, and the Record of Decision. See EPA's Clean Construction USA website for additional information.[14]

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[12] http://www.wapa.gov/transmission/grapevine/DEISv1complete.pdf
[13] http://www.epa.gov/compliance/resources/nepa.html
[14] http://www.epa.gov/cleandiesel/construction/

Fugitive Dust Source Controls:

- Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate. This applies to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.
  Install wind fencing, and phase grading operations, where appropriate, and operate water trucks for stabilization of surfaces under windy conditions.
- When hauling material and operating non-earthmoving equipment, prevent spillage, and limit speeds to 15 miles per hour (mph). Limit speed of earth-moving equipment to 10 mph.

Mobile and Stationary Source Controls:

- Reduce use, trips, and unnecessary idling of heavy equipment.
- Maintain and tune engines per manufacturer's specifications to perform EPA certification levels, where applicable, and to perform at verified standards applicable to retrofit technologies. Employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications.
- Prohibit any tampering with engines and require continuing adherence to manufacturer's recommendations
- If practicable, lease new, clean equipment meeting the most stringent of applicable Federal or State Standards.
- Utilize EPA-registered particulate traps and other appropriate controls where suitable, to reduce emissions of diesel particulate matter and other pollutants at the construction site.
- Limit vehicle speeds on unpaved roads to 15 mph.

Administrative Controls:

- Identify all commitments to reduce construction emissions and incorporate these reductions into the air quality analysis to reflect additional air quality improvements that would result from adopting specific air quality measures.
- Identify where implementation of mitigation measures is deemed to be not implementable due to economic infeasibility and provide comparable determinations for other similar projects as justification for this decision.
- Prepare an inventory of all equipment prior to construction, and identify the suitability of add-on emission controls for each piece of equipment before groundbreaking. (Suitability of control devices is based on: whether there is reduced normal availability of the construction equipment due to increased downtime and/or power output, whether there may be significant damage caused to the construction equipment engine, or whether there may be a significant risk to nearby workers or the public.)
- Meet EPA diesel fuel requirement for off-road and on-highway (i.e., 15 ppm), and where appropriate use alternative fuels such as natural gas and electric.
- Develop construction traffic and parking management plan that minimizes traffic interference and maintains traffic flow.
- Identify sensitive receptors in the project area, such as children, elderly, and infirm, and specify the means by which you will minimize impacts to these populations. For

example, locate construction equipment and staging zones away from sensitive receptors and fresh air intakes to buildings and air conditioners.

Noxious Weeds and Invasive Plants

Among the greatest threats to biodiversity is the spread of noxious weeds and exotic (non-indigenous) plants. Many noxious weeds can out-compete native plants and produce a monoculture that has little or no plant species diversity or benefit to wildlife. Noxious weeds tend to gain a foothold where there is disturbance in the ecosystem. Early recognition and control of new infestations is essential to stopping the spread of infestation and avoiding future widespread use of herbicides, which could correspondingly have adverse impacts on biodiversity and nearby water quality. Executive Order 13112, *Invasive Species* mandates that federal agencies take actions to prevent the introduction of invasive species, provide for their control, and minimize the economic, ecological, and human health impacts that invasive species cause.

Recommendations:

A vegetation management plan should be prepared to address control of such plant intrusions. The plan should list the noxious weeds and exotic plants that occur in the project corridor. In cases where noxious weeds are a threat, the EPA recommends the vegetation management plan detail a strategy for prevention, early detection of invasion, and control procedures for each species.

There are a number of prevention measures available such as reseeding disturbed areas as soon as possible and cleaning equipment and tires prior to transportation to an un-infested area. Plant seeds can be carried from a source area by the wind, wildlife, on equipment tires and tracks, by water, and on the boots of workers, so care should be taken to implement control procedures in all source areas to avoid spread to unaffected areas.

If any pesticides and herbicides would be used for vegetation treatment during the proposed project operations, the EIS should address any potential toxic hazards related to the application of the chemicals, and describe what actions would be taken to assure that impacts by toxic substances released to the environment would be minimized.

If vegetation would be burned, then the EIS should include a smoke management program that would be followed to reduce public health impacts and potential ambient air quality exceedance.

The EIS should include a project design feature that calls for the development of an invasive plant management plan to monitor and control noxious weeds, and to utilize native plants for restoration of disturbed areas because of the project.

Historic Resources

Section 106 of the National Historic Preservation Act and its implementing regulations (36 CFR 800) outlines specific procedures to be used in examining potential impacts on historic places. These procedures should be carefully followed in the course of any NEPA analysis, but agencies must be careful not to allow attention to Section 106 review to cause analysts to give insufficient consideration to other kinds of cultural resources. Not all cultural resources are "historic properties" as defined in the National Historic Preservation Act (that is, places included in or eligible for the National Register of

Historic Places); hence they cannot all be addressed through Section 106 review, but this does not mean that they do not need to be addressed under NEPA.

The EPA recommends that no Finding of No Significant Impact or Record of Decision be completed until the processes of consultation, analysis, review and documentation required by Section 106 of NHPA have been fully completed. If adverse effects to historic properties are identified, any Memorandum of Agreement developed to resolve these concerns under Section 106 of NHPA should be referenced in the ROD.

For more information about EPA Region 10's Brownfield Program, please contact Brooks Stanfield at (206) 553-4423 and/or see the program's website.[15]

[15] http://yosemite.epa.gov/r10/cleanup.nsf/sites/bf

U.S. Environmental Protection Agency Rating System for Draft Environmental Impact Statements Definitions and Follow-Up Action*

Environmental Impact of the Action

LO – Lack of Objections

The U.S. Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC – Environmental Concerns

EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO – Environmental Objections

EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU – Environmentally Unsatisfactory

EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 – Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 – Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 – Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.

From: Maynard's Primary E-Mail Account [maynardaxelson@hotmail.com]
Sent: Sunday, August 28, 2011 7:49 PM
To: Hadley, Hannah F NWS
Subject:comments to U.S. Army Corps of Engineers

Dear Hannah,

I gave some brief comment at the public meeting in Mt Vernon on the Skagit River study, but would like to underline the importance of my two key points. As pointed out by others that evening there are many pieces to this puzzle and it will take some time to complete the study and draw conclusions. But there are two very effective things that can be done relatively easily and inexpensively in the short term that could make a huge difference. Using Baker Lake for flood water storage is a very obvious choice, making wise use of infrastructure already in place, paid for, and easily operated. This simple technique could very well save millions in damage and many livelihoods.
As a resident of Fir Island I have first hand experience from the 1990 flood. When the flood water backed up from being trapped inside the levees intended to protect us, that led to much deeper levels and the worst of the damage. This allowed the water up inside everyone's house causing a whole new magnitude of damage and trauma. If we had structures at the bay dikes to allow the water to pass out before getting so deep it prevent much loss and lessen time of recovery. This would take some doing and some expense but could be done relatively quickly as proven in other areas.

Thank You for your consideration, and a special thank you to the commander and your staff that attended our meeting.

Maynard

Maynard Axelson
15929 Fir Island Rd
Mount Vernon, WA 98273
360-202-0415

From: bill mccord [nobler2us@hotmail.com]
Sent: Monday, August 29, 2011 8:46 PM
To: Hadley, Hannah F NWS
Subject: NEPA Public Scoping, Skagit River Basin

Items for consideration in the integrated Feasibility Study Report/Environmental Impact Statement, submitted by Bill McCord, a Mount Vernon, WA, resident:

1. Flood management priorities and protocols.

A systematic method for communication about preparation and steps for emergency response must be tailored for the Skagit River. Existing communications [including social networking] resources can and should be shaped into an integrated protocol familiar to both local and regional jurisdictions. Motor vehicle routes should be prioritized to facilitate safe passage and access to floodfree grounds. A modification of the current road construction signing will provide an adequate platform.

2. Salmon habitat protection and restoration

At present an unnaturally fixed notion of an optimal habitat dictates overly rigid and scientifically unverified policies/practices. [see Ecology & Society 14(1): 45] With a more analytical look at natural variability in salmon habitat, flood management engineering can design solutions that avoid intractable confrontations with legal decisions that tend to thwart progress. More importantly, engineers will discover a newer range of flexibility; ecology experts can join them in designing systems more amenable to the complexities of salmon habitat. A concerted effort toward this end must be included in addressing flood problems. Most likely this will also satisfy judicial expectations, too.

3. Adapting to inevitable flooding

Instead of making the Skagit River a carefully controlled "animal", strategies need to refocus on adapting to the vagaries of this natural phenomenon. Fort Collins, Colorado, subject to unpredictable flash flooding, demonstrated how creative adaptation can minimize destruction: relocate structures from the floodplain and maintain open space in the floodplain. Since Fort Collins initiated its long-range plan, new technologies for floatable structures and rescue operations have emerged, e.g. Winston Land-Locked Floating House. Similarly, floating structures have been extant in the Netherlands for several years. A few towns on the Oregon coast have recently begun building elevated structures to withstand potential tsunami events. All illustrate how the specified feasibility study criteria can be met: technically viable, economically sound, and supported by local jurisdictions.

4. Carrying capacity/population

Every reputable environmental analysis must consider the impact of population--the human kind. In this particular situation, estimating consumption behaviors, e.g. water units per capita, requires full disclosure. Flood management strategies must reach further by addressing the overlapping habitats of humans, fish, and free-ranging animals. Compatibilities and conflicts should be clearly outlined.

5. Proactive community involvement

On a regular basis, open and candid community dialogue about proposed projects are necessary. While this is a daunting task, there is consummate wisdom in involving community support through constructive criticism, providing the latter is invited in good faith. Members of a watershed community need to be kept in touch with the decisions about and for their environment.

From: Daniel E Penttila [depenttila@fidalgo.net]
Sent: Friday, August 12, 2011 2:12 PM
To: Hadley, Hannah F NWS
Subject:Skagit flood controls versus anadromous smelt species
****

Hannah Hadley:

This message is in response to an invitation for public comment carried in the 8/11/11 Skagit Valley Herald newspaper attached to an article on Skagit River flood control options presently under discussion.

My concern is that the critical spawning habitats and ecology of a presently un-identified species of anadromous smelt must be taken into account in the flood option discussions. It presently has not been. The evidence for the presence of anadromous smelt in the lower Skagit River is scanty, primarily because no resource agency up to the present time has taken the time to properly sample the lower river for evidence of it.

I spent 38+ years with the WA Department of Fisheries/Fish and Wildlife involved in investigations of marine forage fishes throughout western Washington, after having been raised on Fir Island in the Skagit delta. During my tenure at the WDFW LaConner field office in the 1990s, it was reported to me by WDFW enforcement officers working in the region that a sport fishery for a species of smelt was undertaken during the winter(?) at a bank access site downstream of Mt Vernon on the west side of the river (the so-called "Spud-House Hole"). Long-handled dipnets were used to harvest the fish, in the same manner that such gear is used to catch eulachon ("Columbia River smelt") on the tributaries of the lower Columbia River. Very unfortunately, no specimens were obtained by which to identify the smelt species. At the time, I was fully involved in studies of other marine forage fishes, and thus did not immediately follow up on the report myself. At the time, the eulachon and its management were the responsibility fo the WDFW Salmon Program, which has expressed no interest in andromous smelts outside the Columbia River region.

The Skagit species could presumably be the longfin smelt, Spirinchus thaleichthys, with a known andromous population in the Nooksack River (the annual "hooligan" fishery in the lower river), suspected to occur in the Duwamish River, and with a land-locked population in Lake Washington, spawning in the Cedar River and other tributaries.

The only other species the Skagit fish might be is the eulachon, Thaleichthys pacificus, with a known andromous population in the Fraser River, but not known to spawn in any river in the US Puget Sound Basin until it was discovered in the Elwha River just a few years ago. The eulachion has recently been listed as "threatened" under the ESA, due to low populations throughout its geographic distribution.

I believe the disjunct distribution of these species in the Puget Sound Basin may simply be due to a lack of local knowledge of these "secretive" fishes and resource agency survey effort to document them.

Adding to the evidence for a unidenified smelt spacies in the Skagit River would be my observations of "non-surf smelt" planktonic yolk-sac larvae at several sites around the mouth of the river from early February to early March, 1987. Plankton samples taken in association with WDF herring spawn surveys in northern Skagit-Similk Bays yielded numbers of smelt-type larvae that could be distinguished from the common surf smelt larvae by having only 8-10 ventral gut-line chromatophores, rather than the surf

smelt's 15-20 such pigment spots. Sketches and notes were taken of these collections for my files, but the specimens were then discarded.

A belated follow-up to the sport fishery reports on the Skagit River was made in early March 2006, when we collected several plankton samples in the lower river to look for evidence of anadromous smelt spawning. However, no suspended eggs, empty egg-shells ro planktonic smelt-type larvae were found.

It is my belief that until adequate studies are undertaken, potential smelt-type spawning habitat (stream-bottom coarse sand-gravel beds) needs to be protected from unwise flood control measures on the lower Skagit River. One measure that is commonly mentioned in the local media is the wholesale dredging of the lower Skagit River bottom sediments to "deepen the drainage ditch" for the protection of human infrastructure. Such dredging activities may remove the very spawning substrate beds that an anadromous smelt species would seek out for deposition of its adhesive eggs.

In the case of the eulachon, such spawning sites are presumably considered "essential habitat" for this ESA-listed species. Even if the species turns out to be longfin smelt instead, it is still worthy of critical-habitat protection. The longfin smelt may in fact be the most "vulnerable" forage fish species living in Washington State, given its very restricted geographical distribution known at present. It is currently under ESA-listing review due to its declining stocks in the lower Sacramento-San Jouquin River system in central California.

Any anadromous smelt species seasonally inhabiting the lower Skagit River could be investigated by a number of means: monitoring of bank-fishing sites on the lower river for smelt-dipnetting activity in the late winter, periodic sampling of the river plankton and suspended material for evidence of smelt eggs and larvae, distribution of questionnares to the sport-fishing public for indications of local/traditional smelt knowledge within the river, beach-seine sampling of eddies in the lower river for evidence of the ripe fish or post-spawn dead fish, review of fish-sampling records by the SRSC and other in the Skagit estuary for evidence of anadromous smelt species, etc.

I strongly urge you to take the occurrence of this forage fish resource into consideration when pondering flood control on the Skagit River.

Thank you.

Dan Penttila
Salish Sea Biological (marine biological consultations)
5108 Kingsway
Anacortes, WA 98221
tel: (360) 293-8110
e-mail: depenttila@fidalgo.net

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From: Eron Berg [eberg@ci.sedro-woolley.wa.us]
Sent: Monday, August 22, 2011 8:25 AM
To: Hadley, Hannah F NWS
Subject:Skagit GI Comments (NEPA)

Good Morning Ms. Hadley,

On behalf of the City of Sedro-Woolley, please accept the following comments regarding the Skagit GI Study scoping:

Our community has been working on Skagit River flooding for generations. To date, little or no progress has been made on any meaningful flood protection including the City of Sedro-Woolley's wastewater treatment plant and dozens of residents in our city. As you scope the GI Study, please be sure to focus on additional flood storage that can be made available in the Baker River system (both Upper and Lower Baker) including additional hard storage as well as useful management of the PSE operated dams to allow for additional storage on an event-by-event basis. I understand that the USACE has found, that if managed correctly, these dams can reduce a peak flood event by more than four feet at Mount Vernon. This is extremely significant, can benefit everyone on the river, and could be very cost effective flood protection.

Please include additional storage, both permanent, hard storage and the so-called drawdown in the event of an imminent flood within the scope of the Skagit GI.

Also, we are interested in studying the value of a small ring dike to protect the City of Sedro-Woolley's wastewater treatment plant as well as replacement of BNSF's Skagit River Bridge as two additional measures.

Thanks,

Eron

Eron Berg | City Supervisor/Attorney
City of Sedro-Woolley | 325 Metcalf Street | Sedro-Woolley, WA 98284
'(360) 855-9921 (direct) | (360) 855-9923 (fax) | * eberg@ci.sedro-woolley.wa.us | * www.ci.sedro-woolley.wa.us

Advisory: Please be advised the City of Sedro-Woolley is required to comply with the Public Disclosure Act Chapter 42.56 RCW. This act establishes a strong state mandate in favor of disclosure of public records. As such, the information you submit to the City via email, including personal information, may ultimately be subject to disclosure as a public record.

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From: Eron Berg [mail@eronberg.com]
Sent: Tuesday, August 30, 2011 9:17 PM
To: Hadley, Hannah F NWS
Subject: Skagit GI NEPA comments

Hello Ms. Hadley,

My wife and I are Skagit River property owners in the area between Mount Vernon and La Conner. Thank you for the opportunity to comment on the scoping of the Skagit River GI Study. As river frontage owners with dike district easements running through our property, we are keenly interested in the GI Study and more importantly the future flood protection that may result from the study.

I ask you to focus attention in the GI on the following issues:

1. Additional hard storage in the Baker River system;

2. Full use of the management tools available to ensure maximum space available on a flood by flood basis in the PSE operated dams on the Baker River system with the primary goal of creating adequate storage in the period when a flood is imminent that will allow zero discharge during the Skagit peak; and

3. The Avon Bypass or other similar "bypass" solution that would allow for confidence that we can move water through the Skagit Valley without inundating farms, homes, businesses, schools, roads and other parts of our community.

My interest in the GI Study is to see these critical projects studied early and fully – each of these three measures, if implemented with sound science, would benefit all Skagitonians and would lead to flood protection for all rather than the piecemeal approach we see today. I do not believe that we must pick between people and fish; I believe we can protect lives and property and still enjoy a vibrant river teaming with salmon and other species of fish that are critical to all of us.

Please add me to your mailing list for future notices.

Thanks,

Eron Berg
19041 Beaver Marsh Road
Mount Vernon, WA 98273
360-420-7178

From: G. Basye [georgebasye@sbcglobal.net]
Sent: Thursday, August 04, 2011 12:06 PM
To: Hadley, Hannah F NWS
Cc: Larry Kunzler
Subject:Skagit River General Investigation Study

Ms. Hadley -

I am a retired water and flood control lawyer from Sacramento. I worked on flood control issues in the Sacramento Valley for 50 years.

I have, however, an interest in the Skagit River flood issues as we have my wife's grandfather's farm between Mount Vernon and La Conner. The farmhouse was surrounded by flood water in the flood of (I believe) 1908. We have a picture showing the water from that flood around the house. The house is about a mile West, and uphill, from the River.

The Sacramento area has a plan for additional flood protection which I believe the Skagit River area should pursue. We have a flood control agency, in the Sacramento area, consisting of the City and the County of Sacramento, an adjacent County and the two local districts responsible for maintenance of the levees protecting the Sacramento area. I was involved in its formation. It has been very effective. For additional protection, the Agency has contracted with the USBR, operator of the Folsom Dam, Sacramento's main flood protection, to provide for some additional flood storage capacity behind the dam in addition to that required by the USCE.

The Agency has agreed to reimburse the USBR for any loss in power revenue attributable to that additional flood control protection. It has only been required to pay for a loss one time in the more than 10 years since this agreement has been in place. It is well worth the price.

I have urged the authorities in Skagit County to follow this example. It would provide the quickest and probably the cheapest way to obtain some immediate additional flood protection. Such an Agency in Skagit County could contract with the power dams up the River to obtain additional protection. It would, I am quite sure, be well worth the price. Unfortunately the Skagit authorities have paid no heed to this suggestion and to the Sacramento example.

With all due respect to the USCE, a further study of these issues will be very expensive and time consuming. Additional flood protection from such a study is not likely to be achieved for at least 10 years (very optimistic).

The Sacramento Valley is extremely fortunate to have had in place since at least 1930 a bypass system which, at flood stage (estimated at 600,000 cfs), carries 500,000 cfs (5/6ths of the flood flow) past the City of Sacramento with only 100,000 cfs (1/6th) remaining between the levees of the Sacramento River past the City.

The Skagit River should, of course, have had such a bypass system many years ago and it has been often suggested. In the meantime, if no additional protection is obtained, the Skagit River will probably one day CREATE a bypass of its own.

It is hoped that the USCE, in its continued study of the Skagit River flood control issues, will encourage pursuit of the type of contractual protection which the Sacramento area has achieved. The USCE cannot, of course, accomplish this type of solution as it is in the hands of the local authorities and the power companies. It could, however, comment on the benefits which such a local action might provide, as that action has in the Sacramento area.

George Basye, BA,LLB,LLM

From: Movassaghi, Greta [gmovassaghi@fs.fed.us]
Sent: Wednesday, September 07, 2011 2:36 PM
To: Hadley, Hannah F NWS
Subject:Skagit River GI Scoping

Dear Hannah,

Please include the MT. Baker-Snoqualmie National Forest at the contact information below, on the GI mailing list for all pertinent notification. As administrators of the Skagit Wild & Scenic River (Bacon Creek to the pipeline crossing in Sedro Woolley and the Sauk, Suiattle and Cascade Rivers, we would like to see the GI study alternatives address areas upriver of the levees and include non-structural measures for flood damage reduction. We are particularly concerned that consideration be given to protecting and enhancing the water quality and free-flow of the river and the resources of fish, wildlife and scenery that are significant in it's designation as a National Wild and Scenic River.

Thank you.

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GRETA MOVASSAGHI
Natural Resource Specialist
Skagit Wild & Scenic River & Hydropower
Mt. Baker-Snoqualmie National Forest
810 State Route 20
Sedro-Woolley, WA 98284

SedroWoolley 360-854-2630
Darrington 360-436-2325
Cell 360-631-4499
email gmovassaghi@fs.fed.us
http://www.fs.usda.gov/goto/mbs/skagit-wsr

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APPENDIX G
BASELINE INFORMATION SOURCES REFERENCE LIST

Baseline Information Sources Reference List
(Provided by Commenters)

Baker Hydroelectric Project Settlement Agreement Article 107, 2011. Provided to Aquatics Working Group, Baker River Coordinating Committee. 2011.

Bell, Esco, P .E., Public Works Director, City of Mount Vernon; John Doyle, Town Administrator, Town of la Conner; Margaret Fleek, Planning Director, City of Burlington; Mark Freiberger, P.E., Public Works Director, City of Sedro-Woolley; Jana Hanson, Development Services Director, City of Mount Vernon; Chal Martin, P.E., Public Works Director, City of Burlington; Jack Moore, Planning Director, City of Sedro-Woolley; Letter to Lorna Ellestad, Project Manager, Skagit County, 2011. Re: Review Comments, Puget Sound Energy's Preliminary Draft Report, "Reservoir Management Related to Imminent Flood Conditions." July 28, 2011.

BNSF Profile and Water Surface, 2009. PDF document incorporating survey conducted by John B. Semrau, PLS, overlayed with Skagit River water surface elevations for various discharges. 2009.

Brands, Peter K., PLS, CFedS with Pacific Surveying & Engineering, 2011. Memorandum re: "Professional Opinion of Methodology and Results of Upper Dalles Gauge Calibration Survey Performed by James E. Stewart (1922-1923). March 29, 2011.

Cities of Burlington and Mount Vernon, 2011. Responses to USGS Memorandum of May 6, 2010. March 29, 2011.

Cities of Burlington and Mount Vernon, 2011. Responses to FEMA Region X Memorandum of February 26, 2010 (revised May 19, 2010). March 30, 2011.

City of Burlington with Dike District #12 as Co-Lead Agency, 2010. "Final Environmental Impact Statement to Adopt a Strategic Program for Comprehensive Flood Hazard Mitigation in the Burlington Urban Area and Adjacent Land with a Range of Structural and Non-Structural Components." July 9, 2010.

City of Burlington, 2011. Skagit River General Investigation Study Scoping Meeting Comments. Powerpoint presentation provided at the scoping meeting of the Skagit River General Investigation Study, Mount Vernon, Washington, August 10, 2011.

Countryman, Joseph D., P.E., D.WRE, with MBK Engineers, 2011. Office Report, "Probability Estimates for Historical Flood Events and Recorded Floods, Skagit River near Concrete." March 10, 2011.

Ehlers, C., 2011. Skagit County and Skagit Watershed. Powerpoint presentation provided at the scoping meeting of the Skagit River General Investigation Study, Mount Vernon, Washington, August 10, 2011.

FEMA, 2010. Conditional letter of Map Revision, Case No. 09-10-1122R, August 24, 2010.

Golder Associates, 2009. "Mount Vernon Flood Protection Project, Geotechnical Assessment, Mount Vernon, Washington," prepared for Pacific International Engineering, January 2009.

Golder Associates, 2009. Technical Report, "Geotechnical Investigation and Levee Analysis, City of Burlington and Dike District 12 Levee Certification Project, Burlington, Washington, Final Report. November, 2009. (electronic copy).

Martin, Chal, P.E., Public Works Director, City of Burlington, 2011. Letter to Lorna Ellestad, Project Manager, Skagit County. Comments related to the Tetra Tech presentation "Imminent Flood Analysis Article 107(c). April 20, 2011.

Martin, Chal, P.E., Public Works Director, City of Burlington, 2011. Presentation entitled "FERC 2150, Baker Hydroelectric Project, Washington State, Update of Flood Control Provisions, with Emphasis on license Article 107(c), From the Perspective of the local Communities." June 1, 2011.

Martin, Chal, P.E, 2011. Presentation synopsizing potential for increased salmon survival related to Baker Hydroelectric Project operation for imminent flood drawdown. July 2011.

Martin, Chal, P.E. "Outline of Assumptions and Basis of Evaluation; Impact of Imminent Drawdown on Spawning Salmonids and Egg-to-Migrant Survival" Handout provided to Aquatic Resources Group of the Baker River Coordinating Committee August 24, 2011.

Martin, Chal, P .E, 2011. Spreadsheet handout comparing estimated Baker Project outflow necessary in advance of a Skagit flood event at various intervals from 1 October through 1 January. Handout provided to Aquatic Resources Group of the Baker River Coordinating Committee August 24, 2011.

Northwest Hydraulic Consultants, 2010. Technical Memorandum, "Skagit River G I Study - Seasonality Assessment of Flood Storage." 15 June 2010.

Northwest Hydraulic Consultants, 2011. Draft Technical Memorandum, "Hydraulic Effectiveness of Measures, Skagit River Risk Management Study." 19 August 2011.

Pacific International Engineering, 2004. Technical Memorandum, "Analysis of Flood Control Storage at Baker River Project," August 27, 2004.

Pacific International Engineering, 2007. "Final Environmental Impact Statement, Mount Vernon Downtown Flood Protection Alternatives," prepared for City of Mount Vernon, July 6, 2007.

Pacific International Engineering, 2008. Skagit Basin Hydrology Report, Existing Conditions. October 2008. (electronic copy - appendices A through I not included - available on request).

Pacific International Engineering, 2009. Spreadsheet, "Max Warer Surface Elevation." Various Skagit River discharges. February 20, 2009. (electronic copy, filename "090220 Profile Modeling BNSF Bridge."

Pacific International Engineering, 2009. "Conditional Letter of Map Revision (CLOMR), Application and Supporting Documentation for Mount Vernon Downtown Flood Protection Project," prepared for City of Mount Vernon, submitted to FEMA February 25, 2009.

Pacific International Engineering, 2010. "Response to FEMA October 8, 2009 letter and Additional Data to Support Conditional letter of Map Revision (CLOMR) for Mount Vernon Downtown Flood Protection Project, Case No. 09-10-1122R," prepared for City of Mount Vernon, submitted to FEMA January 4, 2010.

Pacific International Engineering, 2010. "Response to FEMA April 12, 2010 Letter and Additional Data to Support Conditional letter of Map Revision (CLOMR) for Mount Vernon Downtown Flood Protection Project, Case No. 09-10-1122R," prepared for City of Mount Vernon, submitted to FEMA June 4, 2010.

Pacific International Engineering, 2011. "Technical Report - Supporting Data and Analysis for Skagit River RFIS Appeal, prepared for City of Burlington; City of Mount Vernon; City of Sedro-Woolley; Town of La Conner." (With electronic supporting files and data). March 2011.

Puget Sound Energy, 2011. Draft Meeting Notes, Aquatic Resources Group, Article 107(c) Workshop of May 10, 2011.

Puget Sound Energy, 2011. "Preliminary Draft, Reservoir Management Related to Imminent Flood Conditions, Settlement Agreement Article 107(c), Baker Hydroelectric Project, FERC No. 2150." July 11, 2011.

Reichhardt & Ebe, Inc., 2011. Dike 12 Levee Certification Project, design drawings and associated documents. March 4, 2011. (electronic copy).

R2 Resource Consultants, 2009. Draft presentation, "Environmental Effects of High Water Events, Middle Skagit River, Washington." October 13, 2009.

Scuderi, M., 2001. Regarding: Critical questions to the conceptual alternatives for reducing flood damage along the lower Skagit River. Email message to: Swinomish Indian Tribal Community, November 13, 2001.

Shapiro, Scott L., 2011. "Summary Report, Appeal of the Revised Digital Flood Insurance Rate Map (rDFIRM) and Revised Flood Insurance Study (rFIS) for Skagit County, Washington, dated July 1,2010, and Submittal to the Scientific Resolution Panel." March 29, 2011.

Smith, Jay, P.E., Tetra Tech, Inc., 2011. Presentation "Imminent Flood Analysis Article 107(c)." Aquatic Resources Group Meeting January 11, 2011.

Smith, Jay, P.E., Tetra Tech, Inc., 2011. Presentation "Imminent Flood Analysis Article 107(c)." Aquatic Resources Group Meeting March 8, 2011.

Swinomish Indian Tribal Community, 1963. Letter to: US Army Corps of Engineers. Regarding: Objections to Avon Bypass Project and Related Phases Thereof. 1963.

Swinomish Indian Tribal Community, 2000. Potential Topics. Prepared for GI Scoping. August 7, 2000.

Swinomish Indian Tribal Community, 2005. Skagit Concerns. Prepared for 2005 GI Scoping. 2005.

Synopsis provided by Puget Sound Energy to the Aquatic Resources Group meetings in Spring/Summer 2011, "License Articles applicable to Article 107 c or Flooding".

Towell, Inc., 2009. Base Map and Topographic Information, Burlington Levees. Ground Survey by USKH. March, 2009. (electronic copy) .

US Army Corps of Engineers, 2005. Tide Gates and Pump Houses Scope of Work. Prepared for 2005 GI Scoping. 2005.

US Army Corps of Engineers, 2011. Draft Report, Hydraulic Technical Documentation, Skagit River Basin, Skagit River Flood Risk Management Study. March 2011.

US Fish and Wildlife Service, 2000. Letter to: Colonel Ralph H. Graves, District Engineer, Corps of Engineers, Seattle District. Regarding: Planning Aid Letter; Skagit River Flood Feasibility Study. October 10, 2000.

Valentine, Marian, P.E., 2003. Presentation, "Skagit River Flood Control" to the City of Burlington Council, December 11, 2003.

Washington Utilities and Transportation Commission, 2005. Washington State Pipeline Atlas. Skagit County. 2005 Edition.

APPENDIX H
PREVIOUS SCOPING COMMENTS

QUESTIONS AND COMMENTS ON SCOPING FOR SKAGIT RIVER FLOOD DAMAGE REDUCTION FEASIBILITY STUDY

30 March 1998 Draft

The following table contains the written comments and/or questions the Corps/Skagit County Study Team has received in response to the October 19, 1997 Notice of Intent to prepare an Environmental Impact Statement (EIS) for the study. Initial answers and/or responses are provided for many of the comments/questions for your information. We have tried to include all written comments received at and following the December 11, 1997 Public Meeting. This table will be revised and updated periodically as we go through the study. Answers and responses may change in future drafts as additional information is received and specific study tasks completed. Not all comments or questions are answered at this time but we intend to address them during the study. Not all the verbal comments received at the December meeting are included. For the next draft of this table we intend to review the videotape of the meeting to better document the verbal comments provided at the meeting. If we have misstated your comment or question, please let us know and we will correct it.

We want to thank the following persons or organizations who took the time to provide written comments and/or questions on the study.

Barbara Austin
Mark Backlund
Bud Belcoe
Lawrence Boettcher
Joe Booth
Al Bridgeman
Darwin Geerdes
Leonard Halverson
William & Suella Hershaw
Jennifer Hess
Glen Johnson
Dave Jones
Gary Jones
Jeff & Laurie Kaspar
Larry Kunzler
Duane & Joan Melcher
Michael Roozen
Phyllis Rowan
Allen Rozema
Ann Sameyer
Rupert Schmidt
Pat Severin
John Spence
Scott Thompson
Tony Trish
Melody Wallace
Susan Willis
Fred Winyard
Tiffany Youngren
Tom Zimmerman
National Marine Fisheries Service
Skagit System Cooperative
U S Fish & Wildlife Service
Washington Department of Natural Resources

If you have further comments and/or questions as we move through the study, please contact us by mail, by phone, by Fax, or e-mail as listed below:

	FOREST BROOKS	(206) 764-3456	FAX (206) 764-4470
Mail Address:	Project Manager	forest.c.brooks@usace.army.mil	
Corps of Engineers			
PO Box 3755	MIKE SCUDERI	(206) 764-3479	FAX (206) 764-4470
Seattle, WA 98124-3755	Environmental Coordinator	michael.r.scuderi@usace.army.mil	

QUESTIONS AND COMMENTS ON SCOPING FOR SKAGIT RIVER FLOOD DAMAGE REDUCTION FEASIBILITY STUDY

30 March 1998 Draft

QUESTIONS AND/OR COMMENTS	ANSWERS AND/OR RESPONSES
GENERAL COMMENTS/QUESTIONS	
Would it be possible to use the information now available to resolve the problem? ***[Spence]***	The last major study of the river flooding was done to support floodplain mapping by the Federal Emergency Management Agency (FEMA) in the early 1980's. This work was largely based on the previous Corps 1979 design report for the Levee & Channel Improvements Project (this project has subsequently been deauthorized). More recently, limited analyses were performed by the plaintiffs and defendants in the recent lawsuit. It would be difficult, if not impossible, to complete a study based solely on available information. We will be using as much existing information as possible in the Feasibility Study.
…I would love to see a study (especially one as expensive as the one you mentioned in your e-mail) that encompasses ideas that will work, and that have not been studied and restudied many times before (unless, of course, they have been found to work - although if they work and we do another study on it, it would be nice to see a working system implemented. ***[Youngren]***	Based on the reconnaissance report, there appear to be a limited number of real options available and most, if not all, have been considered at some time in the past in one form or other. The most important factors for Skagit County citizens are: the recognition by the community at large that floods pose a significant unacceptable risk to life and property, the determination by the entire community that measures to reduce the existing level of risk are needed, and the commitment by the people to support necessary funding for appropriate measures.
The public and County should address the need to develop a financing plan for any project. In order to stay on track; maybe dual efforts are needed, separating the two processes: funding and engineering/alternatives ***[Public Meeting]***	Skagit County, as local sponsor for the study, is responsible for providing the non-federal share of study and project costs. A funding agreement would be signed between the Corps and the County verifying the availability of funds before construction would begin.
At the public meeting on December 11, 1997, Dave Brookings, Skagit County Public Works Surface Water manager made the statement, "This is Skagit County's study. We are in charge of it. We own it." I feel it imperative that the Corps inform the County that this study is funded to the tune of 2 million dollars by federal taxpayers. Strict compliance with the National Environmental Protection Act (NEPA) is not only expected it is demanded and that the Corps will settle for nothing less. Simply because an element of this study will show results unfavorable to Skagit County's long history of abuse is no reason or justification for not proceeding with the study in strict compliance with NEPA standards. ***[Kunzler]***	The study is being conducted as a Federal-local partnership. The Project Study Plan was developed in full cooperation with Skagit County, which is responsible for half the study costs, $2 million. The challenge is to develop a plan that will meet all federal, state, and local laws and policies, while remaining within the ability of the partners to finance. The Corps will be responsive to the County's requests and desires during the study, as long as those requests do not violate legal statues or policies. Full NEPA compliance is required for this project to move forward through the study stage and Congressional authorization to construction.
LARGE SCALE FLOOD DAMAGE REDUCTON ALTERNATIVES	
	All proposed large scale alternatives will be examined by the study team. However, some alternatives may be eliminated at an early phase because they are impossible to construct, clearly would not have a positive benefit-to-cost (B/C) ratio, or contain environmental impacts which are restricted by law. This screening process will take place during the next year.

AVON BYPASS	
Many comments supported consideration of the Avon Bypass alternative ***[Austin, Backland, Bridgeman, Geerdes, Halverson, Hess, D Jones, Kunzler, Melcher, Roozen, Rowan, Sameyer, Schmidt, Spence, Thompson, Trish, Wallace, Willis, Winyard]***	The Avon Bypass will be examined as a project option using the new hydraulic model during Stage 1 to determine whether it should be carried forward in detail to Stage 2.
I hope that the environmental study of the feasibility of rural overtopping levees will use more than one alternative and that the environmental impact of the Avon Bypass Project will be part of the study. The Avon Bypass proposal has been studied and authorized in the past. It should make a good comparison, even if it does not prove to be the preferred alternative. It benefits most of the land in the flood plain. The idea should, however, be subjected to appropriate scrutiny as to its adverse environmental impacts. ***[G Jones]***	Comment noted. If selected for detailed study, the impacts of the Avon Bypass proposal will be identified.
One person suggested multiple spill ways or channels or culverts leading to the bay with property owners paid for leasing their land during a flood. ***[Public Meeting]***	Comment noted.
Our home may have to be taken for the Bypass. It does not matter. What matters to us is what is best for the people of the Skagit Valley. ***[Melcher]***	Comment noted
The Avon Bypass makes so much sense. It will create a channel to take the extra water when the river is high. With the Bypass there will never be another flood in the Skagit Valley, Period! Please don't think it can not be built. With the Bypass no one will have to take any water ever. If the Panama Canal could be built, then why can't the Bypass be built? ***[Melcher]***	Comment noted. However, the Avon Bypass as envisioned in past studies would not have completely eliminated flooding in the Skagit River delta. Past designs controlled flooding through the 50 to 100-year events, usually in combination with levee system improvements and/or additional upstream storage.
While the Reconnaissance Addendum states that "no further consideration of this alternative in the Feasibility Study is anticipated", I strongly urge you to add the Avon Bypass to the Feasibility Study. It appears that it was dropped because of "opposition from the Washington Department of Ecology because of anticipated significant changes that could occur in the Padilla Bay National Estuarine Research Reserve resulting from the fresh water flood flows and accompanying sediment adversely impacting the estuarine habitat." A more ridiculous opposition has never been stated. The Padilla Bay Estuary is an "orphaned estuary". It was orphaned when the Skagit River changed course over 1,700 years ago due to an eruption of Glacier Peak. the Skagit River built the estuary as it is building the estuary in Skagit Bay. If there are going to be adverse impacts the proper place to analyze the impacts would be in the Environmental Impact Statement (EIS). ***[Kunzler]***	Comment noted. During the reconnaissance study, the Washington Department of Ecology expressed concerns over the possible impacts to the estuary that the Avon Bypass could cause. If the Bypass is studied in detail, both the negative and the positive impacts of the proposal will need to be identified.
Is it Still Feasible With Floodplain Development?	
Create the Avon Bypass to Padilla Bay relieving down river pressure but doing little for Burlington (increasing the flow rate will help). ***[Roozen]***	Comment Noted
Has newer construction such as malls eliminated this option (Avon Bypass) or are there other reasons why it is not part of the proposed study? ***[Schmidt]***	The Avon Bypass was dropped during the reconnaissance phase of the study for the reasons noted above in one of the Kunzler comments. The new hydraulic model should be able to determine the effect that the development in southern Burlington has on flooding.

Can It Handle a Flood?	
Will the Avon Bypass be included in your study of the Skagit River floodplain? Is this an option which cooperates with the natural flow of the Skagit River in full flood? ***[Winyard]***	The major problem for the delta is that for major floods there is too much water in the river at Sedro Woolley to be contained within the existing downstream levee system. Even if impacts to the Sterling-Nookachamps area were to be ignored, It is probably not practical for a number of reasons to raise the levees high enough for a high level of protection (100-year) for the entire delta. There is an excess of about 80,000 to 100,000 cubic feet per second (cfs) with no place to put it. A bypass could carry this excess floodwater to the bays.
Use Highway 20 Right of Way	
It would appear to me that a strictly engineering view would say that another channel as short as is possible to do the job would be the answer. This is why the Avon Bypass option that was discussed several years ago would be the best option. But there is no way that this, or any other option, would be possible without just and proper compensation for the owners of the property effected. In fact this may be a very inexpensive option because it may be possible to use land already owned by the state. The Washington State Department of Transportation (WDOT) already owns most of a possible right of way through the area. This right of way is useless to them because of the amount of wetland areas that it runs through. Having an overtopping levee put more water into a wetland area should cause little or no environmental problems. ***[D. Jones]***	Comment noted. A possible partnership with WDOT will be examined.
Utilize Wetland Banking to Make the Bypass Pay for Itself	
I also urge the Corps to include in its B/C analysis economic ways of making the Avon Bypass pay for itself (i.e. purchasing the land outright in the name of the taxpayers and selling the land to developers for wetland mitigation banking purposes.) ***[Kunzler]***	In examining lands needed for the right-of-way for an Avon Bypass, environmental benefits from acquisition and possible restoration of those lands may be considered.
…the Avon Bypass to Padilla Bay from at least a hydraulic standpoint must be analyzed. The cost benefit analysis will probably not work out but financing could still be obtained through either wetlands mitigation banking or litigation involving federal, state and local governments who have by not enforcing federal, state and local regulations acquired an astronomical amount of liability. More than enough to cover the cost of the Bypass. ***[Kunzler]***	The use of the easements and mitigation banking lands will be examined in the study. However, all proposed measures must conform with Corps regulations and requirements, such as having a B/C ratio greater than 1 to 1.
ADDITIONAL FLOOD CONTROL STORAGE	
I believe before any water is overtopped or a Bypass constructed that additional storage that is available at Skagit River dams be purchased for flood control…. ***[Halverson]***	Skagit River dam storage is governed by provisions of each dam's Federal Energy Regulatory Commission (FERC) license. Previous analyses have indicated that further increasing flood control storage at dams on the Skagit River will not necessarily produce large improvements in flood damage reduction for the lower river. This is due to the significant runoff from the Sauk River which would remain uncontrolled. The potential for additional flood control storage will be reviewed during Stage 1 to determine whether further detailed analysis is warranted in Stage 2. In addition, any impacts resulting from additional flood storage would have to be renegotiated in the FERC licenses for the dams.
Make the capacity of the lakes behind the dams to hold more water. ***[Trish]***	Comment noted.

DREDGING AND CLEARING RIVERS	
The only measure necessary is to dredge the river out like was done in the past!!! You can walk across the mouths of the Skagit River now, where only 25 years ago there was deep water because the river was dredged for navigation. ***[Public Meeting]***	Comment noted. However, although dredging of the river for navigation was performed for many years by the Corps' snagboats, there was little or no direct flood control benefit. The dredging was only intended to maintain sufficient depths for vessel traffic. The dredged material was taken from the navigation channel and side-cast near the bank back into the river from the snagboat. Thus, there was no appreciable flood control benefit from the dredging.
I believe before any water is overtopped or a bypass constructed that…the existing river corridor must be widened and cleared of obstructions to provide maximum flow. ***[Halverson]***	Comment noted. Clearing of the river has been examined in previous studies. While some flood damage reduction benefits can be obtained from clearing debris from the river, these benefits are typically offset by continuous maintenance costs and impacts to fish populations which depend upon debris for habitat.
Dredge the river from Sedro Woollev to the mouth of the river thus increasing the channel volume. ***[Roozen]***	Comment noted. Dredging for flood control has been studied in the past. However, due to its short-term benefits and potential for severe environmental impacts it has not been attractive in the past as an alternative on the Skagit River. The 1979 Corps studies determined that high levels of flood protection could not be provided by dredging alone and that a combination of dredging and levee improvements would be more expensive than a levee only project for comparable levels of protection.
Since the river is no longer dredged beyond the lower reaches, the now constrained channel is filling with silt which in the past flowed out into the valley. Filling the channel will continue to decrease the capacity of the river, and continue to increase flooding in unprotected areas upstream of the urban areas which the County wishes to protect. If certain lands are to remain unprotected and will suffer increased impacts from additional diking, then the possibility of dredging the river further up the channel must be explored. ***[Kaspar]***	Comment noted. Channel cross sections obtained in 1990 by Skagit County were compared with 1960 sections at the same locations. This comparison showed very little change in total cross sectional area. Some changes in depositional loading (i.e., new sandbars or erosion areas) were noted. As part of the current study, check sections are being obtained to confirm this earlier analysis.
Put out a request for proposal for private entity to dredge 3-4 miles at mouth of North Fork. ***[Johnson]***	Comment noted.
Ownership of Gravel Removed	
Washington State asserted ownership (through Article XVII of the State Constitution) to the "beds and shores of all navigable waters in the state . . . " except those sold according to law. The State of Washington owns it's aquatic lands in fee and abutting owners and others wishing to use state-owned aquatic lands must obtain prior authorization for use of the land from the state. No material removals can take place on state-owned aquatic lands without prior written authorization from the Washington Department of Natural Resources (WDNR). This authorization may involve a material purchase agreement from the state. **RCW 79.90.150 Material removed for channel or harbor improvement or flood control - Use for public purpose.** states, ". . . Prior to removal and use, the state agency, municipality, county, or public corporation contemplating or arranging such use shall first obtain written permission from the department of natural resources. No payment of royalty shall be required for such gravel, rock, sand, silt, or other material used for such public purpose, but a charge will be made if such material is subsequently sold or used for some other purpose . . ." Public purposes include, but are not limited to, construction and maintenance of roads, dikes, and levies. ***[Washington Department of Natural Resources-WDNR]***	Coordination with the WDNR will occur before removal of any material on state-owned aquatic lands occurs.

Sediment Removal Project near Highway 9	
At no expense to Skagit County, the State of Washington or the Corps of Engineers, we will construct and maintain a catch basin spanning the Skagit River (on our property to the north and south), with the dimensions of 50 yards wide and 30 feet deep. The project location would be approximately 1/4 mile below the Highway 9 bridge…The catch basin would fill with gravel, sand silt and other debris that normally flows down the river and builds up on islands and bridges, clogging the channel...The equipment that will be used is a skyline excavator system…We are ready to proceed whenever the permits are approved…it is a cost-effective benefit for the residents of the Lower Skagit Valley. ***[Hershaw]***	We thank Mr. Hershaw for his offer and will coordinate with him as our study proceeds. However, if this specific excavation proposal is considered as part of the Feasibility Study, our time line for construction is some years in the future, which may not match his plans. The report should be completed in about three years with any construction following some years later after Congressional authorization. As part of our study, sediment transport will be reviewed and if determined to be a significant contributor to flood damages, sediment removal measures, such as this proposal, will be considered during Stage 2 of the study.
RING DIKES FOR URBAN AREAS	
Ring Dikes ***[Public Meeting]***	Ring dikes will be reviewed during Stage 1 to determine whether they should be evaluated in detail in Stage 2 of the Feasibility Study
OVERTOPPING LEVEES	
This proposal would allow about seven areas of overtopping and is in my opinion a poor one because there is no way all that water will find its way out. This may be a good option if we are looking at making lakes out of some people's property. ***[D. Jones]***	The new hydraulic model being developed for the Feasibility Study will be used to determine flow paths for overflow waters both for the existing condition case, where levees fail, and for any proposed overflow plan. Based on this analysis the existing drain system at the sea dikes will be reviewed to determine whether any improvements at the bays are appropriate. Unfortunately, floods always make some people's properties into lakes, as has been often experienced by the Sterling and Nookachamps residents in the past. Many Burlington and/or Mount Vernon residents will be just as wet sometime in the future when levees break.
Create a multiple overtopping program for 34 to 36 foot rivers. This is problematic by virtue of the amount of winter crops in the affected areas such as berries, apples, bulbs, and seed. If you think the lawsuits are large now in the Nookachamps, wait till you flood out producing berries with 12,000 to 18,000 dollar replacement costs. ***[Roozen]***	The overtopping levee system will be examined during the Feasibility Study. Impacts to agricultural activities are an important consideration and will be examined. As a comparison to any flood damage reduction plan, the NO ACTION alternative, which assumes break(s) in the levee system will occur with resulting flooding of agricultural activities, will be developed. The estimated flood damages resulting from expected future floods in absence of any Corps project will be compared with the expected flood damages with each of the final alternatives in place as part of the study.
The idea of rural overtopping is probably a good idea, but people impacted will need to be compensated. They should be notified by the County and the Corps how they will be affected, and terms of compensation should be agreed upon prior to being impacted. ***[Thompson]***	Comment noted.
While compensation for the affected property owners is expensive, no project can expect to be completed without it. It seems to me that the proposed overtopping levee proposal that is the starting point for your study is more expensive because you have more property owners to deal with. ***[J Jones]***	Comment noted.
What are you going to do with the big pond? The majority of the water in the flats goes in drainage district's ditches and back into the Skagit. Kind of sounds like a huge detention pond without a relief system…Give the downstream some conveyance capacity, possibly opening up traditional paths in the valley. ***[Severin]***	Comment noted.

Install 3 relatively small spillways. One across Fir Island. One from about where Memorial Highway meets the dike, carefully directing the water mostly west shallowly toward La Conner. Another would put water from just west of the Interstate Highway 5 bridge northwest into old Gages Slough, directing water along Highway 20 to exit at Twin Bridges or thereabouts. These are all set to take about 10,000 cfs. At about 34 feet in Mount Vernon. Start overtopping at 33 feet. Raise Dikes to equal height of 35 feet. ***[Johnson]***	Comment noted.
AVON BYPASS WITH OVERTOPPING LEVEES	
Perhaps overtopping and the Avon Bypass in concert is the solution. ***[Thompson]***	Comment noted.
RIVER WIDENING/SETBACK LEVEES	
…any overtopping or bypass should start below I-5. This would entail the widening of the river channel from above the BNRR bridge through the bridge corridor where massive amounts of illegal fill has been placed in the floodway. ***[Halverson]***	Comment noted.
Widen the river from the Highway 9 bridge in Sedro Woolley to the mouth. ***[Trish]***	Comment noted.
Utilize setback levees where feasible. Setback levees are preferred, because they facilitate the natural processes that usually enhance, rather than degrade, habitat features. ***[US Fish & Wildlife Service-USFWS]***	Comment noted.
Avoid expansion of levees riverward of the existing levees. ***[USFWS]***	Comment noted.
SAMISH BYPASS	
I do not believe we should divert the Skagit River water into the Samish River Basin at the Sterling Hill location as is experienced under the current man made conditions. ***[Halverson]***	Comment noted.
Create a Sterling Bypass to the Samish Basin relieving down river pressure. ***[Roozen]***	Comment noted.
Create a channel from just west of Sedro Woolley, across Highway 20. Bend west, build Cook Road up to accommodate 100-year event, have perhaps ¼ mile wide floodway south of Cook Road. Have opening to this channel start flow at 30 feet. Create south dike out of dredging this channel deeper in the middle of the ¼ mile wide floodway. Put 20-6' culverts under Interstate Highway 5, ¼ mile south of Cook Road. Have this floodway then turn slightly south and west through lowest ground, meandering between Cook and Maiben, south of Sakumas up against Bayview Hill. Use hill as dike coming out about ¼ mile with dike following hill to Padilla Bay at Merritts. Cut across bay to deep water south of Strawberry Island. This water course would have small water in all but big events. Purchase as little ground as possible, perhaps a deeper strip 100-yards-wide where diking material is purchased from. ***[Johnson]***	Comment noted.

NON-STRUCTURAL MEASURES	
Take advantage of the rivers natural predisposition to break and flood on Fir Island. Buy the residents of the Island, deed the land back and allow them to farm the summer crops (peas & spuds etc.) that predominate now. ***[Roozen]***	Comment noted. Purchase and deed-back to the prior owner probably is not possible under provisions of the Uniform Relocations and Assistance Act.
The EIS should also suggest and analyze non-structural (house raising and buy outs) ways of helping those who are already impacted adversely by the filling of the floodway. ***[Kunzler]***	Comment noted. At the end of Stage 1, when the hydraulic model for existing conditions has been developed and calibrated, a review of the floodplain will be made to determine areas where non-structural measures may be most appropriate. Coordination with the Federal Emergency Management Agency (FEMA) will occur to identify repetitive loss areas. Stage 2 work would include detailed studies for selected areas.
Raise everyone home in the floodplain where there is no dikes. ***[Trish]***	Comment noted. Currently FEMA is helping Mount Vernon with removing a number of homes in West Mount Vernon that are riverward of the levee. They are also funding a home raising project in Centralia with an average cost of about $30,000. As the study progresses, coordination will be maintained with FEMA to identify any opportunity for their help in the Skagit Valley.
Every landowner probably must prepare for his own protection. Every land owner should be given an elevation map to assist them to make a decision. ***[Boettcher]***	Comment noted. The Flood Insurance Program and Floodplain and Floodway mapping is the responsibility of FEMA. When the hydraulic model is completed, elevations throughout the floodplain would be available. However, a formal redo of the existing floodplain & floodway mapping would occur under FEMA auspices.
Something should be done to help the homeowners that get frequent flooding…There has been no help for the people in the Sterling Addition, only more flooding. All of the grant money so far is proposed to be used for Mt. Vernon and Burlington. We need help of some sort to lower the water levels during floods. ***[Booth]***	Comment noted. See above.
SMALLER SCALE FLOOD DAMAGE REDUCTION MEASURES	
	All proposed smaller scale measures will be considered by the study team. However, some may be eliminated at an early phase because they are impossible to construct, clearly would not have a positive benefit-to-cost ratio, or contain environmental impacts which are restricted by law. This screening process will take place during the next year.
Sand and Gravel Bars and Log Jams	
Scalp sand and gravel bars and removal of log jams from the Skagit River. ***[Halverson]***	Comment noted.
Clean up log jams and debris in a controlled effort to reduce the size of big sand and gravel bars ***[Trish]***	Comment noted
Hamilton & Cockerham Island	
The impacts of the Cockerham Island levee on theTown of Hamilton and Day Creek community must be studied for possible improvement on flood flows. ***[Halverson]***	Comment noted.
I am also concerned that the study as currently being considered does not do enough for residents upstream of the Burlington Northern Santa Fe Railway (BNSFR) bridge. The study should include floodway analysis of the Skagit County owned and operated levee on Cockerham Island and its effects on the town of Hamilton.***[Kunzler]***	Comment noted.

Sedro Woolley Area	
Provide ring dike around Sedro Woolley. ***[Johnson]***	Comment noted.
…include specific analysis of the impacts of the levee system on the Sedro Woolley sewage treatment plant and outlet to the Skagit River. ***[Halverson]***	Comment noted.
Replace approach to Highway 9 bridge from Sedro Woolley with piers. Take replaced fill and build up dike around Sedro Woolley. ***[Johnson]***	Comment noted.
Remove the old railroad bridge at Highway 9. ***[Halverson]***	Comment noted.
Clear Lake and Beaver Lake Area	
…a one way gate on the north fork of Nookachamps Creek at Highway 9 should be studied to prevent flood damage into Clear Lake and Beaver Lake. ***[Halverson]***	Comment noted.
The Beaver Lake Valley…is a different situation than the official Nookachamps area. We crest 10-12 hours after the river crests…The water is forced under Highway 9 south of Clear Lake. Your goal of overtopping at 146,000 cfs will not help…It would need to overtop at much less cfs…We need a quicker way to unpile the water—perhaps the Avon Bypass—It has to get away quicker in order to be any help in the Nookachamps—Beaver Lake—Clear Lake area. ***[Austin]***	Comment noted.
Burlington/Gages Slough	
Open up Gages Slough for extra water. ***[Trish]***	Comment noted.
Strawberry Point & District 12 Wing Dike	
The river at this point is only 360 feet wide from the toe of the wing dike to the timber on the opposite side of the shore. This backs up 3.5 feet of water in a small flood, filling Sterling and Nookachamps before any storage benefit for the lower valley can be achieved. At this point there has been massive amounts of illegal fill and riprap placed in the floodway. ***[Halverson]***	Comment noted.
Above the BNSFR Bridge	
Remove the illegal riprap obstructions above the BNSFR bridge. This was done without the benefit of permits and holds 1.5 feet of water in even a small flood. ***[Halverson]***	Comment noted.
Mt. Vernon Bridge Corridor	
Widen bridge corridor at Mount Vernon. ***[Halverson]***	Comment noted.
Upgrade the BNRR bridge to allow more flow. ***[Halverson]***	Comment noted.
Remove cement pile for the old interurban railroad. ***[Halverson]***	Comment noted.
Replace the Old 99 bridge between Burlington & Mt. Vernon to carry 100-year flood flows or more. ***[Halverson]***	The design of a replacement bridge is currently underway. The new bridge will be built in the next few years. Coordination is ongoing to insure the bridge as constructed will accommodate a widening of the overbank area on the north end of the bridge. The north abutment of the bridge will be able to serve as a pier in the future if studies show widening of the overbank is appropriate.
Widen the I-5 bridge. ***[Halverson]***	Comment noted.
Avon Bend	
Remove riprap from Avon Bend.***[Halverson]***	Comment noted.

Overtopping at Mount Vernon and Left Bank	
Robert Herzog of the Great Northern Railroad, wrote in his report in 1922 that approximately 90,000 cfs must be diverted in the Avon area to Padilla Bay in a 100 year flood event. I see little or no benefit to overtopping on the left bank or on the Mount Vernon side of the river. ***[Halverson]***	Comment noted.
West Mount Vernon/Young's Bar	
Remove spur dike just upstream of Young's Bar in West Mount Vernon to reduce erosion on east bank. ***[Bellcoe]***	Comment noted.
Redesign Roads and Stormwater Drainage	
Combined engineering of roads and stormwater drainage could greatly reduce flood damage ***[G Jones]***	Comment noted.
Put culverts under all of the elevated roads. ***[Severin]***	Comment noted.
La Conner Dike	
Is there a need for a dike to protect La Conner from Skagit River flooding? If so, what can be done to reinstall such a structure? ***[Zimmerman]***	The need for a cross dike to protect La Conner will be evaluated during the study. If such a dike appeared necessary, it would be included in appropriate alternative(s) for consideration. Since it would be a very small part of a much larger project, consideration could be given to splitting it off to accomplish separately.
South Fork Wildlife Area Dikes	
Improve flow on South Fork by removing dikes on the State Wildlife Area. ***[Halverson]***	Removal and relocation of some of the dikes on the State Wildlife Area along Deepwater Slough is being considered by the Corps under a separate feasibility study. The sponsor for that project is the Washington Department of Fish and Wildlife (WDFW). The project would restore tidal influence to 250 acres of the 430 acre island in the refuge. Public review of the project report and environmental assessment is scheduled for August 1998.
Widen North Fork bridge at boat launch area. ***[Halverson]***	Comment noted.
Removal of jetty at the north fork of the Skagit River. ***[Halverson]***	Comment noted.
Mouth of the River	
Clean out mouth of the river and lower it by 14 to 20 feet. ***[Trish]***	Comment noted.
OTHER QUESTIONS AND/OR CONCERNS	
ACCURATE IMPACT ASSESSMENT	
…we (the people of Skagit County and the Corps of Engineers as lead agency) are suppose to be identifying the significant issues to be analyzed in depth in the EIS. The EIS shall succinctly describe the environment of the area(s) to be affected or created by the alternatives under consideration... ***[Kunzler]***	Elements of the environment to be analyzed in the EIS will be developed based on scoping comments, technical knowledge, and legal requirements. For all practicable alternatives, detailed evaluations of impacts will be developed and presented.

FISH AND WILDLIFE IMPACTS	
We look forward to working with Corps throughout the life of the project to develop an alternative that is responsive to communities and individuals susceptible to flooding from the Skagit River, and is sensitive to the fish and wildlife resources present, especially salmonids… ***[USFWS]***	The environmental impacts of any proposal which is studied in detail in the feasibility study will be assessed as part of the NEPA process. Mitigation actions will be recommended when appropriate.
Impacts to Padilla Bay and fish stocks in the Skagit River must be evaluated if the Avon Bypass is proposed. ***[Agency Coordination]***	The environmental impacts of any proposal which is studied in detail in the Fasibility Study will be assessed as part of the NEPA process.
Impacts to salmonids must be considered in the analysis. Potential impacts include additions of more riprap, loss of fish through overtopping, and loss of habitat through removal of riparian vegetation. ***[Skagit System Cooperative-SSC]***	Design of studies to assess the impact of proposed projects is currently underway and will be coordinated with agencies and tribes.
Inventory fish and wildlife habitats of all areas that could be affected by the project. Utilize aerial photos to quantify and characterize terrestrial and riparian habitats that may be affected by the proposed project. Ground-truthing may be required to assess habitat quality. ***[USFWS]***	Inventorying fish and wildlife habitat is part of the study plan.
Include quantitative and qualitative assessments of aquatic and terrestrial species and their associated habitats as they relate to the project area, especially an assessment of fish losses due to modifications of in stream habitats, the stranding of fish following over bank flows, and the removal of large, mature trees that could be utilized as perches. ***[USFWS]***	Assessments of these impacts are included in the study plan.
Develop a fish and wildlife mitigation and monitoring plan in cooperation with the USFWS, the Environmental Protection Agency (EPA), the National Marine Fisheries Service (NMFS), Tribes, and state resource agencies. A monitoring and remediation plan should also be developed to determine the success of revegetation efforts (especially on erodible surfaces), aquatic habitat mitigation features, and mitigation features implemented to prevent or reduce stranding of adult and juvenile salmonids ***[USFWS]***	Development of a mitigation plan is included in the study plan.
Minimize disturbance to existing vegetation, especially riparian areas that provide shading and refuge during high flows. Revegetate disturbed areas where vegetation is removed or destroyed by construction activities. Plantings of indigenous grasses, shrubs, and trees are recommended. Revegetation efforts should occur in the first planting season following the disturbance. Construction equipment should be staged to avoid vegetation and wetlands. ***[USFWS]***	Comment noted.
Develop levee vegetation maintenance standards that allow for the retention of valuable woody riparian vegetation and encourage the planting of selected plant species to create additional habitat as well as to prevent erosion. ***[USFWS]***	Revisions to levee vegetation standards are currently being addressed by the Corps of Engineers headquarters.
Investigate opportunities to restore the floodplain by using setback levees or restoring freshwater flows to diked off sloughs, such as Dry Slough on Fir Island. Potential mitigation measures that should be considered if this project goes forward include: setback levees, mini-setback levees, restoring cut-off sloughs, culvert improvements, placement of large woody debris, restoration of riparian habitats, and modification of levee vegetation standards to allow for more natural overhanging vegetation. ***[USFWS]***	Comment noted.
The loss of the potential to reopen sloughs cutoff by levees must be addressed in the analysis. ***[SSC]***	The development of a project will not prohibit future reopening of sloughs. Skagit County has committed to developing a set of criteria to evaluate future proposals to reopen sloughs.

Any proposal to place a closure structure across Nookachamps Creek must evaluate the impacts to fish and wildlife resources. Conduct additional studies to address impacts if the Corps investigates the use of levees to protect the towns of Clear Lake and Beaver Lake. ***[USFWS]***	Any proposal to place closure structures or levees will evaluate impacts to fish and wildlife. Appropriate mitigation measures will be proposed.
The loss of riparian habitat could a significant impact from the project. ***[Agency Coordination]***	A survey of riparian vegetation on the river will be conducted and impacts calculated based on that survey and construction plans.
Consider overbuilding sections of levees land ward to allow for development of large woody vegetation riverward that would not normally be allowed to grow on most Public Law (PL) 84-99 levees. ***[USFWS]***	This measure will be examined as part of the development of the mitigation plan.
Rock groins, large boulders, and large woody debris should be incorporated into any proposal to place rip rap. These provide foundation material for bank armor and mitigate for lost fish habitat. Groins may be extended at selected locations to surface elevations of flows up to about 18,000 cfs (slightly above the mean flow of 16,000 cfs) and vegetated to offset habitat loss due to levee construction. ***[USFWS]***	These measures will be examined as part of the development of the mitigation plan.
Coordinate the construction season with the USFWS, the NMFS, Tribes, the WDFW, and state and local regulatory agencies to ensure protection of migrating salmonids. ***[USFWS]***	Comment Noted.
ENDANGERED SPECIES ACT	
We do have a significant interest in the outcome of this process…Our interest could be amplified soon if salmonid listings occur under the Endangered Species Act (ESA) this area. ***[National Marine Fisheries Service-NMFS]***	ESA coordination will be a part of this study
We look forward to working with Corps…to develop an alternative that is responsive to communities and individuals …and is sensitive to…threatened and endangered species. Complete consultation under the ESA. ***[USFWS]***	ESA coordination will be a part of this study
WATER QUALITY & WETLAND CONCERNS	
Wetland delineation should be conducted to determine the extent of wetlands in the project area. ***[USFWS]***	A wetland delineation on the proposed alignment will be conducted with Corps and Natural Resources Conservation Service (NRCS) staff.
Efforts should be made to protect and enhance wetlands that may occur along or adjacent to proposed levee or overflow weir alignments. ***[USFWS]***	Comment Noted. Opportunities to protect or enhance wetlands as part of the mitigation for the proposed project will be examined.
HYDRAULIC IMPACTS	
Accuracy of Flood Readings	
…any measurement of the River by volume would lead to problems. River flow volume will be a function of speed and channel volume. As the years have passed both of these factors have been impacted negatively. The channel volume has been reduced by virtue of silting. The speed of the River has been slowed by the trees and related debris on the banks. Consequently historical less significant events (10, 15, etc. year floods) like we had in 1990 become much more serious. ***[Roozen]***	The new hydraulic model will be calibrated to current conditions using past flood data..

If the Thanksgiving flood of 1990 was a 35-year event, why did the upstream property owners within the delta area of the Nookachamps, Sterling area experience water levels within one to two inches of that 35-year event during the reported 12-year event of 1995. A 12-year event equals approximately 130,000 cfs at the Mt. Vernon gage. This is the same reported cfs reading during the 1975 flood. A flood event which produced 2 to 3 feet lower flood levels than those experienced in the 1995 flood event. The only thing different between the 1975 flood and the 1995 flood, besides increased flood levels, has been the filling of the floodway by the Skagit County Publics Works Dept., the Diking Districts, the Washington State Department of Ecology (WDOE) and the Corps of Engineers PL 84-99 projects…***[Kunzler]***	The Thanksgiving flood of 1990 cannot be used directly to compare either stage or discharge due to the double levee failure at Fir Island. The discharge at the Mt. Vernon gage for that event cannot be compared directly with other flood events that did not have comparable levee failures associated with them. We appreciate input from the public on what appears to be inconsistent or unusual information. As part of our study, we will review any apparent inconsistencies brought to our attention, investigate any verifiable stage records with a view to incorporating valid information into the new hydraulic model.
Drainage Improvements	
The study should balance the need to convey water to the Sound and the damage caused by greater velocity. Please study what can be done to expand capacity for drainage at outlets of Samish, Joe Leary, Gages, Indian, Telegraph, Sullivan, Higgins Sloughs, District #17 (Big Ditch) and both forks of the Skagit, including their sloughs. ***[G Jones]***	As part of the hydraulic modeling, drainage patterns will be analyzed and designs will be developed to move the water back to the river and bays.
Impacts of Overtopping	
How much more overtopping will we get when overtopping is at 146,000 cfs. if all the dikes hold? ***[Austin]***	Impacts for each of the final alternatives will be calculated in Stage 2 using the hydraulic model.
Sustained Overtopping Impacts	
The duration of flood events and the probability of levee embankment saturation should be considered in evaluating existing flooding and any proposed alternatives. ***[Rozema]***	The duration of flooding will be considered in the evaluation of the condition of the current levee system design to determine what protection it provides and in the design of any new levees, levee improvements, and overtopping structures.
The study should anticipate…various types of flood in order to provide assurance to those in the flood plain who rely upon the design under study. It has always been difficult to imagine a system of overtopping levees which would not produce different results under differing conditions. For example, some floods might occur because of a wave of water coming down the upper valley at high velocity. The more typical events vary in their intensity from rapid rise to very gradual rise and sustain crests of varying duration. It is easy to imagine a rapid rise or sustained peak which causes the upriver overflow to take more water than the downstream overflow with the expected environmental impact on the Samish or other upriver overflow areas. ***[G Jones]***	Various likely flood conditions will be examined in the hydraulic model. The concept for overflow developed in the reconnaissance study was to try to set the overflow elevations such that overflow would began at each location at the same time. An overflow alternative, assuming ungated overflow sections, could only do this for a single selected flood design condition. In reality, because of uncertainities in the analysis and variations of future flood events not all overflows would actually begin at the same time.
Sedimentation	
The sediment carry capacity of the Skagit River system needs to be considered in evaluating any alternative. ***[Rozema]***	Comment noted. Sediment studies are planned.
Include Bridges in Hydraulic Modeling	
--one commenter talked about the river running into problems at the bridges and that all our actions should be coordinated; also asked about the length of time the study would take and talked about the computer modeling—wanted to make sure the issue of bridges, etc., was included in the modeling ***[Public Meeting]***	Bridges will be included as part of the hydraulic model.
The study should include the impact of past and future public works on flooding. Especially important are I-5 and Highway 20 as they constrict or direct floodwater. ***[G Jones]***	Existing conditions will be used as the baseline for the hydraulic model.
Display of Model Results	

When the model is completed you should be able to produce a print out of flood levels during various scenarios. SHOW THEM A PICTURE. That they understand. ***[Kunzler]***	The feasibility of linking the output of the hydraulic model to a Geographic Information System to display outputs will be examined.
CUMULATIVE IMPACTS	
The cumulative impact of this fill material between 1977 and 1997 must be analyzed in the proposed project. Failure to do so will result in an EIS that will be most likely be challenged due to its inadequacy. ***[Kunzler]***	Determination of a baseline for the cumulative impacts analysis will be by the Corps. Typically, existing conditions are used as a baseline. Past actions can still be incorporated into the analysis, however.
…there is no more important step or issue that must be addressed in the EIS then to determine the existing cumulative impacts of the current diking system as well as the alterations to this diking system since the last Corps of Engineers Levee Improvement Project in 1977-1979....The cumulative impacts in the instant case would be not only the impacts on flood flows from the illegal filling of the floodway since 1977 but the mountains of landfill including Interstate 5, that has been placed in the floodplain of the Skagit River without the benefit of hydraulic analysis. ***[Kunzler]***	This comment will be considered by the study team to help determine the appropriate scope and extent of the cumulative impact analysis.
EIS PROCESS	
It is my understanding of NEPA that while the EIS is being prepared "no action concerning the proposal can be taken which would have an adverse environmental impact or limit the choice of a reasonable alternative." I interpret this to mean that no proposal such as subdivision of land within a possible Bypass alternative of the construction of a floodwall within the floodway could take place. I urge the Corps to inform local government of the consequences of such an action. ***[Kunzler]***	The comment refers to Section 1506.1 of Chapter 40 of the Code of Federal Regulations (40 CFR Sec. 1506.1) which applies only to actions by Federal agencies. It limits commitment of resources by Federal agencies before a Record Of Decision is issued by the agency. Local governments, including project sponsors, can undertake commitments of resources including land use actions which might impact the feasibility of certain alternatives. However, when local government make such decisions they can significantly affect the analysis of various alternatives and risk affecting their viability, which could stop a feasibility study if no viable alternatives remain economically justified.
FINANCIAL IMPACTS TO FLOODPLAIN RESIDENTS	
Although I understand Skagit County's desire to keep the costs within an acceptable range, if in so doing, the agricultural community is to be asked to make sacrifices, the true costs of lost crop land to flooding, must be assessed. Last July (1997), a flood occurred in the Sterling Nookachamps area severely damaging crops or planted earlier in the spring. Such an event may be more possible with the proposed alternative. During the proposed study, the local office of the NRCS along with the local agricultural community must be contacted to determine loss of valuable farmlands due to an increased incidence of flooding. Skagit County has a major resource in the productive capacity of its land, and such capacity will be limited if many crops can no longer be planted in the affected areas. Economic impacts must be analyzed, and reduction in values of impacted properties assessed, then mitigated. ***[Kaspar]***	The hydraulic model will be used to determine both without-project flood conditions and with-project flood conditions. Based on this information, without-project, with-project, residual, and any induced damages would be estimated.
How many of our Skagit County neighbors' homes would be impacted by the bypass theory, plus how the "compensation" would be decided. ***[Youngren]***	Comment noted.
While compensation for the affected property owners is expensive, no project can expect to be completed with out it. It seams to me that the proposed overtopping levee proposal that is the starting point for your study is more expensive because you have more property owners to deal with. ***[D Jones]***	Comment noted.
Finally, it is interesting that the County plans to save money by allowing continued excessive flooding at our home while substantially raising property taxes this year. Just the threat of the proposed option has caused real estate values in the Sterling area to decline, or properties to be not marketable due to the unknown	Comment noted.

effects of the future Court and Corps action. These conditions must be assessed and the financial impacts included and mitigation proposed which via include the past improper activities for which the County has recently been found legally responsible.***[Kaspar]***	
The Avon Bypass seems to be the best alternative. As with overtopping some people will need to be compensated. ***[Thompson]***	Comment noted.
OPERATION OF OVERTOPPING LEVEES	
The "overtopping" proposed to be designed is unclear. When exactly and at what elevation would overflows be proposed? Historically, the flood waters have been illegally contained by threatened businesses and citizens sandbagging in areas which has prevented relief from the flood containment. How will this be prevented and enforced? In 1995, the City of Burlington caused water to raise at our home by sandbagging along Highway 20 even though they were told to stop (too late) by the Corps of Engineers. ***[Kaspar]***	Right now, the overtopping alternative is more a general concept than a specific plan. During the coming year, the new hydraulic model will be put together, existing conditions evaluated, and various alternative configurations tried, with a view to selecting the alternatives to be considered in detail during Stage 2 of the Feasibility Study. The local sponsor, Skagit County, would be required to operate and maintain any Corps project in accord with an Operation and Maintenance Manual prepared by the Corps. Such a manual would specify what the County must do and, conceivably, what the County must not do to operate the project as designed.
IMPACTS OF VOLCANOS AND EARTHQUAKES	
The study should anticipate volcanic activity, severe earthquakes damaging one or more dams upstream…***[G Jones]***	An analysis of these impacts will be made. However, levee design will be for specific flood stage events.
Within the last few years the United States Geological Survey (USGS) has issued two reports (one on Mt. Baker and one on Glacier Peak) which both identify the Skagit River as having a high risk of debris and mud flow events from the volcano's. An eruption from either volcano would have devastating impacts on any project proposed by the Corps. I feel very strongly that this element, under NEPA must be analyzed in the EIS and strongly urge you to include it. By not conducting such an analysis I feel that a levee project that would protect some from flood events would only be adding to the false sense of security that the residents of the lower valley already suffer from. ***[Kunzler]***	We agree that an eruption from either volcano could have devastating impacts whether or not any future flood damage reduction projects are built in the Skagit River valley. People who live along rivers often have a false sense of security from existing flood control measures, particularly, if the river has not had major floods in memory, as is the case with the Skagit only having 20 to 30-year floods this half century. Likewise, the danger posed to river valleys emanating from volcanos is not often realized by valley residents. Volcanic events usually will be much more severe but occur much less often than river floods. The planning horizon for flood events is tens to hundreds of years, while the major volcanic events follow thousands to tens of thousands of years. The EIS will consider the possible effects from volcanic events within the planning horizon for the study.
LEGALITY OF SKAGIT LEVEES	
As was testified to by the State Department of Ecology in the Halverson vs. Skagit County lawsuit…the entire system of levees along the Skagit River are illegal. They have been raised and widened within the floodway without the benefit of permits and in complete disregard for federal and state law as well as the safety of the people the levee system adversely impacts. This issue must be dealt with early on in this feasibility study process to determine if the Corps of Engineers can even participate in a project that will be expending federal dollars to enhance a system of illegal levees. I suggest to you that you receive a written legal opinion from at least the Seattle District Office of Counsel before you proceed. ***[Kunzler]***	Discussions have been held with Seattle District counsel. There is no legal impediment to a study of flood damage reduction measures for the Skagit River valley. Consideration of existing jurisdictional, legal, or institutional constraints is part of the study plan The study would identify changes, if any, needed in federal, state, or local law to implement the recommended plan. Since the output from the Feasibility Study will include a report with a recommendation for Congressional authorization of a project, any necessary changes in federal law would be part of the recommendations. If any changes in state or local law were to be required, these would identified as required item(s) of local cooperation for the local sponsor to accomplish.
…any project designed by the Corps of Engineers that does not reduce the induced flooding into the Nookachamp Sterling area by a minimum of two to three feet of water will result in yet another wasted effort by federal officials. The Corps of Engineers first recognized the induced flooding in its report by Colonel W. J. Barden authored on December 4, 1925. This report along with several subsequent reports all advised Skagit County to move its levees back away from the edge of the river. The County responded by moving the levees closer to the river (Dike District	Comment noted.

12) in 1956. Since that since the County has continued to raise the levees and conduct illegal filling of the floodway with excessive riprap projects and backfilling the riverward side of the levees, causing continued and increased induced flooding in the Nookachamps/Sterling basin. This highly illegal policy cannot be condoned nor continued into the twenty first century. ***[Kunzler]***	
PUBLISH "COMPLETE" B/C ANALYSIS	
I strongly urge the Corps to include as an appendix to the EIS the complete B/C analysis. To simply make a statement that this project or that project has a B/C ratio of 0.7 to 1.0 questions the adequacy of the EIS. Please, a full and complete compilation of all that went into the B/C analysis must be included as an appendix, including, but not limited to, the cost figures utilized by the Corps Real Estate Division. This will be especially critical with respect to the Avon Bypass alternative. It may very well be that the Avon Bypass cannot be constructed because of the B/C analysis, however, if this ratio is not properly justified the credibility of the entire EIS will be questioned. ***[Kunzler]***	The organization of the Feasibility Report and Environmental Impact Statement has not been decided at this time. However, such documents usually have appendixes that address each significant discipline contributing to the analysis. Among others, one appendix would contain the detailed Project Cost Estimate(s) and another the detailed Economic Analysis. Generally, cost estimates would be shown for each final alternative consider in detail.
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Waive B/C Ratio ***[Public Meeting]***	Current Corps regulations prohibit this.

SKAGIT RIVER GENERAL INVESTIGATION
Feasibility Phase
Response to Public Comments
Meeting Date: August 2008

The US Army Corps of Engineers (USACE) Skagit River General Investigation Project Development Team (PDT) conducted a public meeting in August 2008. The purpose of this meeting was to present measures that have been developed by the PDT as elements of future alternatives that will be developed and evaluated under the Feasibility Study.

Comments received were logged and categorized. The PDT prepared responses to comments that were deemed appropriate for the level of data analysis that has been completed and reported to date. All comments received will be used to inform the PDT as the project progresses.

Process
Comments were received that expressed concern over the amount of time taken by the feasibility study to produce results.

The process for completing a General Investigation (GI) Feasibility Study encompasses a 6-step planning process. Each step provides the building blocks upon which the federal government and local sponsor make decisions regarding which alternative to recommend.

The Skagit River GI Feasibility Study process has completed the first step of identifying and solidifying the problems and opportunities. The project development team is currently immersed in inventory and forecast conditions and formulating alternative plans, steps two and three. Step two, inventory and forecast conditions, is an extremely important and exhaustive step. This step provides foundational information such as the hydrology and hydraulics (H&H) models, environmental baselines, and economic damage modeling. The PDT will provide reports of model results as they are developed throughout the remainder of the project.

Additionally, the PDT will be developing the initial range of alternatives. Each alternative is comprised of one or more measures. Measures can be viewed as puzzle pieces that will be put together in various combinations to form alternatives to address the problems identified. It is anticipated, based on funding history, that completion of the inventory and forecast conditions and the development of the initial range of alternatives will take the majority of the next 18 to 24 months. Once completed the remaining planning process steps include evaluate effects of alternative plans, compare alternative plans, and select recommended plan.

Additional Information
Many comments provided additional information to the PDT with regard to the existing conditions within the basin, historic efforts to reduce flood damage, previous studies, and potential impacts related to individual measures.

The PDT makes every effort to incorporate up to date information into its 6-step planning process. The team utilizes the public as an important source of information, especially with regard to our inventory and forecast conditions step, and comments are an important source of information utilized by the PDT during the development of this project.

Alternatives Development
Comments requested a holistic approach to reducing flooding in the study area. Additionally, some comments provided suggestions for grouping measures or opinions so certain measures would not resolve flooding issues if not implemented with other measures.

The process for developing alternatives is based on a concept of developing building blocks, in the form of measures that are later used to build the alternatives. Alternative development comes later in the USACE's 6-step planning process. The alternative development exercise is incremental in nature and by identifying discrete projects, the team is able to add or subtract measures to determine a measures' contribution to the alternative. The process involves first seeking to use measures as "puzzle pieces" to maximize hydrologic performance. Then the alternatives are compared to various goals with regard to cost/benefit and environmental impact to formulate and define alternatives with a higher probability of implementation. Finally, alternatives are refined to increase cost/benefit or reduce impacts based on information obtained during the alternative analysis process.

Alternative Impacts
Other comments from the public expressed concern regarding potential impacts resulting from implementation of various measures.

The assessment of impacts by alternative will include a detailed, in-depth technical analysis not only for GI requirements, but to fulfill the requirements of the National Environmental Policy Act (NEPA), Endangered Species Act (ESA), Clean Water Act (CWA), and other applicable local, state and federal regulations for project development. It is anticipated that this analysis will commence, pending funding, in 18-24 months. At that time, the PDT will be able to provide quantification of impacts within the Skagit Basin as a measure is selected as part of an alternative and included in the final impact analysis.

Approve/Disapprove of Measures
A number of comments received expressed approval or disapproval of individual measures for a variety of reasons, from cost to impacts.

The opinions of the public are a vital part of this process as the project moves forward in the 6-step planning process and written comments become part of the project record. Although the selection of a recommended measure or alternative is not based on a "public vote", there is significant value in hearing the voices and opinions in the communities that may be impacted by the project outcome. As the project progress, there will be

additional opportunities for the public to provide input, information and to further comment.

Funding

A number of commenters expressed concern about the amount of time and money that has been expended thus far on the Skagit River GI, with no preferred plan selected.

To date, an exhaustive effort has been expended on generation of baseline and inventory data. Furthermore, the H&H for the project has gone through several iterations of review and validation with USACE experts and external agency and private industry experts. This level of data generation, analysis, and validation has taken extensive time and project resources.

Anticipated total cost to complete the remaining work on the GI is anticipated to be over $4,000,000 and the selection of a preferred plan is currently scheduled during Step 3 for completion in or about 2012. Each step in the planning process is methodical to ensure that decision-makers have an analysis that is scientifically sound. The outcome of this project will have lasting impacts on the social and physical landscape in Skagit County, most likely for decades to come. The PDT is making every effort to move the project along; however, the magnitude of what is at stake for the communities make it critical to do it right, even if it takes more time.

The current estimated construction cost for a recommended plan may be near $200,000,000. The Skagit GI process anticipates that the planning process (including all work that has been conducted to date as well as all work to complete the Feasibility Study, Environmental Impact Statement, and 35% design) will cost in the neighborhood of $15,000,000 total, approximately 7.5% of the construction costs. The relative cost of planning such a project is a small fraction of the cost of construction.

Current federal funding for FY2009 is $358,000. The PDT is currently funding the revision of the H&H model, completion of the Environmental Baseline reporting, and preparation of a range of measures that will be used as the building blocks of alternatives. Several work items, including geotechnical investigations, H&H and Economics without project condition report and alternatives formulation are the next step items required prior to alternatives analysis and the selection of a preferred alternative plan. The estimated cost to complete each of these work items or deliverables range from $200,000 to $500,000. The development of these tasks are prioritized based on funding received and timing. Timing is important not only because of the need to complete this project but as it relates to when the data will be needed in order to maximize efficiency as some reports have a limited “shelf life”. In order to use the best scientific information available some reports that were needed and prepared in the past will need updating in order to accurately reflect the existing conditions during alternatives development and in the impact analysis.

Measure Modification/New Measure

Some comments suggested incorporating various changes to measures to improve performance or reduce impacts.

Public involvement on this project is carried out with multiple goals in mind. One of those goals is to consider a "universe of ideas". The PDT appreciates the submittal of ideas from the participants of the August 2008 meeting. As the team moves toward alternative development, public comments and opinions are considered and if warranted are further developed and analyzed. However, this consideration should not be construed to mean that each new idea will be selected for further or in-depth analysis as some ideas are outside the scope of the project and will be eliminated from further study. The team will use these submissions to ensure that they have made every effort to consider the impacts and ramifications of the alternatives.

Lack of Detail
The PDT received comments indicating disappointment with the lack of detail presented at the August meeting.

At this stage of the GI process, the PDT has not tasked technical experts to generate impact reporting or measure design with a significant level of detail. As the project moves forward, the PDT will attempt to screen from further study the measures with limited usefulness or which fail to further the goals and objectives of the project. Once this happens, the remaining measures will be formulated into alternatives and then the PDT will task technical experts with delving into significant detail as to design elements and impacts of each alternative as part of the range of alternatives.

Levee Certification
Some of the comments inquired as to the levee certification process and justification for use of certain certification limits.

Any levees constructed or modified by this project will be designed in accordance with the USACE levee standards and guidance. USACE policy guides the PDT toward providing the maximum amount of protection while complying with cost/benefit criteria that is in the national interest. Levees in urban areas must protect to the 100-flood event in order to qualify for FEMA certification. However, 100 year certification is not a guaranteed outcome of projects recommended for construction. The cost/benefit analysis will guide the determination for the level of protection afforded to urban areas.

Hydrology and Hydraulics
Several comments received pertained to the H&H for the project. Most of the comments requested additional information, while others referred to discrepancies between USACE generated H&H data and information generated by others.

An H&H without Project Condition Report was prepared and released in 2004. Since that time, USACE engineers have continued to incorporate data from a variety of scientifically published sources and refined the H&H model to maximize its scientific confidence. The presentations prepared and delivered by the PDT in 2008 were results of

that work. Currently, additional geotechnical data is in the process of being gathered for the project and will be incorporated into the model. Once the geotechnical data is complete, the PDT will prepare and release a revised H&H without Project Condition Report for review. It is anticipated that this report will provide the baseline H&H for the project. Once this report is completed, the PDT will update and finalize the measures report reflecting each measure's hydrologic performance. The team anticipates this report to be completed, based on funding, in late 2010.

The PDT is dedicated to utilizing the most up to date, scientifically accepted data published. Technical review of previous H&H reports has been completed. In addition, future reports will be reviewed prior to release and will culminate in an Independent Expert Panel Review conducted outside of the USACE at the end of the project.

Economics Detail
A few comments were received requesting additional detail or with questions regarding certain aspects of the economic analysis.

The Economic without Project Condition Report was completed in 2004 detailing anticipated economic damages and benefits generated by inputting data from the hydrologic and hydraulics reporting. Since completion of this report, USACE has adopted use of a revised economic model. Due to changes in the economic landscape, data generated from the model and reported in 2004 needs to be updated. This update may impact data presented in 2008 as well. The PDT anticipates, based on funding, that the updated report will be completed and released in 2010. This report should yield sufficient detail to provide answers to economics focused questions.

Measures Screening
Some comments expressed concern that measures were being excluded from further examination.

The PDT is has not yet concluded any screening that will exclude a measure from further consideration in the GI. Much of the work of the PDT will be to determine what measures are feasible, further the goals and objectives of the project and are within a reasonable cost. Currently, there is not a sufficient level of detail known about how individual measures contribute to an alternative to know for sure if they are feasible or not. Comments made by staff at the August meeting were based on professional judgment for the purpose of transparency, but were not the formal decision of the project.

Potential Alternative Outcomes
Some comments expressed concern that no fruitful alternative would be generated by the GI because of what appears to be limitations in USACE jurisdiction or inability to meet USACE cost/benefits criteria.

The USACE civil works guidance does require that a recommended alternative have an acceptable National Economic Development (NED) rating. This NED is part of the alternative analysis and incorporates all projects that will be eligible for federal funding.

It is also possible that the GI study will result in the development of a Locally Preferred Alternative or even spin off projects that may include additional measures, not eligible for federal funding, but are determined by Skagit County to be of significant value. As such, it is not the intent of the PDT to disregard measures from further consideration until both USACE and Skagit County no longer deem the measure to be viable. At this time, no measures identified at the August 2008 meeting has been screened from further consideration.

Local Governments Should Not Wait for the GI
Many comments expressed concern with regard to the time and money required to complete the GI. These comments suggested that local governments move forward with flood reduction projects.

The PDT is aware that local jurisdictions have immediate needs to reduce the impacts from severe flooding events. It is not the intent of the GI process to postpone, delay, or interfere with construction of flood reduction projects. Should a local jurisdiction chose to move forward with design and construction of flood reduction projects, the PDT will coordinate with those jurisdictions so that the projects constructed are incorporated into the without project condition analysis and are compatible with any future alternative selected.

The significant federal investment for construction of activities associated with this project will not be authorized until the GI is completed and the project successfully moves through the USACE approval process, including Congressional authorization and appropriation.

Implementation
Many questions have been raised as to "how" a measure would be operated.

Measures that have operational flexibility may or may not be included in alternatives analyzed later in the process. For measures with operational flexibility, the PDT will include operations as part of the details for the alternatives. Some alternatives may have the same overall measure in them, but the PDT may modify operational characteristics from one alternative to the next to determine how this impacts the performance of the alternative.

Data Availability
Comments were submitted with regard to a lack of data availability.

The PDT makes every attempt to incorporate the best science into our analysis and takes many steps through the 6-step planning process to ensure that information used meets proven scientific standards. As data is generated, the PDT generates reports to record the outcome of that work and provide guidance for future activities. Prior to the release of reports they are reviewed by agency technical experts to confirm the validity of the methodologies used.

Currently, the PDT is generating new data to prepare updated reports for inventory of H&H and Economics. As this reporting is completed, the PDT will release reports for public information. This data generation and document preparation takes significant amounts of time, effort and money with the ultimate goal of informing the public and providing project decision-makers the tools and information they need to make useful and appropriate decision for the project.

Action Should be Taken to Motivate Burlington Northern Santa Fe Railroad to Replace it's Bridge

The USACE does not have the federal authority to mandate Burlington Northern Santa Fe Railroad (BNSF) to replace this bridge or to require them to participate or adopt any measure recommended in the GI study. BNSF is aware of the study and has participated in discussions with the USACE. The USACE anticipates that BNSF will continue to participate in discussions as the study progresses.

Overtopping Levees

The question was raised as to why levees would require overtopping at five years.

The reference to the 5-year level refers to a channel flow low enough to avoid the potential for levee failure at a larger event (i.e. 100-year event). This would allow the water to leave the system early at an elevation that could be exceeded in a 5-year event. The overtopping measure is being evaluated for the affect of the action by itself, affect on other actions as a separable element and to see if the actions warrant being included in future alternatives. The analysis is showing that the overtopping measure could be added later as part of an alternative to reduce the volume of water coming down the river.

Property Relocations

Comments were received inquiring as to the process for property relocations.

On cost share projects, such as the Skagit River GI, the relocation of displaced residences and businesses will be identified in the final study which receives public review and comment. After the study is complete and an alternative is selected, the actual implementation of any real estate acquisition or relocations is the responsibility of the Non-Federal Sponsor, Skagit County. If a property is required for the project to go forward, a written notification for each residence will be delivered in person or by certified mail delivery. After reasonable replacement housing has been found, the Non-Federal Sponsor is required to give at least 90 days written notice to the displaced person regarding the deadline date for completing the move or relocation. This notification will be delivered at the earliest possible time in order to allow residents an appropriate amount of time to vacate. The Non-Federal Sponsor is responsible for ensuring that the public is provided access to adequate knowledge of programs involving relocations and those persons to be displaced are fully informed.

Sedimentation

Questions arose as to the potential for sedimentation in the event that levees are setback.

Sediment currently deposits on the existing benches during floods and deposition is likely to increase on wider benches. The increase is not expected to be problematic to the project because the infrequent occurrence and short duration of large flood events will limit deposition. Channel deposition is not expected to increase significantly because most of the sediment transported during floods is finer than the bed material in the river. The potential sediment deposition on the benches and in the channel will be re-evaluated during later design phases of this study. Channel migration with setback levees should not increase, unless the riverbanks are also moved back. Bank protection may be necessary on new setback levees at outside bends to protect them during large floods. The potential for channel migration will be evaluated as the designs are refined.

Rural Inundation
Some comments expressed concern about additional inundation to rural lands as a result of increased protection for urban lands.

The PDT will not induce flooding in areas beyond what historically exists. Any measures which induce flooding will be compensated with other measures or actions that decease potential damages.

Emergency Project at 3-Bridges Corridor
Comments were received requesting that the PDT investigate immediate construction projects in the 3-Bridges Corridor.

The GI Feasibility Study will analyze the existing condition of the project area and consider activities within the scope of the project purpose and need. This GI investigation is not an appropriate study avenue to develop an emergency plan to widen the 3-Bridge Corridor. Any emergency actions to widen the corridor must occur outside of the GI process and will be incorporated into the GI as part of the without project condition. Should emergency action take place, the overall cost of the GI recommended alternative will likely be reduced.

Levees with Excavation
Some comments asked for information concerning excavation and whether it would destabilize the system.

The current system of levees and bank protection has resulted in a stabilized alignment of the lower river. Only a very preliminary analysis has been completed related to the potential or extent to which excavation leading to a wider channel would "destabilize the river system" or allow for the river to meander and migrate within its banks. The extent to which meandering might occur would depend on the configuration and size of the excavation. However, it should be noted that the current stabilized condition is an alteration of the river's natural tendency to meander and migrate over time. The potential for channel migration will be evaluated as the designs are refined.

Ring Dikes
Comments were received indicating that ring dikes cause a "bath tub effect".

The PDT concurs with this statement. The bath tub effect for ring dikes is a concern for the PDT and will be given consideration and proper analysis during the alternatives generation.

Restoration Measures
Comments were received concerning an apparent lack of attention given to environmental impacts and restoration measures.

The project is still in the feasibility stage and non-structural measures are still under consideration, and will receive as much scrutiny as any of the other measures considered. This is the stage in the GI process where measures will begin to be screened out due to technical feasibility, excessive costs, and environmental red flags. After screening, alternatives will be developed and most likely, be various combinations of the measures.

Dam Storage
Several comments or questions have been received with regard to investigating dam storage on the project and the capability of upstream dams to provide increase storage as a flood reduction project.

In regards to additional storage at the dams, Upper Baker Dam currently provides significant support in reducing floods and will continue to do so for the foreseeable future. This is action is related to a 1977 Congressional Authorization approving the USACE to control 74,000 acre-feet. To implement actions to gain additional storage or methods to achieve greater flood damage reduction at either Upper or Lower Baker Dam, the USACE will have to receive additional Congressional authorization. A recommendation leading to a possible Congressional authorization would need to include documentation that the additional benefits exceed the cost, are implementable, meet safety regulations, and are environmentally acceptable.

For Upper Baker Dam, there is a need to explore the dam safety issues and evaluate any environmental concerns. For Lower Baker Dam, the only way to achieve a benefit is to change the operation of the dam when the river will hit its peak, which is difficult to predict consistently. While PSE has shown some ability to do this in recent floods, it is still not certain that this operation can be guaranteed or done consistently due to variable forecasts. The USACE and PSE we will continue to explore dam storage but hurdles will have to be overcome before this becomes a viable measure.

USACE Authority
One comment was submitted regarding the fact that the USACE does not have the jurisdiction to tell local entities that they cannot construct a flood control project. A story in the Sacramento Bee, issue dated August 21, 2008, was cited as a case in which it was believed the USACE did have this authority.

In certain circumstances, the USACE does have the ability to decide how a levee will be repaired, restored or even removed. For instance, the example of alternatives to the levee system cited in the Sacramento Bee, this project is referring to levees that were already under USACE control and thus need USACE approval before any physical changes are to occur. In the case of levees in Skagit County, any levee systems that are not owned by the USACE do not need USACE approval for modifications outside of the ordinary high water mark. USACE coordination is only required if the project places fill within the ordinary high water mark.

Section 205 Hamilton Study
A comment regarding the validity of the Hamilton Section 205 study was posed. Due to the increased risk of flood hazard to the Town of Hamilton and the surrounding area and increased construction cost, the findings of the study conducted in 1982 are most likely outdated.

The previous Section 205 study contains useful data that will help in the preliminary planning associated with the Skagit GI Study. The preferred alternative in the 1982 study was determined not to be economically justified. For purposes of the Skagit GI study, the evaluation of relocating the Town of Hamilton will include analysis of the environmental benefits which do not require a benefit-to-cost ratio for justification. The costs and impacts of such relocation will be included in the economic and social impact analysis if it is selected as a measure included in an alternative.

Dredging
Some questions submitted by the public asked why wide scale dredging is not being pursued by the USACE.

At this time, given the high costs and environmental impacts of dredging, dredging is not considered to be a viable solution for any of the areas identified in the Skagit River GI. The information on sediment yield and river deposition in the USACE's 2005 Hydrology report is being updated. The new report includes revisions concerning the Skagit River sediment yield and the yield is being revised downward to approximately 1 to 4 million tons/year. Over the last 48 years the river channel has experienced periods of both aggradation and degradation. Since 1975, there has been aggradation ranging from around 2 ft near Sedro-Woolley to about 1 ft in the North Fork creek. A dredged channel would likely cause an increase in deposition due to reduced flow velocities, especially in the tidal reaches of the river.

Mount Vernon Bypass/Bypass General
There were some questions raised regarding the effectiveness of the Mount Vernon Bypass.

Mount Vernon Bypass does not remove water from the river but it does overcome a constriction in the channel at the Division Street Bridge which allows the bypass to move water downstream.

There is some potential for deposition and/or erosion in the bypass channels and deposition in the river downstream of the diversion points. The overall magnitudes of erosion/deposition are limited by the infrequent use of the bypasses, i.e. diversions would only occur for floods larger than 10 to 25 yr events. Erosion in the bypass channels can be inhibited by controlling the depth, velocity, and vegetative cover in the channels. Fir Island flow diversion would divert some sediment to the central portion of the Skagit Bay shoreline. There could be some deposition in the bypass channel and near the shoreline of Skagit Bay. The shoreline deposition could offset some of the recent erosion. The potential for erosion and deposition can be evaluated during later design phases of this study.

The PDT has not performed any screening of measures to date, thus all measures are still under consideration. These measures may be combined with other measures to form a viable alternative. Alternatives will be formulated later in the 6-step planning process.

Levee Construction

One commenter posed the question if interlocking sheet pile driven into the levee could be used as an option to protect densely populated areas.

The analysis will address the option of a sheet pile wall versus a levee in areas where population and development are in close proximity to the river. The PDT will also evaluate costs associated with possible measures or alternatives, including those which are estimated to have potentially high costs associated with real estate and construction.

3) Skagit River Flood Risk Management General Investigation Comment Received (April 2012 – June 2012 Outreach) Report

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Skagit River Flood Risk Management General Investigation Comment Received (April 2012-June 2012 Outreach) Report

Report Purpose

This report documents comments received in response to outreach efforts to gather public feedback on preliminary alternatives for the Skagit River Flood Risk Management General Investigation (GI) in Skagit County to the public and stakeholders during the months of April 2012-June 2012.

Public Involvement Process

The centerpiece of the PDT's outreach efforts was a series of presentations of the preliminary alternatives to the public and local stakeholders. The presentations included a general overview of the study and study area, an overview of the plan formulation process, an overview of the preliminary alternatives, and an overview of the study process and path forward. A sample power point presentation and read-ahead are attached (Attachment 1&2)

The project delivery team gave several presentations to Skagit County cities and stakeholders as noted below:

Meeting	Date
Puget Sound Energy	Friday, April 6, 2012
Burlington City Council	Thursday, April 12, 2012
Flood Control Zone District Advisory Committee	Monday, April 16, 2012
Environmental Resource Agencies	Wednesday, April 25, 2012
Sedro-Woolley City Council	Wednesday, April 25th, 2012
Flood Control Zone District Advisory Committee Workshop	Friday, May 4, 2012
Anacortes Water Treatment Plant	Monday, May 7th, 2012
Public Workshop at Skagit County Building	Monday, May 7th, 2012
Aquatic Resources Group	Tuesday, May 8, 2012
La Conner City Council	Tuesday, May 8, 2012
WSDOT	Wednesday, May 9th, 2012
Mount Vernon Public Works Committee	Wednesday, May 9th, 2012

Farm, Fish and Flood Initiative Workgroup (3FI)	Monday, May 21, 2012
Dike and Drainage District Advisory Boards Workshop	Friday, June 15, 2012

The goal of this outreach effort was to:

- Identify issues that appear to be major concerns
- Gather data or identify data sources that would assist with refinement of the without project condition, formulation of the alternatives and evaluation of project impacts
- Obtain public input and determine acceptability of the preliminary alternatives.

Comments Received

This report summarizes all comments received during the meetings listed above and comments submitted to the Corps and County. A comment card was provided at every meeting and posted on the Skagit County website (Attachment 3). The public and stakeholders were asked to state their comment, issues and concerns regarding the alternatives and the study process. The public and stakeholders were also asked to provide alternatives to the alternatives presented and local knowledge of the area that would be helpful for further refinement of the alternatives.

All comments received are summarized in the attached spreadsheet (Attachment 4). The comments fall into the following categories:

Comment Categories		**# of Comments Received**
CIV	Civil Engineering	13
ECON	Economics	38
ENV	Environmental	37
HH	Hydrology and Hydraulics	83
HTRW	Hazardous Waste	3
PF	Plan Formulation	32
PM	Project Management	32
TRIBE	Tribal Concerns/Issues	1
ALT1	Alternative 1: No Action	1
ALT2	Alternative 2: Non-Structural	17
ALT3	Alternative 3: Joe Leary Bypass	27
ALT4	Alternative 4: Swinomish Bypass	17
ALT5	Alternative 5: Urban Levees	16
ALT6	Alternative 6: Levee Setbacks	8

Questions/Comments:

POC for this report is the project manager, Dan Johnson (206) (206)764-3423 or daniel.e.johnson@usace.army.mil

Skagit River General Investigation
Preliminary Alternatives

Daniel Johnson
Project Manager
U.S. Army Corps of Engineers, Seattle District
May 7, 2012. Preliminary Alternatives Public Workshop.

US Army Corps of Engineers
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Skagit River General Investigation

Problem

- Problem: The Skagit River Basin is subject to rain floods and related snowmelt runoff flooding that typically occur from October – March. This flooding results in damages to infrastructure; residential, commercial and industrial structures; agricultural areas; and is a threat to life safety. Existing flood control systems, including locally owned levees and flood control storage in non-Federal hydropower projects, provides a limited level of flood risk management to developed areas that is not acceptable to the local communities in the Basin.

Opportunity and Objectives

- Opportunity: Reduce flood risk and life/safety risk in the Skagit River Basin from overland flow resulting from October – March rain floods and related snowmelt floods.

  Objective: Reduce flood damages in the Skagit River Basin over the 50 year project life.

  Objective: Reduce threat to life safety in the Skagit River Basin over the 50 year project life.

Study Schedule

- Upcoming milestones
  - Public Outreach on Preliminary Alternatives, April-May 2012
  - Public Outreach on Final Alternatives and Tentatively Selected Plan, March 2013
- Future Milestones
  - Public Outreach on Recommended Plan, March 2014
  - Formal Public Comment Period on draft Integrated Feasibility Report and Environmental Impact Statement per NEPA requirements, January 2015

Measures and Alternatives

- **Measures are strategies that decrease flood risk for a specific location. Alone, they cannot address basin-wide flooding problems.**
  - ► Levees/floodwalls
  - ► Operational modifications Upper and Lower Baker Dams
  - ► Bypasses
  - ► Non-structural
  - ► Bridge modification
- **Alternatives are groupings of measures that can address basin wide flooding problems.**

Alternatives Formulation Process

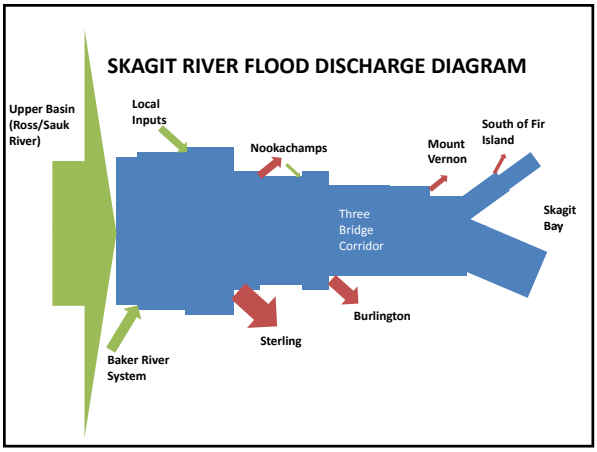
- **Preliminary alternatives are conceptual designs.**
- **The Alternatives Formulation Process is an dynamic process.**
  - **Over the next year, the study team will refine the alternatives based on considerations of:**
    - **Hydraulic analysis**
    - **Economic analysis**
    - **Environmental analysis**
    - **Federal, state, and local laws**
    - **Public input**
    - **Local, state and federal agency input**
- **The preliminary alternatives presented today are likely to change as they are refined through the alternative formulation process.**

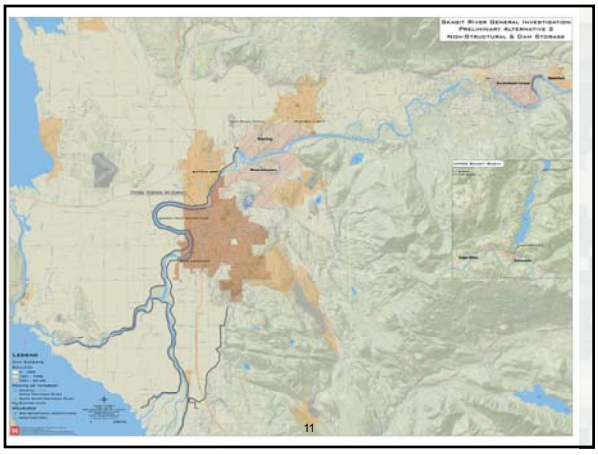
Alternatives Formulation Process: Evaluation Criteria

- Completeness
- Effectiveness
- Efficiency
- Acceptability

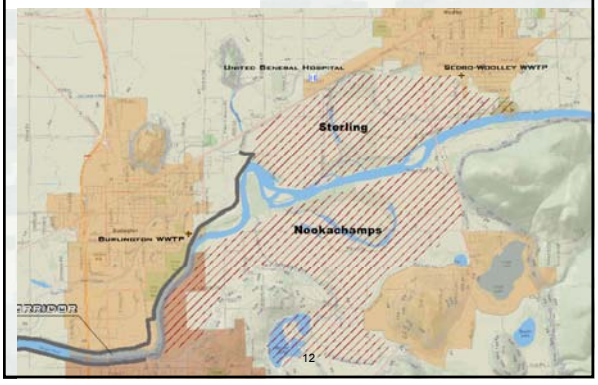
Preliminary Alternative 1: No Action

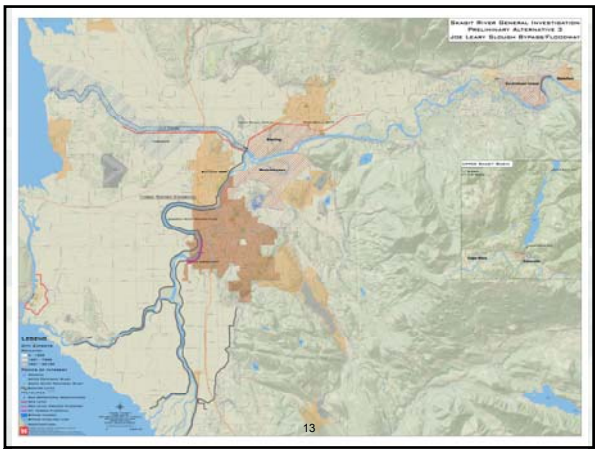
- Per USACE planning guidance, the No Action Alternative was evaluated.
- The No Action Alternative will not achieve the study objectives and will not be brought forward for further consideration as the recommended plan.



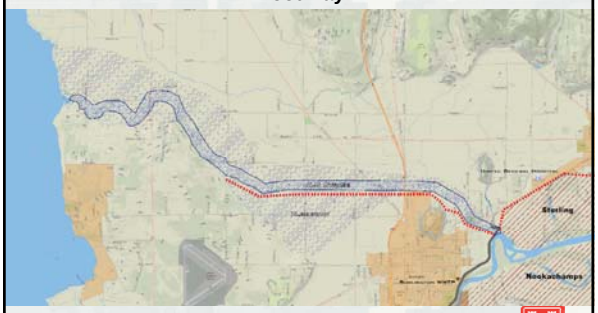


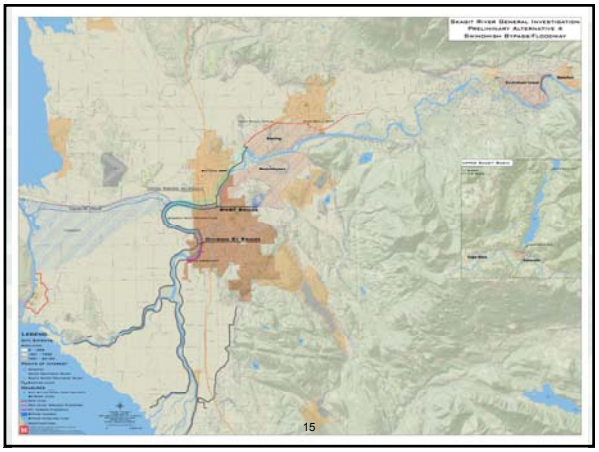
Alternative 2:Non-Structual and Dam Modifications



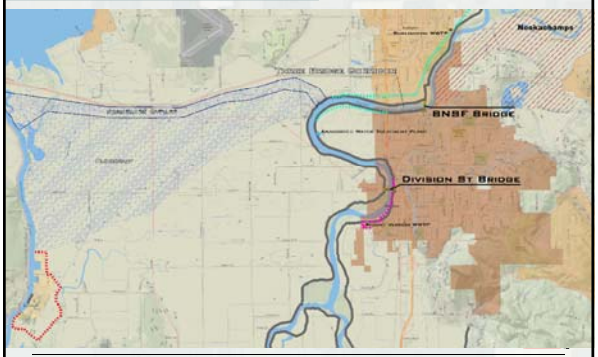


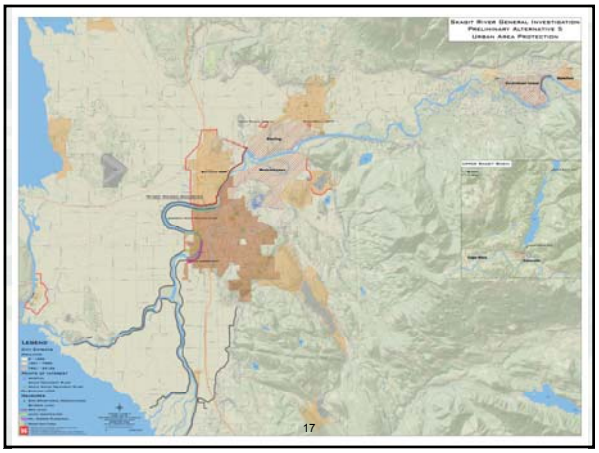
Preliminary Alternative 3: Joe Leary Slough Bypass or Floodway



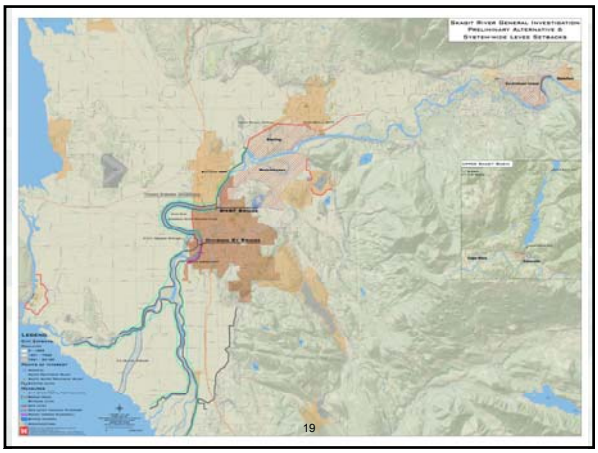


Preliminary Alternative 4: Swinomish Bypass or Floodway





Preliminary Alternative 5: Urban Area Protection



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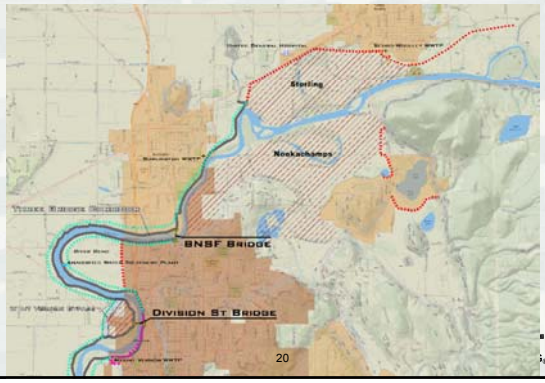
Preliminary Alternative 6: System-wide Levee Setbacks



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Preliminary Alternative 6: System-wide Levee Setbacks

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Comments?

- Please fill out a comment card.
- Contact:
  Dan Johnson, USACE
  Daniel.E.Johnson@USACE.army.mil
  (206) 764-3423

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Skagit River General Investigation
Preliminary Alternatives Presentation Read-Ahead, April 25, 2012
POC: Dan Johnson, USACE Project Manager, 206-764-3423

The Skagit River General Investigation (GI) is a flood risk management study with the primary goal of reducing flood risk and increasing public safety in the Skagit River Basin (Basin). The Basin is located approximately 60 miles north of Seattle, WA. The study area encompasses the Skagit River watershed and the Skagit River floodplain from the Seattle City Lights' Ross Dam reservoir (Ross Lake) to Puget Sound, a total of approximately 150 miles. The GI is currently in the early phases of alternative formulation and the study team has recently completed development of preliminary alternatives.

The primary purpose of this meeting is to present the preliminary alternatives and to discuss natural resources issues/concerns relating to the preliminary alternatives. There will also be discussion of how the National Environmental Policy Act (NEPA) process will be implemented for the GI. Alternatives formulation is dynamic process. It is likely that the final set of alternatives will look different from the preliminary set of alternatives presented today. Agency and public input will be considered in the refinement of the preliminary alternatives into a range of alternatives that will be carried forward to a 10% level of design. Additional analysis (hydraulic, economic, environmental, and policy) will be performed on the refined range of alternatives. Agencies and public will have several opportunities to review the alternatives throughout the remainder of the study.

The study team has developed six preliminary alternatives:

Preliminary Alternative 1: No Action Alternative
Preliminary Alternative 2: Non-Structural and Dam Storage Alternative
Preliminary Alternative 3: Joe Leary Slough Bypass or Floodway
Preliminary Alternative 4: Swinomish Bypass or Floodway
Preliminary Alternative 5: Urban Areas and Critical Infrastructure Protection
Preliminary Alternative 6: System-wide Levee Setbacks

The following pages contain descriptions of each alternative including assumptions and solutions made to formulate the alternatives, and concerns and advantages identified at this time. A schematic representation of the existing hydrology used to formulate the alternatives (Figure 1) is shown below:

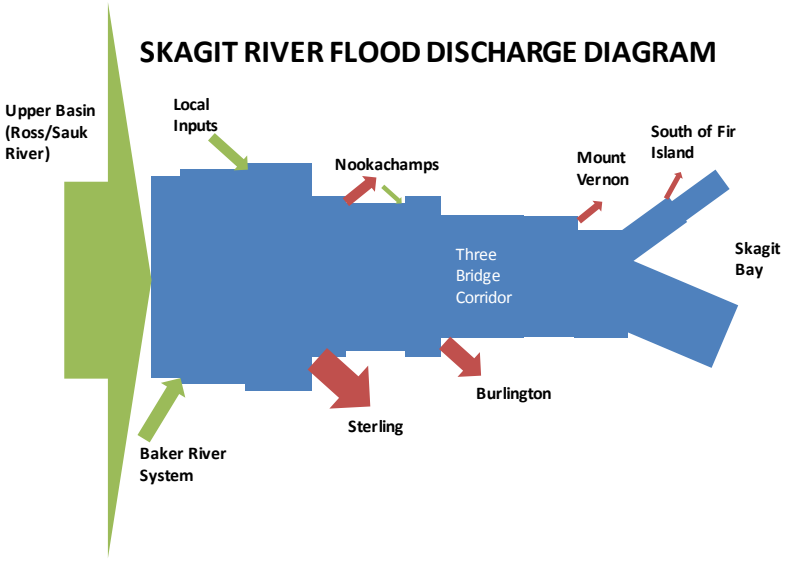

Figure 1. Skagit River Flood Discharge Diagram. This diagram is a representation of Skagit River flood inputs and outputs volumes in a greater than 50-yr flood event with existing conditions (assuming levee overtopping only). The Upper Basin (Ross reservoir and the Sauk River) contributes the majority of flood flows to the Skagit River. The Baker River system, local upstream inputs and return flows from the Nookachamps contribute a small percentage of flood flows. Flood waters exit the system at Sterling, Nookachamps, upstream of the Three Bridge Corridor into Burlington, Mount Vernon, and the left bank of the South Fork

Preliminary Alternative 1: No Action Alternative

- Per USACE planning guidance, the No Action Alternative was evaluated. In general, flooding problems in the Skagit Basin will get worse if no action is taken. The No Action Alternative does not address the study objectives to reduce flood risk and life safety risk in the Skagit River Basin. The County predicts that there will be an increase in future population and there are numerous environmental challenges to maintenance of existing levees per current regulations which further renders the No Action Alternative ineffective.

- FINAL DECISION: The No Action Alternative will not achieve the study objectives and will not be brought forward for further consideration as the recommended plan; however, the No-Action Alternative will be used in evaluation of the range of alternatives during analysis under the National Environmental Protection Act (NEPA).

Preliminary Alternative 2: Non-Structural and Dam Storage Alternative

This alternative does not involve construction of significant new infrastructure or structural modifications of existing infrastructure in the Skagit River Basin.

Components of this alternative include:

- Dam operational modifications of the Upper and Lower Baker Dam per Baker River Hydroelectric Project No. 2150 - Federal Energy Regulatory Commission (FERC) license Article 107 Flood Storage
    - (a) referencing 74,000 acre feet of flood storage in the Upper Baker River reservoir,
    - (b) referencing 29,000 acre feet of flood storage in the Lower Baker River reservoir, and
    - (c) referencing imminent flood operations; and Article 106 referencing modification of flow implementation plans (Aquatics Table 2).

  It is assumed that during a flood event peak, discharge from the dams will be 0 cfs.

- Debris management for river bridges
- A combination of the following non-structural components will be implemented throughout the basin with focus on the areas of Nookachamps, Sterling, Cockreham Island, Hamilton, Cape Horn, and Concrete.
    - Education and outreach
    - Evacuation routes
    - Installation of additional gauges
    - Flood warning systems
    - Real estate acquisition
    - Relocation of structures
    - Elevation of structures
    - Flood proofing buildings

Preliminary Alternative 3: Joe Leary Slough Bypass or Floodway

The defining piece of this alternative is the Joe Leary Slough Bypass or Floodway. The Joe Leary Slough Bypass or Floodway would allow for removal of flood waters from the Skagit River system upstream of the Three Bridge Corridor either through a defined channel (bypass) or sheet flow (floodway). This alternative does not include structural modification to river bridges or setback levees in the Three Bridge Corridor.

Components of this alternative include:

- Dam operational modifications of the Upper and Lower Baker Dam per Baker River Hydroelectric Project No. 2150 - Federal Energy Regulatory Commission (FERC) license Article 107 Flood Storage
    - (a) referencing 74,000 acre feet of flood storage in the Upper Baker River reservoir,
    - (b) referencing 29,000 acre feet of flood storage in the Lower Baker River reservoir, and
    - (c) referencing imminent flood operations; and Article 106 referencing modification of flow implementation plans (Aquatics Table 2).

  It is assumed that during a flood event peak, discharge from the dams will be 0 cfs.

- Joe Leary Slough Bypass or Floodway
- Sterling Levee
- Levees to protect Sedro-Woolley, Burlington and La Conner from induced flooding
- Completion of the Mount Vernon Floodwall
- Debris management for river bridges
- A combination of the following non-structural components will be implemented throughout the basin with focus on the Nookachamps, Sterling, Cockreham Island, Hamilton, Cape Horn, and Concrete areas: education and outreach, evacuation routes, installation of additional gauges, flood warning systems, real estate acquisition, relocation of structures, elevation of structures, and flood proofing buildings.

The following assumptions and solutions were made to formulate this alternative:

Assumption	Solution
Increased flood storage upstream at Upper and Lower Baker reservoirs can potentially reduce flood damages in the Basin	Optimized operations of Upper and Lower Baker Dam per the Federal Energy Regulatory Commission (FERC) license.
Removal of flood waters from the Skagit River system can potentially reduce flood damages in the Basin.	During a flood event, flood waters would be diverted out of the Skagit River system to Padilla Bay through a Joe Leary Slough Bypass/Floodway. Solution assumes that flood volumes continuing through the river system downstream of the bypass can be contained by the existing levee system.
During a large flood event, flooding will occur in	Non-structural measures would be considered.

the Sterling and Nookachamps areas	
Diversion of floodwaters into the Joe Leary Slough Bypass may induce flooding in Burlington, Sedro-Woolley and La Conner.	Levees would be constructed to protect these communities from induced flooding.
Flooding or spill may occur in downtown Mount Vernon	The Mount Vernon floodwall would be completed.

Concerns Indentified as of April 2012:

- Routing of floodwaters through the Joe Leary Bypass or Floodway may adversely impact salinity levels in Padilla Bay.
- Routing of floodwaters through the Joe Leary Bypass or Floodway may adversely impact eelgrass beds in Padilla Bay.
- Routing of floodwaters through the Joe Leary Bypass or Floodway may require additional infrastructure for drainage of farmland along the Bypass.
- The Joe Leary Bypass or Floodway crosses through miles of farmland. Runoff entering the bypass may contain high levels of agricultural runoff resulting in adverse water quality impacts to Padilla Bay.
- The Joe Leary Bypass or Floodway may remove agricultural farmland out of production.
- Construction of the Joe Leary Bypass/floodway may require modifications to Interstate 5 and Burlington Northern Santa Fe railroad, local roadways, and utilities.
- The Joe Leary Bypass or Floodway may involve significant real estate acquisition and costs.

Advantages Identified as of April 2012:

- The Joe Leary Bypass follows the path of the natural hydraulic condition under existing conditions at the Three Bridge Corridor.
- Construction of the Joe Leary Bypass may eliminate the need to modify the Three Bridge Corridor to increase conveyance of floodwaters through the Skagit River system.

Preliminary Alternative 4: Swinomish Bypass or Floodway

The defining piece of this alternative is the Swinomish Bypass or Floodway. The Swinomish Bypass or Floodway would allow for removal of flood waters from the Skagit River system downstream of the Three Bridge Corridor either through a defined channel (bypass) or sheet flow (floodway).

Components of this alternative include:

- Dam operational modifications of the Upper and Lower Baker Dam per Baker River Hydroelectric Project No. 2150 - Federal Energy Regulatory Commission (FERC) license Article 107 Flood Storage
    - (a) referencing 74,000 acre feet of flood storage in the Upper Baker River reservoir,
    - (b) referencing 29,000 acre feet of flood storage in the Lower Baker River reservoir, and
    - (c) referencing imminent flood operations; and Article 106 referencing modification of flow implementation plans (Aquatics Table 2).

  It is assumed that during a flood event peak, discharge from the dams will be 0 cfs.

- Swinomish Bypass or Floodway
- Structural modifications to the Burlington Northern Santa Fe railroad bridge and setback levees in the Three Bridge Corridor, and potential modification to the Division Street Bridge if needed.
- Setback of existing right bank levees from Sterling to the Swinomish Bypass
- Sterling Levee
- Levees to protect Sedro-Woolley and La Conner from induced flooding
- Completion of the Mount Vernon Floodwall
- Debris management for river bridges
- A combination of the following non-structural components will be implemented throughout the basin with focus on the Nookachamps, Sterling, Cockreham Island, Hamilton, Cape Horn, and Concrete areas: education and outreach, evacuation routes, installation of additional gauges, flood warning systems, real estate acquisition, relocation of structures, elevation of structures, and flood proofing buildings.

The following assumptions and solutions were made to formulate this alternative:

Assumption	Solution
Increased flood storage upstream can potentially reduce flood damages in the Basin	Optimized operations of Upper and Lower Baker Dam per the Federal Energy Regulatory Commission (FERC) license.
Removal of flood waters from the Skagit River system can potentially reduce flood damages in the Basin.	1) During a flood event, flood waters can be diverted out of the Skagit River system to the Swinomish Channel through the Swinomish Channel Bypass or Floodway 2) Solution assumes that flood volumes continuing through the river system downstream of the bypass can be contained by the existing levee system.

Effectiveness of the Swinomish Bypass or Floodway is dependent on increased conveyance of flood waters through the system upstream of the bypass, i.e. the Three Bridge Corridor.	1) Structural modifications to the BNSF railroad bridge and setback levees in the Three Bridge Corridor may increase conveyance of flood waters. 2) Existing right bank levees from Sterling to the Swinomish Bypass or Floodway would be set back.
During a large flood event, flooding will occur in the Nookachamps area.	This area would be addressed with non-structural measures
Construction of Sterling levee may induce flooding in Sedro-Woolley	Levee would be constructed to protect Sedro-Woolley
Diversion of floodwaters into the Swinomish bypass may induce flooding in La Conner.	Levee would be constructed to protect La Conner.
Flooding or spill may still occur in downtown Mount Vernon	The Mount Vernon floodwall would be completed.

Concerns Identified as of April 2012:

- The Swinomish Bypass or Floodway may introduce sediment contamination into the Swinomish Channel. The presence of contaminated sediments in the Swinomish Channel may interfere with disposal options for maintenance dredging material because contaminated material cannot be disposed at open water disposal sites.
- Increased volume of flood waters into Swinomish Channel may adversely affect sedimentation patterns in the Channel.
- Routing of floodwaters through the Swinomish Bypass or Floodway may adversely impact salinity levels in the Swinomish Channel.
- The Swinomish Bypass would require a large number of modifications to existing utilities, pipelines, and roads.
- The Swinomish Bypass or Floodway may remove agricultural farmland out of production.
- The Swinomish Bypass or Floodway may involve significant real estate acquisition and costs.
- Routing of floodwaters through the Swinomish Bypass may require additional infrastructure for drainage of farmland along the Bypass.

Advantages Identified as of April 2012:

- Removal of floodwaters from the Skagit system through the Swinomish Bypass/Floodway may eliminate the need to set back levees downstream of Mount Vernon.

Preliminary Alternative 5: Urban Areas and Critical Infrastructure Protection

This alternative focuses on providing flood risk reduction for urban areas, such as the cities of Sedro-Woolley, Burlington, and Mount Vernon, and critical infrastructure, such as waste water treatment plants and hospitals, in the Skagit River Basin. This alternative prioritizes flood risk reduction for areas with the potential for high economic and infrastructure damages during a large flood event. This alternative does not include structural modification to river bridges or setback levees in the Three Bridge Corridor.

Components of this alternative include:

- Dam operational modifications of the Upper and Lower Baker Dam per Baker River Hydroelectric Project No. 2150 - Federal Energy Regulatory Commission (FERC) license Article 107 Flood Storage
    - (a) referencing 74,000 acre feet of flood storage in the Upper Baker River reservoir,
    - (b) referencing 29,000 acre feet of flood storage in the Lower Baker River reservoir, and
    - (c) referencing imminent flood operations; and Article 106 referencing modification of flow implementation plans (Aquatics Table 2).

  It is assumed that during a flood event peak, discharge from the dams will be 0 cfs.

- Levees/ring dikes around Burlington, Mount Vernon and La Conner
- Ring dikes around critical infrastructure such as the Sedro-Woolley Waste Water Treatment Plant, the United General Hospital, and also the Anacortes Water Treatment Plant if needed.
- Completion of the Mount Vernon Floodwall
- Debris management for river bridges
- A combination of the following non-structural components will be implemented throughout the basin with focus on the Nookachamps, Sterling, Cockreham Island, Hamilton, Cape Horn, and Concrete areas: education and outreach, evacuation routes, installation of additional gauges, flood warning systems, real estate acquisition, relocation of structures, elevation of structures, and flood proofing buildings.

The following assumptions and solutions were made to formulate this alternative:

Assumption	Solution
Increased flood storage upstream can potentially reduce flood damages in the Basin.	Optimized operations of Upper and Lower Baker Dam per the Federal Energy Regulatory Commission (FERC) license.
During a large flood event, the greatest flood damages will occur in Burlington, Sedro-Woolley, Mount Vernon, and La Conner.	Levees/ring dikes would be constructed to protect these urban areas.
Critical infrastructure outside of the urban areas protected by levees may still be subject to flooding.	Ring dikes would be constructed around critical infrastructure such as the Sedro-Woolley Waste Water Treatment Plant, the United General Hospital, and also the Anacortes Water Treatment Plant if needed.
Flooding or spill may still occur in downtown	The Mount Vernon floodwall would be completed.

Mount Vernon.	
Flooding may occur in areas outside the urban areas.	Non-structural measures would be considered.

Concerns Identified as of April 2012:

- This alternative may induce flooding on agricultural lands.
- Would require evacuation routes and procedures out of areas enclosed by levees to provide an additional level of safety for residents.

Preliminary Alternative 6: System-wide Levee Setbacks

This alternative increases conveyance of floodwaters though the river system and contains floodwaters within the river system by setting back the entire levee system, modifying river bridge structures, and constructing a West Mount Vernon Bypass.

Components of this alternative include:

- Dam operational modifications of the Upper and Lower Baker Dam per Baker River Hydroelectric Project No. 2150 - Federal Energy Regulatory Commission (FERC) license Article 107 Flood Storage
    - (a) referencing 74,000 acre feet of flood storage in the Upper Baker River reservoir,
    - (b) referencing 29,000 acre feet of flood storage in the Lower Baker River reservoir, and
    - (c) referencing imminent flood operations; and Article 106 referencing modification of flow implementation plans (Aquatics Table 2).

  It is assumed that during a flood event peak, discharge from the dams will be 0 cfs.

- Set back the entire Skagit River levee system
- Structural modifications to the Burlington Northern Santa Fe railroad bridge and setback levees in the Three Bridge Corridor, and potential modification to the Division Street Bridge if needed.
- Completion of the Mount Vernon Floodwall
- West Mount Vernon Bypass
- Fir Island Bypass
- Sterling levee
- Levees to protect Sedro-Woolley as needed to reduce flood risk from induced flooding caused by the Sterling levee.
- Completion of the Mount Vernon Floodwall
- Debris management for river bridges
- A combination of the following non-structural components will be implemented throughout the basin with focus on the West Mount Vernon, Nookachamps, Sterling, Cockreham Island, Hamilton, Cape Horn, and Concrete areas: education and outreach, evacuation routes, installation of additional gauges, flood warning systems, real estate acquisition, relocation of structures, elevation of structures, and flood proofing buildings.

The following assumptions and solutions were made to formulate this alternative:

Assumption	Solution
Increased flood storage upstream can potentially reduce flood damages in the Basin.	Optimized operations of Upper and Lower Baker Dam per the Federal Energy Regulatory Commission (FERC) license.
Increased conveyance of flood waters through the Skagit River system can potentially reduce flood damages in the Basin.	Set back the entire Skagit River levee system. This would involve construction of right bank levee set backs beginning from a Sterling levee to the south of Mount Vernon, construction of a Riverbend levee, and setback of levees on both sides of the

	river from south of Mount Vernon along both forks of the Skagit River (Fir Island) to Skagit Bay. Structural modifications to the BNSF railroad bridge. Construction of the West Mount Vernon Bypass. Construction of the Fir Island Bypass.
Construction of Sterling levee may induce flooding in Sedro-Woolley.	Construction of levee to protect Sedro-Woolley.
During a large flood event, flooding will occur in the Sterling, Nookachamps and West Mount Vernon.	These areas would be addressed with non-structural measures.
Critical infrastructure not protected by new levees is subject to flooding.	Ring dikes would be constructed around critical infrastructure such as the Sedro-Woolley Waste Water Treatment Plant, the United General Hospital, and the Anacortes Waste Water Treatment Plant.
Flooding or spill may occur in downtown Mount Vernon	The Mount Vernon flood wall would be completed.

Concerns:

- West Mount Vernon Bypass may involve relocation of numerous homes and businesses and may impact the West Mount Vernon urban growth area.
- Levee setback may require large number of modifications to existing utilities and roads.
- Levee setbacks may remove agricultural farmland out of production.
- Levee setbacks may involve significant real estate acquisition and costs.

Advantages:

- Setting back of levees would increase the width of the riparian corridor and provide potential environmental benefit.
- Maximizes the flood capacity of the existing channel.

Skagit River General Investigation
Preliminary Alternative 2
Non-Structural & Dam Storage

Hamilton
Cockreham Island
Lyman
Sedro-Woolley
United General Hospital
Sedro-Woolley WWTP
Sterling
Burlington WWTP
Burlington
Nookachamps
Clear Lake
Three Bridge Corridor
Anacortes Water Treatment Plant
Mount Vernon WWTP
Laconner
Skagit Regional Airport

Upper Skagit Basin

1:192,000
1"~ 3 miles

Upper Baker Dam
Lower Baker Dam
Concrete
Cape Horn
Lake Shannon
Lake Cavanaugh
Goat Mountain
Welker Peak
Jackman

Legend

City Extents

Population
- 0 - 1200
- 1201 - 7500
- 7501 - 22100

Points of Interest

- Hospital
- Water Treatment Plant
- Waste Water Treatment Plant
- Existing Levee

Measures

- Dam Operational Modifications
- Nonstructural

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1:96,000, 1"=1.5 miles
NAD83 UTM10N
ESRI US & Canada City Areas
CENWS FCW Levees
National Geographic Basemap

0 2 Miles

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Skagit River General Investigation
Preliminary Alternative 3
Joe Leary Slough
Bypass/Floodway

JLS Bypass Floodway

Three Bridge Corridor

United General Hospital

Sedro-Woolley WWTP

Burlington WWTP

Anacortes Water Treatment Plant

Mount Vernon WWTP

Sedro-Woolley

Sterling

Nookachamps

Burlington

Clear Lake

Cockreham Island

Hamilton

Lyman

Laconner

Skagit Regional Airport

Eagleridge Golf Course

Upper Skagit Basin

1:192,000
1" ~ 3 miles

Upper Baker Dam

Lower Baker Dam

Cape Horn

Concrete

Goat Mountain

Lake Shannon

Welker Peak

Jackman

Legend

City Extents

Population
- 0 - 1200
- 1201 - 7500
- 7501 - 22100

Points of Interest
- Hospital
- Water Treatment Plant
- Waste Water Treatment Plant
- Existing Levee

Measures
- Dam Operational Modifications
- New levee
- New Levee (Induced Flooding)
- Mount Vernon Floodwall
- Bypass channel
- Bypass overland flow
- Nonstructural

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ESRI US & Canada City Areas
CENWS FCW Levees
National Geographic Basemap

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Skagit River General Investigation
Preliminary Alternative 4
Swinomish Bypass/Floodway

Sedro-Woolley
Hamilton
Lyman
Cockreham Island
United General Hospital
Sedro-Woolley WWTP
Sterling
Burlington WWTP
Burlington
Nookachamps
Clear Lake
Three Bridge Corridor
BNSF Bridge
Anacortes Water Treatment Plant
Swinomish Bypass
Floodway
Division St Bridge
Mount Vernon WWTP
Mount Vernon
La Conner
Skagit Regional Airport
Eaglemont Golf Course

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NAD83 UTM10N
ESRI US & Canada City Areas
CENWS FCW Levees
National Geographic Basemap

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Legend

City Extents

Population
- 0 - 1200
- 1201 - 7500
- 7501 - 22100

Points of Interest
- Hospital
- Water Treatment Plant
- Waste Water Treatment Plant
- Existing Levee

Measures
- Dam Operational Modifications
- Bridge Mods
- Setback levee
- New levee
- New Levee (Induced Flooding)
- Mount Vernon Floodwall
- Bypass channel
- Bypass overland flow
- Nonstructural

Upper Skagit Basin

1:192,000
1"~ 3 miles

Upper Baker Dam
Lower Baker Dam
Cape Horn
Concrete
Lake Shannon
Goat Mountain
Welker Peak
Jackman
Lake Cavanaugh

Skagit River General Investigation
Preliminary Alternative 5
Urban Area Protection

Sedro-Woolley
United General Hospital
Sedrow-Woolley WWTP
Sterling
Burlington WWTP
Burlington
Nookachamps
Clear Lake
Three Bridge Corridor
Anacortes Water Treatment Plant
Mount Vernon WWTP
Mount Vernon
Lyman
Hamilton
Cockreham Island
La Conner
Skagit Regional Airport

Upper Skagit Basin

1:192,000
1" ~ 3 miles

Upper Baker Dam
Lower Baker Dam
Cape Horn
Concrete

Legend

City Extents

Population
- 0 - 1200
- 1201 - 7500
- 7501 - 22100

Points of Interest

- Hospital
- Water Treatment Plant
- Waste Water Treatment Plant
- Existing Levee

Measures

- Dam Operational Modifications
- Setback levee
- New levee
- Levee modification
- Mount Vernon Floodwall

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ESRI US & Canada City Areas
CENWS FCW Levees
National Geographic Basemap

0 2 Miles

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Skagit River General Investigation
Preliminary Alternative 6
System-wide Levee Setbacks

United General Hospital

Sedrow-Woolley WWTP

Burlington WWTP

Three Bridge Corridor

BNSF Bridge

Anacortes Water Treatment Plant

River Bend

W Mt Vernon Bypass

Division St Bridge

Mount Vernon WWTP

Fir Island Bypass

Sterling

Nookachamps

Sedro-Woolley

Burlington

Mount Vernon

Anacortes

La Conner

Cockreham Island

Hamilton

Lyman

Clear Lake

Upper Skagit Basin

1:192,000
1"~ 3 miles

Upper Baker Dam

Lower Baker Dam

Cape Horn

Concrete

Legend

City Extents

Population

- 0 - 1200
- 1201 - 7500
- 7501 - 22100

Points of Interest

- Hospital
- Water Treatment Plant
- Waste Water Treatment Plant
- Existing Levee

Measures

- Dam Operational Modifications
- Bridge Mods
- Setback levee
- New levee
- New Levee (Induced Flooding)
- Mount Vernon Floodwall
- Bypass channel
- Nonstructural

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ESRI US & Canada City Areas
CENWS FCW Levees
National Geographic Basemap

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Attachment 3

Skagit River General Investigation Study

Public Outreach on Preliminary Range of Alternatives
April/May 2012

We want to hear from you!!

Please take the time to respond to the questions below. You can provide your comments by:

- ✓ Leaving this form with us today or at Skagit County Public Works
- ✓ Putting a stamp on this form and sending by regular mail
- ✓ Contacting Daniel Johnson at daniel.e.johnson@usace.army.mil or at (206) 764-3423

Which features of the preliminary alternatives do you prefer and why?

Which features of the preliminary alternatives do you LEAST prefer and why?

US Army Corps of Engineers
Seattle District

SKAGIT COUNTY WASHINGTON

Skagit River General Investigation Study

Public Outreach on Preliminary Range of Alternatives
April/May 2012

Are there any other issues or concerns that should be considered in the study? Please be specific.

_____

_____

_____

Do you reside within the Skagit River Basin? ☐ Yes ☐ No

Would you like to be added to the Skagit River General Investigation Study mailing list? ☐ Yes ☐ No

If yes, provide us with your contact information so we can add you to the project mailing list (please print):

Name: _____ Affiliation (Optional): _____

Address: _____

City: _____ State: _____ Zip: _____

Email: _____

For more information or to submit other comments, please contact Daniel Johnson, U.S. Army Corps of Engineers at daniel.e.johnson@usace.army.mil or at (206) 764-3423. Please send your comments no later than May 24, 2012. Thank you!

Affix Postage Here

Daniel Johnson
U.S. Army Corps of Engineers
P.O. Box 3755
Seattle, WA 98124-3755

Please fold form in half and tape closed to mail

Skagit River Flood Risk Management General Investigation April 2012-June 2012 Public Outreach Comments Received	
	Comment
1	Please consider the mission and goals of the 3FI team as they relate to the Corp's proposed alternatives. (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 Goal 1: Restore estuary habitats and functions in the tidal Skagit Delta needed to meet the Skagit Chinook Recovery Plan goal (approximately 2,380 acres is the remainder needed). Goal 2: Reduce the risk of destructive flooding by implementing flood risk reduction alternatives that maximize river and estuary habitats and functions whenever possible and minimize the conversion of farmland. Goal 3: Protect and improve agricultural land base and infrastructure (20,000 acres protected through agricultural easements and drainage structures are maintained and enhanced).
2	Intake for Anacortes Water Treatment Plant is on opposite side of the river bank from the plant.
3	Propose a measure that would involve construction of a bypass channel that would run east of the Anacortes Plant through the River Bend area traversing what used to be the Ledger Lake location. Measure involves a meandering continuous flow channel with ability to increase capacity during flood events with a removable structure on the upper end. This measures follows a previously existing channel in this general area. This may be worth looking at in lieu of channel widening in the vicinity of the plant and the intake.
4	What are the benefits of the cost to implement Articles 107 and 106?
5	What is the compensation needed to implement Article 107?
6	What are the environmental impacts of implementing the Baker River FERC license Article 106 and 107?
7	The environmental studies needed to determine the impacts of implementing the Baker River FERC license are the responsibility of the GI.
8	PSE needs to consider maximum outflows during spawning season.
9	Do we know how deep the sheet flow is?
10	Would the sheet flow take a house off its foundation?
11	What's the hydrologic strategy? What levels are we looking at?
12	What is the most storage available in the dam before we trigger a structural modification?
13	Having a number of small dams along the systems still viable?
14	What happens if the 3x3x3 is inadequate (time and money) for the study?
15	Are there issues with putting people behind strengthened levees/ring dikes?
16	Do you have a check off sheet to show the analysis of the plans?
17	Preference for Alternative 5
18	Is curious as to how the Corps will utilize the City of Burlington's hydrological analysis.
19	Least prefers the no action alternative.
20	Stated the need for estimated costs, construction timelines, and the with project H&H
21	What hydrology is the Corps using for the GI? (What are the peak flow volumes?) City does not want to have to pay for improvements that they don't need.
22	Alt 2: Likes how there is minimal impact to the urban areas and prime agricultural areas. May have opportunities for riparian habitat restoration upstream of Burlington. No features of concern

23	Alt 3: Likes how flood waters are diverted from Burlington and Mt Vernon. However, appears that there is potential for substantial environmental impacts to Samish Bay. Floodway may result in reduced agricultural acreage in County.
24	Alt 4: No preferred features. Floodway may result in reduced agricultural acreage in County. And that floodway would fill Swinomish channel with silt and debris. Cannot see how this alt will reduce flooding anywhere other than downstream of Mt. Vernon.
25	Alt 5: likes that alt prioritizes protection of the urban areas. No features of concern
26	Alt 6: like that alt offers most potential for salmon habitat recovery and expands the functional floodplain. Has concerns regarding costs to construct levee setbacks.
27	Need to see cost/impacts before deciding on a preferred alternatives.
28	Alternatives need to be analyzed for potential to enhance salmon recovery.
29	GI alternatives need help achieve or be compatible with the goals of Envision Skagit 2060
30	Prefers the Joe Leary Floodway because topography lends itself to this solution and there are few buildings this way and it has potential for the highest capacity.
31	Second best is the Swinomish Floodway.
32	The most cost effective is to build setback levees. Proposes: that levees be set back and that the existing bridges be extended. Build a weir or overtopping levee a foot lower than the main Burlington levee along Lafayette Rd and UGH Hospital. The main Burlington levee would need to extend to Burlington Hill. A long weir can be installed at Avon as a relief value in large events. *Includes design drawings. Also improve fish habitat.
33	Joe Leary Slough Alt takes pressure off the dikes downstream
34	Has the Corps calculated the impacts of debris that may be introduced into the Swinomish Channel?
35	The urban levee alternative needs to incorporate interior drainage and evacuation plans
36	May want to consider not completely enclosing the urban areas.
37	Please define levee modification.
38	Should consider using sheet pile wall at Mount Vernon and the Riverbend Area rather than a setback levee. This would be cheaper than having to buy land for setback levees.
39	Will the setback levees include excavation? There are concerns that the setback levees will fill up with sediment.
40	How much will the levees cost?
41	Cost of the levee setback alternative is a concern.
42	number one priority is to get water off the floodplain (interior drainage). Their current ability to get water out without damaging the bay dikes is short of capacity.
43	Letting floodwater exit at Sterling makes sense.
44	In the Riverbend area there is a lake area that gets wet during flood events
45	Are bridge modifications necessary for the levee setback alternatives?
46	It should be noted that when the Fir Island levees breached, Sterling still flooded but the base elevation dropped south of Mount Vernon
47	Breaching of Fir Island levees didn't help anyone.
48	The Fir Island bypass won't help relieve the pressure for the upper part of the system.
49	How much does levee setback reduce the flood effects?

50	Corps should look at NHC report to determine the importance of modification of the BNSF Bridge for flood control.
51	Has the Corps done a bathymetric survey of the system lately?
52	Need to look at what it would cost to harden upstream levees when trying to decide between the two bypass alternatives.
53	What will be done about the Riverbend area?
54	There is a risk associated with evacuation. The presence of a ring dike should not change protocols for establishing evacuation procedures.
55	GI should focus on increased upstream flood storage (including but not exclusive to Upper and Lower Baker Dam storage), enhancement and redevelopment of existing infrastructures, increase and divert conveyance of waters to accommodate a major event (with focus on upstream diversions); enhance and redeveloped interior drainage to displace inundating flood waters. Concerns that potential upstream bridge modifications associated with the Swinomish Channel bypass will be cost prohibitive.
56	Propose the following measures (from the Comprehensive Flood Hazard Management Plan) as vital parts to achieving the study goals relocation of Hamilton, Sewage Treatment Plant Ring Dike Sedro Woolley, Ring Dike General Hospital, Burlington Levy Certification Program, Three Bridge Corridor Levy Setback and Certification, Anacortes Water Treatment Plant Ring Dike, Downtown Mount Vernon Floodwall and Redevelopment, and La Conner Ring Dike.
57	There is lack of representation for the residents of the Nookachamps in discussion regarding the ability of the area to take overflow.
58	Submitted article outlining her concerns regarding the safety of aging dams.
60	Is this alternative eliminating any preexisting structures?
61	The resource agencies would like some hard criteria to evaluate the bypass alternatives
62	What about Cherry Point/railroad. What about increases in traffic/commuter rail lines – would this lead to improvements/reconstruction of the bridge?
63	What does levee modification mean? What are these modifications?
64	Need some clarification on assumption of design—whether or not existing levees that are set back are completely removed (including toe).
65	What does the econ analysis include?
66	Power loss Compensation is another issue.
67	If we encircle Burlington, how do you calculate the costs and benefits?
68	How receptive are landowners to selling land?
69	The cost of levee removals might be a drop in the bucket compared to the land acquisition.
70	How is the Corps dealing with climate change?
71	How will the Corps deal with a moving environmental baseline?
72	There would be some issues with moving outside Section 106 because there may be reservoir issues with Coho management.
73	Change in seasonality of a early drawdown would require an analysis of productivity of salmon of the river. Table 2 is not an existing condition. There will be an environmental effect to using those tables despite the fact that they are listed in the FERC license. Productive capacity was not analyzed the in the FERC license EIS. The GI process is supposed to do the environmental analysis of changes resulting from adopting the section 106 and Table 2. Productivity issues behind the dam and then flows downstream.
74	You have not done any of the environmental scoping yet for the alternatives.
75	There are varying effects to the fish for each of these alternatives.
76	NRCS has several easements within the floodplain.

77	Fish are important, but the bigger issue is where we are dumping sediment
78	Skagit In stream Flow limits total diversions to 860 cfs, if this is a diversion from the river, then this would be a water rights issue. The Corps will need to get a Department of Ecology contact.
79	The Corps should look at offsetting impacts with good riparian habitat
80	: Not taking into account climate change will have considerable impacts on what gets support. Not considering increased flows would be a fatal flaw.
81	TNC and NRCS have easements for almost every footprint of the alternatives we have presented
82	How is the Corps dealing with climate change?
83	How is the Corps dealing with the Mount Vernon Floodwall?
84	Any analysis of storage needs to be done through the GI
85	Pinch points are areas to focus on where there isn't an opportunity to setback levees.
86	Why do we have new levee construction in the Sterling area? Impacts to Sterling and Nookachamps. Is the levee setback alternative an all or nothing deal, or are there specific areas where you can gain conveyance and reduce your risk?
87	Would the cross-island bypass reduce the water surface through Mount Vernon? If so, why isn't the Fir Island Bypass included in other alternatives?
88	Is it possible that dam modifications with the Fir Island Bypass would get you a 90% solution?
89	All of the alternatives can be designed to have a positive effect, but they can similarly be designed to have serious showstoppers from permitting and tribal concerns. We need to keep in mind the opportunities to do more good.
90	Can we have an alternative that only addresses the impacts at Sterling and Nookachamps? How do we do economic analysis for the benefits to an area when it would otherwise be cost ineffective . Do we need to provide something for everyone?
91	How far we will go with our analysis? There are concerns that we don't have enough time for studies or money.
92	Another fatal flaw is that the Corps is focusing on ESA, etc, but not as much on the tribal trust responsibility and how this is going to be handled in the planning and review process.
93	No one north of the dike will find the Joe Leary Bypass acceptable.
94	Will the environmental community find the Joe Leary Bypass acceptable?
95	Has the Corps studied what will happen once the floodwaters are emptied into the Swinomish Channel? Does the channel have enough volume to hold the flood water?
96	Did you know that there is a hotel located in the proposed Swinomish Channel floodway?
97	Is there an issue with the jetty on Goat Island? Has the Corps looked at this?
98	For the ring dikes, what would happen if the levee broke? You would get a bathtub - how will you drain this area?
99	There is a choke point in the river system at the North Fork Bridge
100	When will the Corps have costs?
101	What will happen if the costs are really high?
102	What will be the efforts of the economist?
103	How is the cost benefit ratio developed?
104	Will the 3 year schedule also include the EIS? How detailed will the EIS be?
105	The Environmental Committee has good knowledge and can help with the study.
106	When will the Corps confront ESA issues?
107	What are the benefits to wildlife/salmon?

108	How will environmental impacts be considered in the Corps analysis?
109	What does a flood event look like without flood fighting?
110	What is the difference between a floodway and bypass?
111	The Joe Leary floodway area needs to be increased. Need to delete the floodway area shown south of the levee.
112	How much water will be passed through the bypass/floodway?
113	Will the floodway/bypass have water in it throughout the year?
114	Where will the spill into the bypass occur and at what elevation?
115	How frequently will the floodway/bypass be engaged?
116	Will the scale of the improvements be based on the hydraulic model?
117	What is the impact of the Burlington Northern Railroad Bridge on the flows during a flood event? Are you aware of a past lawsuit regarding the bridge?
118	Will the Corps assess interior drainage?
119	Has the Corps looked at the Phillips and Williams study which outlines the paths of water?
120	Will there be cross integration of the alternative?
121	Non-structural measures should be part of every alternative.
122	The community can really help with narrowing the alternatives.
123	I would like to see 100yr protection for the urban areas and no less than existing protection for the upstream and downstream areas.
124	What about Fir Island?
125	How will the Corps determine what work needs to be done to determine the feasibility of the bypass?
126	How far into the 3 year schedule are we?
127	People want to know the study process. When can we engage in the process? Will the Corps look to the County's technical subcommittee's for assistance?
128	The Corps should use the technical sub-committees as a resource
129	When will we get a FEMA map?
130	Does alt 1 include the ongoing improvements that the levee system?
131	Cattle mounds are non-structural
132	We need interior drainage once the floodwater gets in.
133	Alert warning systems – we are currently limited in our capabilities – audible alarm system, telephone system, door to door.
134	Evacuation routes and shelters. No evacuation plan for West Mount Vernon, shelter at the airport. Mount Vernon has no marked routes. Burlington has some marked evacuation.
135	Interagency coordination for state troopers. People stop to look at the water when crossing the bridge.
136	How does Corps deal with this alternative? How does the Corps execute non-structural alternatives?
137	We need early warning system for the upper valley. (Marblemount down).
138	When we drive over the Kincaid Bridge the elevated water levels are visible – there could be visual markers (education and outreach).
139	We need an upsystem Doppler weather forecasting system.
140	We should look at watershed management particularly on public lands. We should try to do something to keep the water up the valley
141	We should look at changing logging practices.
142	Does Cockreham Island include removal of the levee? Studies have shown that this levee induces flooding on Hamilton.
143	Non-structural suggestion: all the homes in harms' way should have it written in the deed of the house that says that they live in the floodplain.

144	You will find the Samish Alt unacceptable to anyone above the dikes, unacceptable to the residents of the Samish. By the time that you get the water into the bypass, you've raised the water levels too high in Sterling.
145	Samish River community will not tolerate the induced flooding. You would need to buy flowage easements.
146	There is a county drainage group. We would need to figure out how to get their drainage incorporated into the Joe Leary Slough.
147	This alternative doesn't need modification of the three bridge corridor – bridge modifications may cost more (6 bridges) then the bypass may be cheaper.
148	You have to distinguish between the two bypasses – how are these going to be made differently than the ones created in the past. We need to look at the impacts.
149	This alternative could be of benefit as long it's triggered to flow before it backs up too much. People in Sterling don't realize that without this, their levees will be very substantial because water will pool up here.
150	We have looked at bypass concept but we have never looked at the floodway bypass. The floodway bypass idea would re-nourish the soil in the floodplain.
151	It is interesting to see how the County roads follow the floodways. There is an opportunity for the County roads to cost effectively become flood weirs without take of farmland. Opportunities to use existing road alignments.
152	Swinomish Alt - This is impossible without a bridge modification
153	Swinomish Alt- If you do this, then you must have a ring dike around La Conner.
154	Swinomish Alt- Bypass blocks hwy 20. There will be no north south traffic; it would be cut off by the floodway.
155	Swinomish Alt - There is already a dike around La Conner.
156	Samish Alt- All you are doing is building the floodway into the Samish. You are forcing water into the Samish. Water doesn't naturally go between the two hills. No Action ends up being a better option for the Samish people.
157	Burlington got themselves into their mess. Is flood control the reward for poor urban planning?
158	West Mount Vernon: Looks like a levee setback. How are you going to get memorial rd and McClain road over that back levee?
159	There are two major trucking companies in West Mount Vernon.
160	Seems like Alternative 5 may be skipping the step of interior drainage
161	Should be more than three bridges here –should be 6 proposed bridge modifications.
162	West Mount Vernon there is a bypass channel. Are you proposing to replace the Division Street Bridge?
163	Division Street Bridge should be looked at.
164	Setback depending where they are will fill up with sediment. What is the lifetime of levee setbacks? (ALT6)
165	The main problem of the levee setback is that you are going out to build a new levee foundation on a soupy foundation. (ALT6)
166	Is there a cost analysis associated with capturing the costs of improving the levees?
167	If Mount Vernon finishes the flood wall, then the benefits resulting from this improvement cannot be counted towards the GI, correct?
168	If there was no action – what is the cost of damages?
169	What about Burlington? Does the Corps account for inflation/appreciation?

170	County citizens want to know how much the damages are and how much we will save if we are asked to pay. The citizens need to see the economic damages. IN addition to assessor's information, this probably doesn't include government infrastructure, cost to rebuild levees, the cost to rebuild the pipelines, and costs associated with Olympic pipeline shut down.
171	How does the Corps calculate damages?
172	Don't just think damages in the flood plain but also damages to the Islands. And the loss of the/economic impact of road closures.
173	What types of things can the Corps pay for? (non-structural items)
174	Building a levee for ALT3 would be extremely expensive. We need to consider cost.
175	Surely there are cost estimates from WSDOT on Centralia from their flooding shutdown. (ALT3)
176	Some of the housing areas that look new are really quite old. (ALT 4)
177	We need to look at the potential cost of levee setback/three bridges mod and the bypass. ALT4
178	But with the floodway, you could open it up earlier, let the water go out soon. ALT4
179	If there are going to be coal trains going through – it seems like one of the conditions is that you should plan for is building a new RR bridge ALT4
180	We need to realize the impact of a 100 yr flood but we have to look at the impacts on the economy – we all pay the price collectively. The flooding that affects Burlington not only affects Burlington but it affects all of us. (ALT 5)
181	Will cost of mitigation be included in project cost? ALT6
182	Biggest environmental issue is the flow of sediments. We have lost a lot of sediment inputs in the estuary. The bypasses may put a lot of sediment into Padilla Bay and starve the Skagit of sediment.
183	What are the dangers for the eelgrass sedimentation in Padilla Bay? (ALT3)
184	Just south of hwy 20 along the channel, you have the braided remnant of the Swinomish slough. This area is a high priority area for the County to look at. This is Telegraph Slough. ALT4
185	In a hundred year flood, the water goes through Gages Slough, then goes through Burlington (in no action scenario).
186	No water goes through the two hills because there is high ground – then it goes into Joe Leary Slough. Then assuming that if a levee breaks then the floodwaters goes all over the place. (in no action scenario)
187	Were the alternatives designed for a probable event?
188	Whenever the Skagit is at flood stage, the Samish is also at their flood stage so that area is already getting a log of water.ALT3
189	In the government land survey, the low point is the Olympia marsh. The water would probably go through the Olympic marsh. ALT3
190	When the river was blocked with logs, then it went to Beaver Marsh and Olympic marsh. (ALT 3)
191	How long will the water be on the property of people who are behind the sea dikes? (ALT3)
192	Key to interior drainage is velocity. Want to have very slow velocities. (ALT 3)
193	ALT 4: Looking at the map at the back of the handouts, water will flow through farmland and to Swinomish Slough and it will go right through a row of houses from McClain road and go straight and then turn right and then there are a row of houses on a levee.
194	How do we know what direction the water exiting the bypass would flow? (ALT 4)

195	Lots of rip rap in the river – removal of the rip rap would allow Nookachamps and Sterling to increase conveyance. We should also remove the rip rap from the railroad – there is a lot of rip rap here. (ALT4)
196	Lots has been said about storage in Nookachamps and Sterling. There is less and less storage in this area. (ALT 5)
197	I live in the Nookachamps, I have standing water on 800 acres that has been there for the last 5 years. I don't know where the water will go. ALT5
198	The Corps has been telling us to setback the levees, but the advantage of keeping the levees at the edge of the river makes the river travel faster and scour out the bottom of the levee. (ALT6)
199	Does this have a set of options such as the interior levees in Fir Island or like the other overland flow options would you create too much flow. Maybe we still need to talk about flowage easement. (ALT6)
200	Do you count tides in the hydraulic model? ALT6
201	flo2D hydraulic model. Where is it? (ALT 6)
202	However, your predecessors have told us the reason you can't move back the levees in West Mount Vernon is because West Mount Vernon put a garbage dump there. ALT6
203	Burlington old dump didn't have anything in it because it was all organics – no plastics back then. (ALT6)
204	What if the plans don't operate the way we plan? ALT4
205	What is the Corps stance on ring dikes? (ALT 5)
206	For this alternative, do you need to do a survey? ALT6
207	"Alternative 2:Non-Structual and Dam Modifications" is a map that does not seem to explain what exactly the these modifications are. Do these include the "Operational modifications to Upper and Lower Baker Dams" and if so:1. What exactly are these modifications? 2. What are the steps to get these procedural modifications adopted and implemented? 3. Overall in terms of efficacy, where do the dam procedural modifications fall on a scale of 1-10 with 10 being the most effective? Alternative 5 slides speak about urban area protection though doesn't seem to address the highest density areas.
208	What determines when and where structural modifications are offered as an alternative?
209	Where does the data come from for the brown and light brown population density regions on the map? The Nookachamps area inaccurately identifies river bank area as highly populate while densely populated areas are not noted at all. I speak specifically to the south end of Francis Road.
210	Is there a long-term timeline that takes flood management in Skagit County through to alternative adoption and implementation?
211	Who is the responsible government agency that makes the final decision regarding which alternative to adopt?
212	Concerned whether or not proposed levee heights will sufficiently consider the impacts of sea level rise.
213	Would like to see B/C ratios.
214	Concerned that plans may not be following the Draft Executive Order on Floodplain Management.
215	Prefer Alt 3- their property would be in the flood area in Alt 4.
216	Alt 4 will flood their property – like this the least.
217	Should consider dredging the Skagit Channel.
218	Like the Fir Island Bypass.
219	Would like to see improved flood protection.
220	Sedimentation at the mouth of the river is an issue that should be considered.

221	Least prefers Alt 3 (Joe Leary Slough Bypass) – it would be devastating if flooding in both the Skagit and Samish happen simultaneously.
222	Prefers Alternative 4 (Avon Bypass) and dredging of the lower river.
223	He has observed silt build up in the freshwater sloughs that meet Skagit Bay.
224	There was historically a third river (Swoolahmish River, 1859 survey) between the Skagit and Samish Rivers.
225	Alt 2: is the most favorable alternative. Dam storage is the most cost effective, environmentally friendly flood protection measure. Also need to limit development in floodplain.
226	Swinomish Bypass has a lot of political controversy
227	Alt 5 coupled with dam storage could be viable if coupled to land-use policies preventing further encroachment on the floodplain.
228	Alternative 6 is unacceptable
229	Concerned about affordability and effectiveness of the proposed alternatives. There is no point in pursuing study further if the County cannot afford the project or if there are major environmental obstacles.
230	For levee setbacks the old levees need to be removed for this to be effective.
231	Propose that dam storage only be proposed as an alternative.
232	Ranking : From most favorable to least favorable: Alt 2, Alt 5, Alt 6, Alt 3, Alt, 4, Alt 1
233	Submitted map developed by Dames and Moore for FEMA. (see file) Maps suggests that in order for water to flow between the hills you would have to dig a channel between the two hills. Also another problem you are going to face is that FEMA designated the Gages Slough area as an area of “Special Flood Hazard” and “should be” treated as floodways. This would prohibit any building of a levee (i.e. fill in the floodway) in that area.
234	Submitted 1897 map prepared by the Corps of Engineers. Shows locations of Beaver Marsh area and Olympic Marsh. Also, shows river depths. The river depths have changed little since 1897.
235	Alt 2: Prefer this alt. Need to give consideration to flood storage at the dams.
236	Alt 3: Benefits of the Alt are similar to Alt 4. Major disadvantage of this alternative is the potential for mixing of fish species and the potential for increase sheet flow flooding the Samish River Basin if both the Skagit and Samish flood at the same time.
237	Alt 4: This bypass idea has been proposed before. It was last considered by the County in 2002. There are significant economic and environmental issues with this alterative. Floodway aspect of this alternative would need an agricultural exemption to allow for construction of agricultural outbuildings and rebuilding of damaged farm houses. Benefits of this alt/floodway version: floodwaters would not impact Burlington or Mount Vernon, would preserve farmland from urban encroachment, prohibit further development in the natural flood corridor. This alternative will likely be the most affordable and provide the most benefits. This alternative will impact fish but this impact can be mitigated. An additional benefit of this alternative would be that Mount Vernon would not need a floodwall.
238	- Alt 5: This alt is not favorable because it overlooks poor land use practices (allowing development) of the floodplain by Burlington and Mount Vernon. Should also construct levees around Clear Lake and Sedro Woolley waste water treatment plant, and stopgap levee for La Conner.

239	Alt 6: This alt is not favorable because the proposed levee at Sterling. This levee would add a 3-4 ft of height in flood water level to the Nookachamps area which in turn makes a deep lake upstream of the Burlington Urban Area. Widening of the 3 bridge corridor to allow for increased conveyance would result in higher levee and/or bridge replacement costs.
240	Analysis from NHC indicated that a significant amount of water leaves the system at Nookachamps. Nookachamps is an artificial storage basin because of levee system of Dike 12 and 17. Nookachamps Creek does not contribute any flow into Skagit River into flood.
241	Concerns regarding storage in Lower Baker Dam. An adverse impact of imminent drawdown is that if you fill up the reservoir and a second storm hits, then there will be no flood storage at the dam.
242	Dredging will not work; however dredging at the mouth of the river may help with drainage of flood properties adjacent to the river during low tide.
243	I-5 was designed by WSDOT to overtop from Gages Slough just north of the Target Store and again north of BEHS to Cook Road during a serious flood event.
244	Interior Drainage: This is an absolutely necessary element.
245	Ranking (from preferred to least preferred): Alt 2, Alt 4, Alt 3, Alt 6, Alt1, Alt 5.
246	Prefers Alt 3- get the water out of the system, ASAP combined with Alt 4 and 5
247	PDT needs to combine the alternatives
248	Stated need to protect public infrastructure and public safety.
249	Ranking (preferred to not like: Alt 3, 4, 5, 6, 2, 1)
250	Stated the need for the burden of flood control shouldn't fall on a few individuals.
251	What about the three bridge corridor?
252	Is there one bridge that make more of a difference or do you need to take out all the bridges?
253	There are a lot of bridges, the railroad bridge, the Division Street Bridge and the bridges over the forks
254	Can you set back the levees without major bridge modification?
255	Does the Corps do bypasses in other parts of the County?
256	Why can't we dredge the river? It has been done in the past.
257	All the alternatives look expensive
258	I can see mixing and matching different pieces of the different alternatives
259	Explain cost-benefit.
260	One of the problems with dredging was that the Corps would pay the first time and then the sponsor pays maintenance.
261	Both bypasses have sheet flow and channel options. What happens to the value of farmland in the path of the bypass?
262	Previous options of bypass had 9-10 year levee corridor. I can't imagine what kind of agriculture that can exist in the bypass.
263	You can farm a bypass but it is not as profitable.
264	I have concerns about limiting the study to three years. Concerned about funding and there are vegetation management issues, ESA consultation. There are lots of things that we can't control. This is too quick.
265	Are steps being taken to streamline the vegetation management and ESA process?
266	What about dredging the river system?
267	Explain what a flowage easement is.
268	At the mouth of the river, the biggest problem is silt build-up. There are a bunch of plugged up sloughs. The issue is maintenance of sloughs and sandbars at the mouth. Dredge a few miles of the river and at Sterling would help. The river is full of snags that need to be cleared out.

269	Over the life of project, how are we considering sea level rise?
270	Why can't we continually dredge the Skagit? They continuously dredge the Mississippi River.
271	How is the sheet flow problem going to be defined? Will eminent domain be involved?
272	Looking at alternatives, I don't see interior drainage.
273	What will tidal influence do to the sheet flow/channel bypass?
274	There is only one thing that helps everyone: dam storage.
275	You have to be careful as to when you let water down the bypass.
276	Has there been a cost analysis and estimated construction timeline?
277	Study has gotten harder and time reduced.
278	Suggestion: The outreach is good but it has to be meaningful.
279	How will the incoming tide affect the water that moves through the Bypass?
280	How will Alternative 3 (Joe Leary Bypass) affect Sedro-Woolley
281	What will be done about the houses located in the floodway?
282	Did the team analyze the effect of the Samish River Flooding in the Skagit Basin?
283	Water begins to overflow at Sterling between a 16-20 year event. Sedro Woolley begins flood fight when gage at Mt. Vernon reads 34ft. This is when the river flows across the railroad tracks.
284	Why wait until larger events to use the bypass?
285	What about NEPA Issues? Has the team looked at the impacts to the Marine Sanctuary in Padilla Bay?
286	Where will the bypass/floodway discharge? Will it empty into Padilla Bay? Padilla Bay currently has pollution issues. How will the bypass affect pollution issues in the Bay?
287	How much water will be diverted from the River into the bypass?
288	This plan will have less impact on Sedro-Woolley (individual opinion)
289	The path of this bypass would affect fewer houses in the city.
290	What do you mean by move-out? Is this a mandatory evacuation before the flood?
291	Is the Mount Vernon floodwall part of this strategy?
292	Will the Corps buy land that is within the floodway?
293	What about Hwy 20 and Cook Road? Closure of these roads would trap Sedro-Woolley - people would not be able to evacuate if needed.
294	Does the Corps have an estimate of project costs? The biggest cost will likely be real estate.
295	Will the FEMA hydrology be used in this study?
296	What about implementation of 107c in the Baker FERC license?
297	Has the team considered placing a bypass on Fir Island to serve as a third fork of the river?
298	Do any of the alternatives incorporate management of woody debris in the river?
299	How did the team formulate the preliminary alternatives?
300	When does the 50 year project lifetime start?
301	Will the project be constructed in phases?
302	How can the City of Sedro-Woolley contribute to this discussion?
303	As the Corps drafts the new list of alternatives, we recommend that the Corps promote alternatives that would improve habitat for listed species, anadromous fish, and other species in the Lower Skagit River and its tributaries. Many such alternatives are likely to have positive influences on the ability of the system to convey and/or more naturally attenuate flood flows compared to channelized conditions (e.g., setbacks).

304	We encourage the Corps to draft alternatives that include promoting setbacks wherever possible, appreciable restoration or enhancement of functional riparian corridors, restoration and/or construction of high quality and fish friendly side channels (that are designed avoid stranding or other impacts to aquatic organisms), and removal of hard shoreline armoring (to reduce edge habitat impacts, constriction of the stream, preclusion of riparian buffer establishments, and other effects).
305	Where certain stream configurations or hard armoring is planned to be maintained or constructed, as in the case of Preliminary Alternative 3 (Urban Areas and Critical Infrastructure Protection), we encourage the Corps to include and consider a reach-based analysis for determining stability and indirect effects of a given feature, and adequately determine and avoid downstream and across-stream negative effects from the features.
306	This GI process gives the Corps an important opportunity to implement section 7(a)(1) of the Endangered Species Act, by "carrying out programs for the conservation of endangered species and threatened species…", and section 2(c) of the Act, "…to seek to conserve endangered species and threatened species" and use "authorities in furtherance of the purpose of this Act".
307	Not incorporating an analysis of climate change related hydrology is a fatal flaw from a NEPA perspective, a development of a clear pathway to address this issue would be timely
308	Submitted letters he received from the Skagit County Public Works Department in 1996 documenting the Public Works Department's investigation of the drainage complaints on Starbird Road. In 1997, the Department found that the existing culverts were adequate but that downstream maintenance was necessary for the full performance of cross culverts under Starbird Road.
309	Prefers dredging and removal of debris from the North and South Fork.

4) Public Comments and Responses

(Pending)