

Skagit River Flood Risk Management General Investigation Comment Received (April 2012-June 2012 Outreach)			
Meeting	Date	Category	Comment
3FI		ENV	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).
Anacortes Water Treatment Plant		CIV	Intake for plant is on opposite side of the river bank from the plant.
Anacortes Water Treatment Plant		PF	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 measure 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.
Aquatic Resources Group	5/7/2012	ECON	What are the benefits of the cost to implement Articles 107 and 106.
Aquatic Resources Group	5/7/2012	ECON	What is the compensation needed to implement Article 107?
Aquatic Resources Group	5/7/2012	ENV	What are the environmental impacts of implementing the Baker River FERC license Article 106 and 107?
Aquatic Resources Group	5/7/2012	ENV	The environmental studies needed to determine the impacts of implementing the Baker River FERC license are the responsibility of the GI.
Aquatic Resources Group	5/7/2012	ENV	PSE needs to consider maximum outflows during spawning season.
Aquatic Resources Group	5/7/2012	HH	Do we know how deep the sheet flow is?
Aquatic Resources Group	5/7/2012	HH	Would the sheet flow take a house off its foundation?
Aquatic Resources Group	5/7/2012	HH	What's the hydrologic strategy? What levels are we looking at?
Aquatic Resources Group	5/7/2012	HH	What is the most storage before we trigger a structural modification?
Aquatic Resources Group	5/7/2012	HH	What is the most storage before we trigger a structural modification?
Aquatic Resources Group	5/7/2012	HH	Having a number of small dams along the systems still viable?
Aquatic Resources Group	5/7/2012	PM	What happens if the 3x3x3 is inadequate (time and money) for the study.

Aquatic Resources Group	5/7/2012	PM	Are there issues with putting people behind strengthened levees/ring dikes?
Aquatic Resources Group	5/7/2012	PM	Do you have a check off sheet to show the analysis of the plans?
Bieche, T		ALT5	Preference for Alternative 5
Bieche, T		H&H	Is curious as to how the Corps will utilize the City of Burlington's hydrological analysis.
Bieche, T		PF	Least prefers doing nothing.
Bieche, T		PM	Stated the need for estimated costs, construction timelines, and the with project H&H
Burlington City Council Meeting	4/12/2012	HH	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.
Clark, D	5/20/2012	ALT2	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
Clark, D	5/20/2012	ALT3	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.
Clark, D	5/20/2012	ALT4	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.
Clark, D	5/20/2012	ALT5	Alt 5: likes that alt prioritizes protection of the urban areas. No features of concern
Clark, D	5/20/2012	ALT6	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.
Clark, D	5/20/2012	ECON	Need to see cost/impacts before deciding on a preferred alternatives.
Clark, D	5/20/2012	ENV	alternatives need to be analyzed for potential to enhance salmon recovery.
Clark, D	5/20/2012	PF	GI alternatives need help achieve or be compatible with the goals of Envision Skagit 2060
Cook, T		ALT3	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.
Cook, T		ALT4	Second best is the Swinomish Floodway.

Cook, T		PF	The most cost effective is to 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.
Dike and Drainage District Workshop	6/15/2012	ALT3	Joe Leary Slough takes pressure off the dikes downstream
Dike and Drainage District Workshop	6/15/2012	ALT4	Has the Corps calculated the impacts of debris that may be introduced into the Swinomish Channel?
Dike and Drainage District Workshop	6/15/2012	ALT5	The urban levee alternative needs to incorporate interior drainage and evacuation plans
Dike and Drainage District Workshop	6/15/2012	ALT5	May want to consider not completely enclosing the urban areas.
Dike and Drainage District Workshop	6/15/2012	CIV	Please define levee modification.
Dike and Drainage District Workshop	6/15/2012	CIV	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.
Dike and Drainage District Workshop	6/15/2012	CIV	Will the setback levees include excavation? There are concerns that the setback levees will fill up with sediment.
Dike and Drainage District Workshop	6/15/2012	ECON	How much will the levees cost?
Dike and Drainage District Workshop	6/15/2012	ECON	Cost of the levee setback alternative is a concern.
Dike and Drainage District Workshop	6/15/2012	H&H	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.
Dike and Drainage District Workshop	6/15/2012	H&H	Letting floodwater exit at Sterling makes sense.
Dike and Drainage District Workshop	6/15/2012	H&H	In the Riverbend area there is a lake area that gets wet during flood events
Dike and Drainage District Workshop	6/15/2012	H&H	Are bridge modifications necessary for the levee setback alternatives
Dike and Drainage District Workshop	6/15/2012	H&H	It should be noted that when the Fir Island levees breached, Sterling still flooded but the base elevation dropped south of Mount Vernon
Dike and Drainage District Workshop	6/15/2012	H&H	Breaching of Fir Island levees didn't help anyone.

Dike and Drainage District Workshop	6/15/2012	H&H	The Fir Island bypass won't help relieve the pressure for the upper part of the system.
Dike and Drainage District Workshop	6/15/2012	H&H	How much does levee setback reduce the flood effects?
Dike and Drainage District Workshop	6/15/2012	H&H	Corps should look at NHC report to determine the importance of modification of the BNSF Bridge for flood control.
Dike and Drainage District Workshop	6/15/2012	H&H	Has the Corps done a bathymetric survey of the system lately?
Dike and Drainage District Workshop	6/15/2012	PF	Need to look at what it would cost to harden upstream levees when trying to decide between the two bypass alternatives.
Dike and Drainage District Workshop	6/15/2012	PF	What will be done about the Riverbend area?
Dike and Drainage District Workshop	6/15/2012	PM	There is a risk associated with evacuation. The presence of a ring dike should not change protocols for establishing evacuation procedures.
Dike District 17	5/29/2012	CIV	Goal of DD17 is to provide minimum of 100 yr level of protection to designated urban and critical infrastructure areas, and to provide less than 100yr but greater or equal to existing level of protection for rural designated areas.
Dike District 18	5/29/2012	PF	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.
Dike District 19	5/29/2012	PF	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.
Dow, R		PM	There is lack of representation for the residents of the Nookachamps in discussion regarding the ability of the area to take overflow.
Ehlers		PM	Submitted article outlining her concerns regarding the safety of aging dams.
Environmental Resource Agencies	4/25/2012	ALT3	From an ESA perspective. NMFS will need look at what fish are doing in a 60 year event and then compare what would happen to them in a bypass event. Don't want fish to become stranded in a bypass.

Environmental Resource Agencies	4/25/2012	ALT4	From an ESA perspective. NMFS will need look at what fish are doing in a 60 year event and then compare what would happen to them in a bypass event. Don't want fish to become stranded in a bypass.
Environmental Resource Agencies	4/25/2012	ALT6	Is this alternative eliminating any preexisting structures?
Environmental Resource Agencies	4/25/2012	CIV	The resource agencies would like some hard criteria to evaluate the bypass alternatives
Environmental Resource Agencies	4/25/2012	CIV	What about Cherry Point/railroad. What about increases in traffic/commuter rail lines – would this lead to improvements/reconstruction of the bridge?
Environmental Resource Agencies	4/25/2012	CIV	What does levee modification mean? What are these modifications?
Environmental Resource Agencies	4/25/2012	CIV	Need some clarification on assumption of design—whether or not existing levees that are set back are completely removed (including toe).
Environmental Resource Agencies	4/25/2012	ECON	What does the econ analysis include?
Environmental Resource Agencies	4/25/2012	ECON	Power loss Compensation is another issue.
Environmental Resource Agencies	4/25/2012	ECON	If we encircle Burlington, how do you calculate the costs and benefits?
Environmental Resource Agencies	4/25/2012	ECON	How receptive are landowners to selling land?
Environmental Resource Agencies	4/25/2012	ECON	The cost of levee removals might be a drop in the bucket compared to the land acquisition.
Environmental Resource Agencies	4/25/2012	ENV	How is the Corps dealing with climate change?
Environmental Resource Agencies	4/25/2012	ENV	How will the Corps with a moving environmental baseline?
Environmental Resource Agencies	4/25/2012	ENV	Not dealing with climate change will be a fatal flaw. It is a major issue for the Skagit CoOp.
Environmental Resource Agencies	4/25/2012	ENV	The Swinomish Tribe was under the impression that we would not go beyond the parameters of 106 of the FERC license.
Environmental Resource Agencies	4/25/2012	ENV	There would be some issues with moving outside the 106 because they may be reservoir issues with Coho management.
Environmental Resource Agencies	4/25/2012	ENV	The volumes and schedule listed in the license are different from what is the current operation by the Corps. Changes in timing from Nov 15 to Oct that would be a concern. The Swinomish Tribe is looking at current water control manual as the existing condition.

Environmental Resource Agencies	4/25/2012	ENV	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. 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.
Environmental Resource Agencies	4/25/2012	ENV	How does Corps operations interact with the FEMA issues? Right now, NWFS would not be supportive of actions that are not consistent with the FEMA Bi-Op. We need to consider these issues.
Environmental Resource Agencies	4/25/2012	ENV	NMFS: NMFS needs to look at how landuse complies with the FEMA Bi-Op.
Environmental Resource Agencies	4/25/2012	ENV	You have not done any of the environmental scoping yet for the alternatives.
Environmental Resource Agencies	4/25/2012	ENV	There are varying effects to the fish for each of these alternatives.
Environmental Resource Agencies	4/25/2012	ENV	NRCS has several easements within the floodplain and has a maps. There policy is that things go around these things. NRCS left maps with Hannah.
Environmental Resource Agencies	4/25/2012	ENV	Fish are important, but the bigger issue is where we are dumping sediment
Environmental Resource Agencies	4/25/2012	ENV	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.
Environmental Resource Agencies	4/25/2012	ENV	: Alternative 6 is least favorable to TNC because some of the bypasses can get you most of the way there and there may not be the need for as much setbacks or levee improvements. Building a levee on one side is cheaper than building levees on both sides. The North Fork Bypass or the Fir Island Bypass—the North Fork Setback might be more acceptable?
Environmental Resource Agencies	4/25/2012	ENV	The Corps should look at offsetting impacts with good riparian habitat
Environmental Resource Agencies	4/25/2012	ENV	: Not taking into account climate change will have considerable impacts on what gets support. Not considering increased flows would be a fatal flaw.
Environmental Resource Agencies	4/25/2012	ENV	TNC and NRCS have easements for almost every footprint of the alternatives we have presented
Environmental Resource Agencies	4/25/2012	H&H	How is the Corps dealing with climate change?
Environmental Resource Agencies	4/25/2012	H&H	How is the Corps dealing with the Mount Vernon Floodwall?

Environmental Resource Agencies	4/25/2012	H&H	Any analysis of storage needs to be done through the GI
Environmental Resource Agencies	4/25/2012	H&H	Pinch points are areas to focus on where there isn't an opportunity to setback levees.
Environmental Resource Agencies	4/25/2012	HTRW	Ecology to provide toxic sites to consider as we're refining our alternatives.
Environmental Resource Agencies	4/25/2012	PF	Why do we have new levee construction in the Sterling are? 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?
Environmental Resource Agencies	4/25/2012	PF	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?
Environmental Resource Agencies	4/25/2012	PF	Is it possible that dam modifications with the Fir Island Bypass would get you a 90% solution?
Environmental Resource Agencies	4/25/2012	PF	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.
Environmental Resource Agencies	4/25/2012	PM	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?
Environmental Resource Agencies	4/25/2012	PM	How far we will go with our analysis? There are concerns that we don't have enough time for studies or money.
Environmental Resource Agencies	4/25/2012	PM	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.
FCZD Meeting	4/16/2012	ALT3	No one north of the dike will find the Joe Leary Bypass acceptable?
FCZD Meeting	4/16/2012	ALT3	Will the environmental community find the Joe Leary Bypass acceptable?
FCZD Meeting	4/16/2012	ALT4	Has the Corps studies what will happen once the floodwaters is emptied into the Swinomish Channel? Does the channel have enough volume to hold the flood water?
FCZD Meeting	4/16/2012	ALT4	Did you know that there is a hotel located in the proposed Swinomish Channel floodway?
FCZD Meeting	4/16/2012	ALT4	Is there an issue with the jetty on Goat Island? Has the Corps looked at this?
FCZD Meeting	4/16/2012	ALT5	For the ring dikes, what would happen if the levee broke? You would get a bathtub - how will you drain this area?
FCZD Meeting	4/16/2012	ALT6	There is a choke point in the river system at the North Fork Bridge
FCZD Meeting	4/16/2012	ECON	When will the Corps have costs?
FCZD Meeting	4/16/2012	ECON	What will happen if the costs are really high?

FCZD Meeting	4/16/2012	ECON	What will be the efforts of the economist?
FCZD Meeting	4/16/2012	ECON	How is the cost benefit ratio developed?
FCZD Meeting	4/16/2012	ENV	Will the 3 year schedule also include the EIS? How detailed will the EIS be?
FCZD Meeting	4/16/2012	ENV	The Environmental Committee has good knowledge and can help with the study.
FCZD Meeting	4/16/2012	ENV	When will the Corps confront ESA issues?
FCZD Meeting	4/16/2012	ENV	What are the benefits to wildlife/salmon?
FCZD Meeting	4/16/2012	ENV	How will environmental impacts be considered in the Corps analysis?
FCZD Meeting	4/16/2012	HH	What does a flood event look like without flood fighting?
FCZD Meeting	4/16/2012	HH	What is the difference between a floodway and bypass?
FCZD Meeting	4/16/2012	HH	The Joe Leary floodway area needs to be increased, Need to delete the floodway area underneath the levee.
FCZD Meeting	4/16/2012	HH	How much water will be passed through the bypass/floodway?
FCZD Meeting	4/16/2012	HH	Will the floodway/bypass have water in it throughout the year?
FCZD Meeting	4/16/2012	HH	Where will the spill into the bypass occur and at what elevation?
FCZD Meeting	4/16/2012	HH	How frequently will the floodway/bypass be engaged?
FCZD Meeting	4/16/2012	HH	Will the scale of the improvements be based on the hydraulic model?
FCZD Meeting	4/16/2012	HH	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?
FCZD Meeting	4/16/2012	HH	Will the Corps assess interior drainage?
FCZD Meeting	4/16/2012	HH	Has the Corps looked at the Phillips and Williams study which outlines the paths of water?
FCZD Meeting	4/16/2012	PF	Will there be cross integration of the alternative?
FCZD Meeting	4/16/2012	PF	Non-structural measures should be part of every alternative.
FCZD Meeting	4/16/2012	PF	The community can really help with narrowing the alternatives.
FCZD Meeting	4/16/2012	PF	I would like to see 100yr protection for the urban areas and no less than existing protection for the upstream and downstream areas.
FCZD Meeting	4/16/2012	PF	What about Fir Island?
FCZD Meeting	4/16/2012	PF	The FCZD would like to have a workshop with the Corps to discuss alternatives.
FCZD Meeting	4/16/2012	PM	How will the Corps determine what work needs to be done to determine the feasibility of the bypass?
FCZD Meeting	4/16/2012	PM	How far into the 3 year schedule are we?
FCZD Meeting	4/16/2012	PM	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?
FCZD Meeting	4/16/2012	PM	The Corps should use the technical sub-committees as a resource
FCZD Meeting	4/16/2012	PM	Environmental Committee and all the committees need to have the opportunity to look at the alternatives.

FCZD Meeting	4/16/2012	PM	The Corps should engage with the Flood Control Zone District Advisory Committee more.
FCZD Meeting	4/16/2012	PM	Can the County's/subcommittee's help be used as WIK? The FCZD Committee would like their work to be counted as WIK.
FCZD Meeting	4/16/2012	PM	When will we get a FEMA map?
FCZD Meeting	4/16/2012	PM	What does the Corps need to know from the FCZD?
FCZD Workshop	5/21/2012	ALT1	Does alt 1 include the ongoing improvements that the levee system?
FCZD Workshop	5/21/2012	ALT2	Cattle mounds are non-structural
FCZD Workshop	5/21/2012	ALT2	We need interior drainage once the floodwater gets in.
FCZD Workshop	5/21/2012	ALT2	Alert warning systems – we are currently limited in our capabilities – audible alarm system, telephone system, door to door.
FCZD Workshop	5/21/2012	ALT2	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.
FCZD Workshop	5/21/2012	ALT2	Interagency coordination for state troopers. People stop to look at the water when crossing the bridge.
FCZD Workshop	5/21/2012	ALT2	How does Corps deal with this alternative? How does the Corps execute non-structural alternatives?
FCZD Workshop	5/21/2012	ALT2	We need early warning system for the upper valley. (Marblemount down).
FCZD Workshop	5/21/2012	ALT2	When we drive over the Kincaid Bridge the elevated water levels are visible – there could be visual markers (education and outreach).
FCZD Workshop	5/21/2012	ALT2	We need an up system Doppler weather forecasting system.
FCZD Workshop	5/21/2012	ALT2	We should look at watershed management particularly on public lands. We should try to do something to keep the water up the valley
FCZD Workshop	5/21/2012	ALT2	We should look at changing logging practices.
FCZD Workshop	5/21/2012	ALT2	Does Cockreham Island include removal of the levee? Studies have shown that this levee induces flooding on Hamilton.
FCZD Workshop	5/21/2012	ALT2	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.
FCZD Workshop	5/21/2012	ALT3	You will find this 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.
FCZD Workshop	5/21/2012	ALT3	Samish River community will not tolerate the induced flooding. You would need to buy flowage easements.
FCZD Workshop	5/21/2012	ALT3	There is a county drainage group. We would need to figure out how to get their drainage incorporated into the Joe Leary Slough.
FCZD Workshop	5/21/2012	ALT3	This alternative doesn't need modification of the three bridge corridor – bridge modifications may cost more (6 bridges) then the bypass may be cheaper.

FCZD Workshop	5/21/2012	ALT3	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.
FCZD Workshop	5/21/2012	ALT3	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.
FCZD Workshop	5/21/2012	ALT3	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.
FCZD Workshop	5/21/2012	ALT3	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.
FCZD Workshop	5/21/2012	ALT4	This is impossible without a bridge modification
FCZD Workshop	5/21/2012	ALT4	If you do this, then you must have a ring dike around La Conner.
FCZD Workshop	5/21/2012	ALT4	Bypass blocks hwy 20. There will be no north south traffic; it would be cut off by the floodway.
FCZD Workshop	5/21/2012	ALT4	There is already a dike around La Conner.
FCZD Workshop	5/21/2012	ALT5	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.
FCZD Workshop	5/21/2012	ALT5	Burlington got themselves into their mess. Is flood control the reward for poor urban planning?
FCZD Workshop	5/21/2012	ALT5	West Mount Vernon: Looks like a levee setback. How are you going to get memorial rd and McClain road over that back levee?
FCZD Workshop	5/21/2012	ALT5	There are two major trucking companies in West Mount Vernon.
FCZD Workshop	5/21/2012	ALT5	Seems like Alternative 5 may be skipping the step of interior drainage
FCZD Workshop	5/21/2012	ALT6	Should be more than three bridges here –should be 6 proposed bridge modifications.
FCZD Workshop	5/21/2012	ALT6	West Mount Vernon there is a bypass channel. Are you proposing to replace the Division Street Bridge?
FCZD Workshop	5/21/2012	ALT6	Division Street Bridge should be looked at.
FCZD Workshop	5/21/2012	CIV	Setback depending where they are will fill up with sediment. What is the lifetime of levee setbacks? (ALT6)
FCZD Workshop	5/21/2012	CIV	The main problem of the levee setback is that you are going out to build a new levee foundation on a soupy foundation. (ALT6)
FCZD Workshop	5/21/2012	ECON	Is there a cost analysis associated with capturing the costs of improving the levees?
FCZD Workshop	5/21/2012	ECON	If Mount Vernon finishes the flood wall, then the benefits resulting from this improvement cannot be counted towards the GI, correct?

FCZD Workshop	5/21/2012	ECON	If there was no action – what is the cost of damages?
FCZD Workshop	5/21/2012	ECON	What about Burlington? Does the Corps account for inflation/appreciation?
FCZD Workshop	5/21/2012	ECON	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.
FCZD Workshop	5/21/2012	ECON	How does the Corps calculate damages?
FCZD Workshop	5/21/2012	ECON	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.
FCZD Workshop	5/21/2012	ECON	What types of things can the Corps pay for? (non-structural items)
FCZD Workshop	5/21/2012	ECON	Building a levee for ALT3 would be extremely expensive. We need to consider cost.
FCZD Workshop	5/21/2012	ECON	Surely there are cost estimates from WSDOT on Centralia from their flooding shutdown. (ALT3)
FCZD Workshop	5/21/2012	ECON	Some of the housing areas that look new are really quite old. (ALT 4)
FCZD Workshop	5/21/2012	ECON	We need to look at the potential cost of levee setback/three bridges mod and the bypass. ALT4
FCZD Workshop	5/21/2012	ECON	But with the floodway, you could open it up earlier, let the water go out soon. ALT4
FCZD Workshop	5/21/2012	ECON	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 bridge ALT4
FCZD Workshop	5/21/2012	ECON	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)
FCZD Workshop	5/21/2012	ECON	Will cost of mitigation be included in project cost? ALT6
FCZD Workshop	5/21/2012	ENV	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.
FCZD Workshop	5/21/2012	ENV	What are the dangers for the eelgrass sedimentation in Padilla Bay? (ALT3)
FCZD Workshop	5/21/2012	ENV	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
FCZD Workshop	5/21/2012	HH	In a hundred year flood, the water goes through Gages Slough, then goes through Burlington (in no action scenario).
FCZD Workshop	5/21/2012	HH	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)

FCZD Workshop	5/21/2012	HH	Were the alternatives designed for a probable event?
FCZD Workshop	5/21/2012	HH	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
FCZD Workshop	5/21/2012	HH	In the government land survey, the low point is the Olympia marsh. The Water would probably go through the Olympic marsh. ALT3
FCZD Workshop	5/21/2012	HH	When the river was blocked with logs, then it went to Beaver Marsh and Olympic marsh. (ALT 3)
FCZD Workshop	5/21/2012	HH	How long will the water be on the property of people who are behind the sea dikes? (ALT3)
FCZD Workshop	5/21/2012	HH	Key to interior drainage is velocity. Want to have very slow velocities. (ALT 3)
FCZD Workshop	5/21/2012	HH	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.
FCZD Workshop	5/21/2012	HH	How do we know what direction the water exiting the bypass would flow? (ALT 4)
FCZD Workshop	5/21/2012	HH	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 of rip rap from the railroad – there is a lot of rip rap here. (ALT4)
FCZD Workshop	5/21/2012	HH	Lots has been said about storage in Nookchamps and Sterling. There is less and less storage in this area. (ALT 5)
FCZD Workshop	5/21/2012	HH	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
FCZD Workshop	5/21/2012	HH	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)
FCZD Workshop	5/21/2012	HH	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)
FCZD Workshop	5/21/2012	HH	Do you count tides in the hydraulic model? ALT6
FCZD Workshop	5/21/2012	HH	flo2D hydraulic model. Where is it? (ALT 6)
FCZD Workshop	5/21/2012	HTRW	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
FCZD Workshop	5/21/2012	HTRW	Burlington old dump didn't have anything in it because it was all organics – no plastics back then. (ALT6)
FCZD Workshop	5/21/2012	PM	What if the plans don't operate the way we plan? ALT4
FCZD Workshop	5/21/2012	PM	What is the Corps stance on ring dikes? (ALT 5)

FCZD Workshop	5/21/2012	PM	For this alternative, do you need to do a survey? ALT6
FCZD Workshop	5/21/2012	TRIBE	You will put two tribes against each other.ALT3
Hall		ALT2	"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.
Hall		CIV	What determines when and where structural modifications are offered as an alternative?
Hall		PF	Where do 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.
Hall		PM	Is there a long-term timeline that takes flood management in Skagit County through to alternative adoption and implementation?
Hall		PM	Who is the responsible government agency that makes the final decision regarding which alternative to adopt?
Helton		CIV	Concerned whether or not proposed levee heights will sufficiently consider the impacts of sea level rise.
Helton		ECON	Would like to see B/C ratios.
Helton		PF	Concerned that plans may not be following the Draft Executive Order on Floodplain Management.
Henckle		ALT3	Prefer Alt 3- their property would be in the flood area in Alt 4.
Henckle		ALT4	Alt 4 will flood their property – like this the least.
Henckle		H&H	Should consider dredging the Skagit Channel.
Henckle		PF	Like the Fir Island Bypass.
Henckle		PF	Would like to see improved flood protection.
Hudbom		H&H	Sedimentation at the mouth of the river is an issue that should be considered.
Knutzen, B		ALT3	Least prefers Alt 3 (Joe Leary Slough Bypass) – it would be devastating if flooding in both the Skagit and Samish happen simultaneously.
Knutzen, B		ALT4	Prefers Alternative 4 (Avon Bypass) and dredging of the lower river.
Knutzen, B		H&H	He has observed silt build up in the freshwater sloughs that meet Skagit Bay.
Knutzen, B		H&H	There was historically a third river (Swoolahmish River, 1859 survey) between the Skagit and Samish Rivers.

Kunzler, J (comment card)		ALT2	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.
Kunzler, J (comment card)		ALT4	Swinomish Bypass has a lot of political controversy
Kunzler, J (comment card)		ALT5	Alt 5 coupled with dam storage could be viable if coupled to land-use policies preventing further encroachment on the floodplain.
Kunzler, J (comment card)		ALT6	Alternative 6 is unacceptable
Kunzler, J (comment card)		ECON	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.
Kunzler, J (comment card)		H&H	For levee setbacks the old levees need to be removed for this to be effective.
Kunzler, J (comment card)		H&H	Propose that dam storage only be proposed as an alternative.
Kunzler, J (comment card)		PF	Ranking : From most favorable to least favorable: Alt 2, Alt 5, Alt 6, Alt 3, Alt, 4, Alt 1
Kunzler, L	5/23/2012	H&H	Submitted map developed by Dames and Moore for FEMA. (see file) Maps suggests that in 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.
Kunzler, L	5/23/2012	H&H	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.
Kunzler, L (comment card)		ALT2	Alt 2: Prefer this alt. Need to give consideration to flood storage at the dams.
Kunzler, L (comment card)		ALT3	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.

Kunzler, L (comment card)		ALT4	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 alternative. 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.
Kunzler, L (comment card)		ALT5	- 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.
Kunzler, L (comment card)		ALT6	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.
Kunzler, L (comment card)		H&H	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.
Kunzler, L (comment card)		H&H	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.
Kunzler, L (comment card)		H&H	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.
Kunzler, L (comment card)		H&H	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.
Kunzler, L (comment card)		H&H	Interior Drainage: This is an absolutely necessary element.
Kunzler, L (comment card)		PF	Ranking (from preferred to least preferred): Alt 2, Alt 4, Alt 3, Alt 6, Alt1, Alt 5.
Lefebber, D		ALT3	Prefers Alt 3- get the water out of the system, ASAP combined with Alt 4 and 5
Lefebber, D		PF	PDT needs to combine the alternatives
Lefebber, D		PF	Stated need to protect public infrastructure and public safety.
Lefebber, D		PF	Ranking (preferred to not like: Alt 3, 4, 5, 6, 2, 1)

Lefeber, D		PF	Stated the need for the burden of flood control shouldn't fall on a few individuals.
Mount Vernon Public Works	5/8/2012	HH	What about the three bridge corridor?
Mount Vernon Public Works	5/8/2012	HH	Is there one bridge that make more of a difference or do you need to take out all the bridges?
Mount Vernon Public Works	5/8/2012	HH	There are a lot of bridges, the railroad bridge, the Division Street Bridge and the bridges over the forks
Mount Vernon Public Works	5/8/2012	HH	Can you set back the levees without major bridge modification?
Mount Vernon Public Works	5/8/2012	HH	Does the Corps do bypasses in other parts of the County?
Mount Vernon Public Works	5/8/2012	HH	Why can't we dredge the river? It has been done in the past.
Mount Vernon Public Works	5/8/2012	PM	All the alternatives look expensive
Mount Vernon Public Works	5/8/2012	PM	I can see mixing and matching different pieces of the different alternatives
Public Workshop	5/7/2012	ECON	Explain cost-benefit.
Public Workshop	5/7/2012	ECON	One of the problems with dredging was that the Corps would pay the first time and then the sponsor pays maintenance.
Public Workshop	5/7/2012	ECON	Both bypasses have sheet flow and channel options. What happens to the value of farmland in the path of the bypass?
Public Workshop	5/7/2012	ECON	Previous options of bypass had 9-10 year levee corridor. I can't imagine what kind of agriculture that can exist in the bypass.
Public Workshop	5/7/2012	ECON	You can farm a bypass but it is not as profitable.
Public Workshop	5/7/2012	ENV	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.
Public Workshop	5/7/2012	ENV	Are steps being taken to streamline the vegetation management and ESA process?
Public Workshop	5/7/2012	HH	What about dredging the river system?
Public Workshop	5/7/2012	HH	Explain what a flowage easement is.
Public Workshop	5/7/2012	HH	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.
Public Workshop	5/7/2012	HH	Over the life of project, how are we considering sea level rise?
Public Workshop	5/7/2012	HH	Why can't we continually dredge the Skagit? They continuously dredge the Mississippi River.
Public Workshop	5/7/2012	HH	How is the sheet flow problem going to be defined? Will eminent domain be involved?
Public Workshop	5/7/2012	HH	Looking at alternatives, I don't see interior drainage.
Public Workshop	5/7/2012	HH	What will tidal influence do to the sheet flow/channel bypass?

Public Workshop	5/7/2012	HH	There is only one thing that helps everyone: dam storage.
Public Workshop	5/7/2012	HH	You have to be careful as to when you let water down the bypass.
Public Workshop	5/7/2012	PM	Has there been a cost analysis and estimated construction timeline?
Public Workshop	5/7/2012	PM	Study has gotten harder and time reduced.
Public Workshop	5/7/2012	PM	Suggestion: The outreach is good but it has to be meaningful.
Sedro-Woolley City Council Meeting	4/25/2012	ALT3	How will the incoming tide affect the water that moves through the Bypass?
Sedro-Woolley City Council Meeting	4/25/2012	ALT3	How will Alternative 3 (Joe Leary Bypass) affect Sedro-Woolley
Sedro-Woolley City Council Meeting	4/25/2012	ALT3	What will be done about the houses located in the floodway?
Sedro-Woolley City Council Meeting	4/25/2012	ALT3	Did the team analyze the effect of the Samish River Flooding in the Skagit Basin?
Sedro-Woolley City Council Meeting	4/25/2012	ALT3	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.
Sedro-Woolley City Council Meeting	4/25/2012	ALT3	Why wait until larger events to use the bypass?
Sedro-Woolley City Council Meeting	4/25/2012	ALT3	What about NEPA Issues? Has the team looked at the impacts to the Marine Sanctuary in Padilla Bay?
Sedro-Woolley City Council Meeting	4/25/2012	ALT3	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?
Sedro-Woolley City Council Meeting	4/25/2012	ALT3	How much water will be diverted from the River into the bypass?
Sedro-Woolley City Council Meeting	4/25/2012	ALT4	This plan will have less impact on Sedro-Woolley (individual opinion)
Sedro-Woolley City Council Meeting	4/25/2012	ALT4	The path of this bypass would affect fewer houses in the city.
Sedro-Woolley City Council Meeting	4/25/2012	ALT5	What do you mean by move-out? Is this a mandatory evacuation before the flood?
Sedro-Woolley City Council Meeting	4/25/2012	ALT5	Is the Mount Vernon floodwall part of this strategy?
Sedro-Woolley City Council Meeting	4/25/2012	ALT5	Will the Corps buy land that is within the floodway?
Sedro-Woolley City Council Meeting	4/25/2012	ALT5	What about Hwy 20 and Cook Road? Closure of these roads would trap Sedro-Woolley - people would not be able to evacuate if needed.

Sedro-Woolley City Council Meeting	4/25/2012	ECON	Does the Corps have an estimate of project costs? The biggest cost will likely be real estate.
Sedro-Woolley City Council Meeting	4/25/2012	H&H	Will the FEMA hydrology be used in this study?
Sedro-Woolley City Council Meeting	4/25/2012	H&H	What about implementation of 107c in the Baker FERC license?
Sedro-Woolley City Council Meeting	4/25/2012	H&H	Has the team considered placing a bypass on Fir Island to serve as a third fork of the river?
Sedro-Woolley City Council Meeting	4/25/2012	PF	Do any of the alternatives incorporate management of woody debris in the river?
Sedro-Woolley City Council Meeting	4/25/2012	PF	How did the team formulate the preliminary alternatives?
Sedro-Woolley City Council Meeting	4/25/2012	PM	When does the 50 year project lifetime start?
Sedro-Woolley City Council Meeting	4/25/2012	PM	Will the project be constructed in phases?
Sedro-Woolley City Council Meeting	4/25/2012	PM	How can the City of Sedro-Woolley contribute to this discussion?
USFWS	6/19/2012	ENV	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).
USFWS	6/19/2012	ENV	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).
USFWS	6/19/2012	ENV	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.

USFWS	6/19/2012	PF	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”.
Wasserman		ENV	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
Wells, G		H&H	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.
Wells, G		PF	Prefers dredging and removal of debris from the North and South Fork.

Comment Categories	
CIV	Civil Engineering
ECON	Economics
ENV	Environmental
HH	Hydrology and Hydraulics
HTRW	Hazardous Waste
PF	Plan Formulation
PM	Project Management
TRIBE	Tribal Concerns/Issues
NA	No-Action Alternative
ALT1	Alternative 1: No Action
ALT2	Alternative 2: Non-Structural
ALT3	Alternative 3: Joe Leary Bypass
ALT4	Alternative 4: Swinomish Bypass
ALT5	Alternative 5: Urban Levees
ALT6	Alternative 6: Levee Setbacks

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