

**Skagit Feasibility Scoping Meeting
Final Meeting Notes
May 4, 2001
Army Corps of Engineers**

I. Welcome and Background Information

Mike Scuderi welcomed everyone to the meeting. He thanked the participants for coming and explained that, as the Corps was proceeding in the planning process for Skagit Valley Flood Risk Management, it needed input from agencies about environmental impacts that they might foresee.

At this meeting, **Mike** wanted to explain the alternatives, formulate concerns and questions that may be raised in the EIS, and identify studies that may be needed. By the end of the meeting, the group would ideally have identified questions and studies, initially ranked the alternatives and listed alternatives it believed to be environmentally infeasible.

Valerie Lee, the **facilitator**, introduced the topic further by saying that she has been working with a group of citizens and other stakeholders on flood risk management planning. This Skagit Flood Risk Management Working Group (Working Group) providing feedback on several different alternatives. She explained that the Working Group is very eager for feedback from the agency experts about the alternatives. The Working Group would like to form partnerships with agencies and other organizations and formulate a flood risk management plan that is beneficial to salmon and as well as provides some protection from floods. They would like to know the initial opinions of the agencies on which alternatives they prefer.

Questions were raised about what stage the planning is at. **Stephen Pierce** explained that there are currently seven action alternatives. Those studies have been planned to a ten percent detail level. Two million dollars are available to take one option to the 35% stage. Replying to the facilitator's question about what the different design stages would look like, **Stephen** stated that the 10% stage has some details, but only enough to formulate a rough estimate of what building costs would be. The 35% stage includes more specifics such as how bridges will be designed and exactly what property will need to be acquired.

Lou Ellyn Jones expressed doubt that there was currently enough information to answer questions and express preferences. She cited the example of the bypass, saying that it was an option with huge potential benefits, but also huge concerns. For her, basic questions remain unanswered.

Acknowledging that what he was going to say was might be unpopular, **Mike** stated that the 10% design that was done had not included an environmental analysis, and legally, the Corps is required to do an environmental analysis. He said that a preferred alternative could be selected, but the studies must still be accomplished.

The **facilitator** suggested that while the regulatory steps that had been laid out was very linear, the process could also be accomplished in parallel. Instead of holding up the process while studies are done, discussions and some design could continue as the studies progress. She also suggested that the group discuss *designation* of a preferred alternative, rather than *selection* of a preferred alternative, since technically selection only happens with a final EIS.

Stephen confirmed that the goal of the group was to reduce the number of options remaining for continued study. **Mike** agreed, but said that legally he would need a strong reason to eliminate an alternative. He cannot eliminate anything for capricious or political reasons.

Larry Wasserman suggested that the alternatives be combined into four types, so there would be less repetition of questions between similar alternatives. All the alternatives that include a Swinomish diversion are included in one group. The second group includes the overtopping alternatives, the third includes setbacks, and the final one is the Samish diversion. He added that, for him, the Samish diversion has such large environmental problems, such as mixing water and fish, it should not be considered further. He believes that the Swinomish diversion alternatives can be discussed together and during that process, the best option will emerge.

Mike clarified the legal process by explaining that a Record of Decision is a legally binding document that defines how a decision was made as well as the decision. That document would be used in lawsuits. The US Fish and Wildlife Service (FWS) supplies a Coordinating Act report to the Corps when the EIS is issued.

Lou Ellyn suggested that the group review all of the alternatives to make sure everyone could follow the discussion.

II. Description of Alternatives

Mike began by elucidating that there are actually eight alternatives because a no-action alternative needs to be analyzed in an EIS according to NEPA. Participants were given a packet of drawings of the different alternatives and another sheet that explained the alternatives.

The first alternative would include an 80,000 cfs-capacity diversion flowing into the Swinomish just downstream from the river bend. At its outlet, an 850-acre salt marsh would be planned. There would be levee setbacks of 500 feet through the three bridge corridor to allow 250,000 cfs under the bridges. The diversion would be designed to include five feet per second flow. When the water in the diversion enters the marsh, the water would slow even more. Along the diversion would be a 500-foot riparian buffer. The amount of water through the channel at low flow has yet to be determined. At the inland edge of the salt marsh would be a tidegate structure to control saltwater intrusion.

Larry asked whether the tidegate structure was a feature of the plan or merely an option. **Mike** replied that it was currently a feature but that, like most features, it could still be discussed.

Mike explained the entry gate structure. It would have two parts: one would tip over during high flow, letting the floodwaters past and the other would let water and fish through during low flow.

Kurt Buchanan raised a question about grade control. **Stephen** responded that every mile, a road would have to cross the diversion, and a sheet pile wall would be placed along the roads to prevent the channel from cutting deeper. This was depicted on the last page of the drawings that Mike had handed out. There would be a small bridge or a large culvert over the channel for most of the country roads. The LaConner-Whitney road would be elevated on a larger bridge.

Rod Sakrison asked how deep the channel would be. **Mike** responded that it would be shallow, but the exact depth had not been worked out yet. **Rod** also asked whether the channel would collect groundwater, since collecting too much could cause a problem. **Larry Wasserman** commented that groundwater channels do exist, for instance the LaConner Slough complex.

Mike continued with the features of Alternative 1 by describing the setback levees in the three-bridge corridor. This is a common feature of all the diversion alternatives. The setbacks in the three bridge corridor would require a 20-foot bank excavation. **Kurt** asked for clarification. Mike explained that a 20-foot bank excavation would mean that the levees would be moved back, and the area between the levee and the river would be excavated 20 feet. Except for the 20 feet already removed, the toe rock maintaining the river bank would remain in place. In this scenario, the armor along the river would remain, so there would be little interaction between the river and the floodplain.

Lou Ellyn pointed out that if the toe rock were left in, most of the environmental benefits of a natural river system would not be realized. Without the environmental benefits, the additional funding may not be available. **Brendan Brokes** concurred, and added that juvenile fish might get stranded outside of the river channel after a flood.

Lou Ellyn added that she had talked to the fluvial geomorphologist at FWS, and he suggested that even if you leave the toe rock in place, the channel might go on the other side of it at some point. She commented that some members of the Working Group had assumed that removal of the toe rock would cause more sedimentation. She stated that numerous questions existed about leaving the toe rock in versus removing it, and that sedimentation studies should be done to answer those questions.

Larry asked if what the group was doing was scoping. If so, he wanted it to be recorded so that the group did not need to go through the process multiple times. He suggested that the group articulate the questions better. The **facilitator** agreed and suggested that the group finish describing the alternatives and then write the questions on a flip chart.

Kurt asked whether the levees would still be grass-covered if the riprap remains in place, and **Mike** responded affirmatively. He continued by explaining that in Alternative 1, there would be a flood wall in Mount Vernon by the revetment, and that one important effect of this alternative would be that the 100-year floodplain designation would disappear.

There would be a new dike built downstream of Sedro Woolley where typically there is a flood fighting effort by Mom's Café. **Mike** directed the group to sheet 29. He explained that the upper portion of the dike protects the sewage treatment plant and the lower portion protects the community. **Kurt** disputed the location of the sewage treatment plant and strongly stated that he was not in favor of the Nookachamps Creek levee. **Larry** questioned whether there was enough information to have this detailed a conversation.

The **facilitator** asked if the group wanted to go through all the questions on an alternative, or go through all the alternatives first. **Kurt** suggested that without questions, the explanation of alternatives would go much faster. The group decided to quickly review all the alternatives first.

Mike moved on to Alternative 2. In this, the diversion would hold 40,000 cfs, and include additional levee setbacks. The diversion would only be 1000 feet wide. It would have the same inlet and outlet as Alternative 1 and include the levee setback through the three bridge corridor with bank excavation.

Mike skipped to Alternative 7 on sheet 27. In many ways, it would be similar to the Alternative 1. It includes the levee setbacks with bank excavation in the three bridge corridor, and a similar diversion. However, the inlet and outlet for the diversion would be situated differently. The diversion in Alternative 7 follows the Highway 20 corridor, and much of the land would be in the DOT right-of-way. The diversion would end in a similar salt marsh.

Alternative 4, **Mike** explained, would involve overtopping with ring dikes around the cities. There would be five overtopping structures. It would result in rural areas being approximately equally inundated during a flood event.

Alternative 3 includes overtopping, but protects the transportation corridor. There would be setbacks and riverbank excavation in the three bridge corridor, a cross dike at Burlington and a floodwall at Mount Vernon by the sewage treatment plant.

Alternative 5 would include only setback levees. There would be a 500-foot setback through Burlington and another in Mount Vernon. Stephen corrected the drawing in which the levee in West Mount Vernon had been inadvertently omitted. Below Mount Vernon, there would be levee setbacks, but no bank excavation.

Lastly, **Mike** moved to Alternative 6. In this alternative, there would be a diversion with no permanent flow in it from above the three bridge corridor joining the Samish River. During flood events fish might go down the channel and have no way to return.

IV. List of Concerns about a Swinomish Diversion

The **facilitator** suggested that the group raise specific questions about the different alternatives, beginning with the alternatives that include a Swinomish Diversion. The group compiled this list, which has been organized by subject matter. During the discussion, the group also offered suggestions for designs they might prefer. These suggestions are listed following the questions.

Salinity

- How would salinity affect the quality of water and habitat in the channel and the surrounding farmland?
- How far might salt intrude around the salt marsh at the diversion outlet?
- How will the design of the channel encourage or discourage salt and fresh water mixing?
- How will the diversion affect salinity in the Swinomish?
- If water for the diversion comes from the Skagit, what will be the downstream salinity effects in the Skagit?

Sedimentation

- At high flows, where will the sediment in the diversion be deposited?
- If water for the diversion comes from the Skagit then what will be the downstream sedimentation effects in the Skagit?
- How will the outflow impact the Swinomish Channel and the Reservation? Will there be sedimentation changes, which might cause navigation problems?

Location of Structures

- What is the relationship between the current bypass and historic sloughs and wetlands?
- Is it possible for the diversion to divide as it comes toward the outlet, thus imitating a more natural and historic course?
- Where along the bend will the inlet for the diversion be?

Land Use

- Can the riparian zone go beyond the 500-foot wide buffer?
- What will the land use be within the 2000-foot diversion and how will it be regulated?
- How will land uses be regulated outside the diversion, especially in light of the removal of the 100-year floodplain designation for the surrounding area?
- Currently, there are sloughs in the area of the diversion. With the potential for increased development in the floodplain, how will their water quality be affected?

Engineering Questions

- How will the water and fish flow into the diversion during low flow? Would that necessitate moving water up hill?
- What will the maintenance practices be for the channel during low-flow?
- What is the appropriate level of modeling to determine salinity and hydrologic changes?
- Are there alternatives other than tidegates to prevent intrusion? For example, could a 15-20 foot ditch filled with clay be used to prevent intrusion?
- Is it possible to design refugia for fish during high-flow events in the diversion? For example, could beads or meanders be designed in the channel?
- Would it be possible to incorporate wetlands within the footprint of the diversion?
- How would wood be placed/recruited into the channel?
- Is it possible to incorporate Sullivan Slough or others into the design?
- How can the engineers guarantee that the main body of the river will not flow down the diversion channel during a flood event?
- What is the likelihood of catastrophic failure, and how do you ensure against it?
- How will grade control structures function and allow for natural function of the river?

- What will maintenance needs be after a flood?
- What will be the standard maintenance?
- Will the tidegate structure reduce habitat benefits?

Flow in the Diversion

- Where does the year-round low flow come from?
- How will the amount of water in the floodplain be regulated?
- Will the sediments in the channel support surface flows, or will the water seep into the ground?
- Are the flows in the diversion subject to in stream flow requirements?
- Is the diversion legally considered a consumptive use of water?
- Are there total maximum daily load (TMDL) concerns?

Other Questions

- How will numbers of returning adult fish be assessed and monitored?
- If you take water out of the Skagit, how will temperature and habitat quality on the lower Skagit be affected? This is particularly important to bull trout, which are more sensitive than Chinook.
- How does the diversion affect the groundwater regime?
- How will a diversion change FEMA maps?

Suggestions

- Both the configuration and location of an inlet structure could have huge effects on the potential for fish passage. Where the inlet structure currently is for Alternatives 1 and 2, there is sufficient large wood debris to cause fish to congregate.
- Lower salinity in the Swinomish would be beneficial to fish.
- A possible salinity barrier could be a 15-20 foot ditch filled with clay, although that might be an expensive alternative.
- Wetlands and refugia of various types could be placed in the diversion.

IV. Timeline and Next Meeting

The **facilitator** reminded the group that the County had requested some specifics before the May 22nd meeting of the Working Group. She acknowledged that this group still had many concerns, and had just finished coming up with questions for the first option, but asked how the group could perhaps meet the County halfway with a potential timeline.

Kurt stated that parts of this process had already been done five years ago and expressed his opinion that the deadlines were artificial. He did not believe it would be possible to get a good product if the process is rushed. **Larry** agreed that it might take longer than the County wishes, because many of the questions raised would need to be studied. The Tribes need more information before they could state preferences.

Kurt reminded the group that the Skagit is one of the most important rivers for Chinook and bull trout. If a project does not clearly benefit these species, he did not think that the project would be feasible. **Dan Tonnes** agreed that this project would offer a great opportunity for partnership. He believed that the more the water could access the flood plain the better it would be for fish. He favored the idea of restoring old sloughs as well.

The **facilitator** asked the group what a reasonable time frame would be to formulate its questions for the rest of the alternatives. **Larry** thought that a similar process of coming up with a list of questions for the other options would last another meeting. He also said that he did not think that the County had an intention of pursuing the overtopping option. He said he would want to know if that were true before this group spent time on that option.

Kurt said that although he may not continue with these meetings he favors having an all-day meeting. Many people have a long drive to get to Seattle, and everyone agreed a long meeting would be better than several short meetings. **Kurt** also suggested that the notes from the old meetings that scoped overtopping be provided, so that people could read ahead about what has been done before.

The **facilitator** asked **Don Dixon** if he would like to have a Working Group meeting before the next meeting of the agencies takes place. **Lou Ellyn**, since she had agreed to report back from this group to the Working Group, wanted to have something concrete to take back to the Working Group.

The **facilitator** responded that she had heard opposition to the Samish bypass alternative from this group, and she asked if they were willing to remove it from consideration. Many people were willing to, but **Kurt**, while agreeing that it was not a popular option, wanted to discuss it more thoroughly first.

The group agreed to meet on May 11th from 9:00 AM to 1:00 PM at the same location. **Valerie** would not be available to facilitate, but **Alisa** will still be present to take the notes at the meeting.

Participant List
May 4, 2001

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