From: staff@envintl.com [mailto:staff@envintl.com]
Sent: Friday, December 08, 2000 3:09 PM
To: Environment International Ltd.; Bob Boudinot; Chuck Bennett; Corey Schmidt; Dan Tonnes; Dave Burdick; Dave Hedlin; Deeann Kirkpatrick; Ed Capasso; Fred Buckenmeyer; Gus Teersdma; Jacqueline Vander Veen; Larry Wasserman; Lou Ellyn Jones; Margaret Fleek; Mike Scuderi; Patrick Massey; Paul Johnson; Rich Johnson; Shirley Solomon; Steve Pierce; Will Roozen
Subject: Information for the December 12th Meeting

Dear Participants,

The alternatives for flood control in Skagit County that have been identified thus far by the Working Group are listed below. These alternatives were identified during a brainstorming session of the September 14th Working Group meeting. During this brainstorming session, Working Group members studied a Mylar map of the Skagit floodplain to help them generate ideas about potential alternatives for further consideration. The purpose of the brainstorming session was to produce a range of flood control alternatives for further analysis by the County and Corps of Engineers. Information from these analyses will include, but is not limited to, the amount of flow accommodated, land required, costs and what segment of the population will be involved or affected by each alternative.

The purpose of the brainstorming session was not to accept or reject specific alternatives, nor to create any limitations on what approaches may be considered in the future. The Working Group will be given additional opportunities to identify more alternatives for investigation and to clarify/fine tune the existing alternatives. Therefore, the following list does not represent the complete list of alternatives being analyzed for the Flood Risk Management Plan.

In addition to the list of alternatives, directions to the County Administration Building where the December 12th meeting will be held are listed below. I look forward to seeing you on Tuesday.

Sincerely,
Valerie

Alternatives from the September 14th Brainstorming Session

1. Do nothing.
2. Increasing levee height, such as raising the Francis Road for 10 to 15-year protection and providing an outlet for Nookachamps Creek.
3. Setting back levees, where levees are moved back 500 feet, 1000 feet or some increment that provides more back flow. An example is the 500-foot set back of levees for Diking District 12 and 17.
4. Overtopping levees, where levees are identified as preferred for overtopping. These levees will be purposely left lower or designed to overflow. The levees would either be hardened for overtopping and/or given shallow back slopes to prevent catastrophic failure.

5. Constructing a floodway bypass. For example a floodway could be built across big bend such that flow returns to the river.
6. Developing a floodway outlet, such as the Avon Bypass where flow is permanently diverted from the river. Another option is to construct a floodway outlet across Fir Island adjacent to Dry Slough where there are no buildings (West side). Each of these floodway outlets would require a controlled inlet but the outlet would be optional. The floodway could be defined and limited by constructing a channel bordered with dikes or a bermed floodway with minimal excavation that permits land use within the berms.
7. Creating a sand plug levee for a tidal sea gate as opposed to a low section levee for over topping or a gated structure. A sand plug levee is composed of a hardened section that is built to withstand flow velocities and a weaker section.
8. Constructing ring dike levees around Conway, Burlington, Mt Vernon and West Mt Vernon. Other developed areas may also need ring dike protection.
9. Developing sea dike outlet structures, such as Fir Island, Padilla Bay and Samish Bay. Examples include flap gates for one-way flow, barn door gates for two-way flow at low tide and sand plugs.
10. Opening existing floodways, such as Gages and Britt Sloughs.
11. Constructing cross dikes that protect areas such as downtown Mt Vernon from being back flooded from the South.
12. Opening protected areas to flooding (levee removal).
13. Excavating channel section, where bench is excavated within the floodplain to allow the river more flow within the confines of the setback levees.
14. Ring diking the towns for a 100-year flood event and leaving the remainder of the levees at a 35-year flood stage. In addition, overtopping will be allowed at strategic places, such as District Line Road, above Burlington; Pulver Road, below the freeway bridge; and Donnelly Road, above West Mount Vernon.
15. Additional items mentioned during the brainstorming session include:
A. Setting back levees across river from Britt Slough
B. Overtopping levees on both sides of North Fork by Beaver Marsh Road
C. Opening Brown and Hall Sloughs
D. Cutting point in river above Burlington
E. Overtopping or drain structures in levees adjacent to Conway (to drain West)
16. Excavating both sides of river at Mt. Vernon to open up the channel and raising the bridge approaches.
17. Establishing flood protection for Lyman, Hamilton and Cape Horn. (Added by Stephen Pierce)

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Environment International
5505 34th Ave NE
Seattle, WA 98105
Tel: 206-525-3362 • Fax: 206-525-0869
www.envintl.com • staff@envintl.com