

SKAGIT COUNTY DIKE,
DRAINAGE & IRRIGATION
DISTRICT NO. 12
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August 4, 2014

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

VIA EMAIL: skagit.river@usace.army.mil

**Re: Skagit County GI Study Draft FR-EIS – Public Comment; Skagit County Dike,
Drainage and Irrigation District No. 12**

Dear Ms. Hadley:

Please accept these public comments by Commissioner Lorna Ellestad, Commissioner Eddie Tjeerdsma, and Commissioner John Burt for Skagit County Dike, Drainage and Irrigation District No. 12 (“DD12”) regarding the Skagit County GI Study Draft FR-EIS. These comments are in addition to and supplemental to the comments made at the public meeting on June 13, 2014, by Dan Lefebber, District Operations Manager, and John Shultz, Attorney for the District.

I. BACKGROUND

Dike District No. 12 is responsible for managing diking, and flood protection operations in its District in Skagit County. DD12 provides protection for the entire City of Burlington, and outlying areas in Skagit County. The District has statutory duties and powers pursuant to state law, and a vital interest in flood protection for public health and safety. DD12 provides protection for over 110,000 residents in Skagit County, and hundreds of millions of dollars of property value. The District also deals with issues relating to flood damage repair, maintenance, erosion, river debris, fish and endangered species habitat, and numerous other environmental issues.

The District is also a member of the Skagit County Dike and Drainage District Flood Control Partnership which is a group of five Dike Districts, including Skagit County Dike District No. 1, 3, 12, 17, and 22. The Districts are continually involved in maintenance, prior to flood season in October, and November of each year, along with flood-fighting efforts during high water in these months. The rest of the year is spent performing maintenance activities, repairs and construction projects.

There can be no greater single impact on life and property, than management of the river to control a catastrophic flood. A flood will destroy every other program, management practice, or effort to maintain environmental features or habitat. A catastrophic flood will sweep away everything in its path, will inundate every aquatic resource, and will contaminate water, submerge sewage treatment plants, farms, chemical facilities, and will introduce human waste, chemicals, gasoline and oils, and toxic waste materials into otherwise clean waters. Lakes

and fields can be covered by a toxic flood of water which will destroy water quality and aquatic resources. There are few more important endeavor than to protect life, property, the environment and habitat from the ravages of floods.

The DD12 Commissioners are in support of this GI Study proposal with selection of the CULI, Comprehensive Urban Levee Improvement. The District has worked with the City of Burlington and Skagit County for many years in support of the GI Study. The District complements the Corps for the diligent work and effort which appears to be bringing the study to completion over these past many years that the study has proceeded. In the interim, the District has worked closely with the City of Burlington for the project which will be included in the CULI. A significant amount of related levee and flood protection work has preceded this proposal, for which DD12 is currently moving through the permit process with the City of Burlington and Skagit County.

The significant benefit of this current study and the CULI proposal is that it finally represents a detailed county and system-wide proposal for reducing flood risk, life safety threats and damages to the Skagit River Basin as a result of flooding. The Skagit River Basin experiences frequent floods, of minor to major intensity, resulting in substantial damage to the community, urban and rural areas, and the infrastructure and economic activities of the Skagit County.

The study has examined more than 20 different measures over the last 15 years including structural and nonstructural to reach the current Draft Feasibility Report and selection of the CULI. The selection of the CULI Alternative was determined to be the most viable and cost-effective project to meet the objectives of reducing flood risk to life safety. Other action alternatives, including three which would have provided similar levels of flood protection at the 100 year level, were determined to have considerably higher construction costs, real estate costs, or environmental impacts. The CULI turned out to be not only the most cost-effective plan to reduce flood risk, but was also the plan which resulted in the least impact to environmental compliance, and provided the most protection for the greatest population in the Skagit River Basin. It would also be the most likely to receive federal funding.

Although this is still a Draft Feasibility Report, the CULI is the best step forward to provide protection to the greatest number of people and the largest geographic area, both urban and rural, and with the best cost-benefit ratio. More importantly, from a local standpoint, this is a system-wide approach which provides numerous proposals for flood protection for various other Districts and municipalities.

As noted on pages 48-51, the CULI provides not only for improvements and work within DD12, but would also provide many other system-wide improvements, including: 1) a flood wall or ring dike around United General Hospital; 2) a ring dike and the flood wall at the Sedro-Woolley Wastewater Treatment Plant; 3) work at the Three Bridge Corridor; 4) work in the area of Dike District 17; 5) a Riverbend cut-off levee and crossing; 6) a Lions Park connector; 7) a flood wall in Dike District 3; 8) raising of the levee with a floodgate in Dike District No. 1.

Also, there would be other structural and nonstructural components. These include: 1) BNSF railroad crossing improvements; 2) debris management of the river bridges; 3) work on evacuation routes; 4) outlet structures in sea dikes; 5) installation of additional gauges; 6) flood warning systems; 7) real estate acquisition; 8) relocation and elevation of structures, and flood proofing of buildings.

Although no plan is perfect and there are no guarantees in life, this is a major step towards providing for a system-wide, comprehensive program of flood protection measurements throughout the County and throughout several Districts and municipalities. Further, although funding may be difficult, when any funding is obtained, this will be a substantial amount of federal funding which can be used by the numerous entities in the County on these projects. This would significantly reduce the cost to the local sponsors, who would likely pay a 35% share with the federal government paying 65%, or some other percentage of cost sharing to be determined.

Reviewing these factors, and looking at this study in light of a system-wide project for the entire Skagit River Basin, there would appear to be much to like about the study. Although there may be detractors, criticism, and resistance by various groups to the plan, we know that not moving forward and rejecting approval of the study could have disastrous consequences. The result would be to deprive Skagit County and municipalities of potentially millions of dollars in federal funds, and a system-wide plan of flood risk protection, for all of the residents, cities, and urban and rural areas in Skagit County.

This study provides funding for a framework of teamwork and mutual benefit for many entities in the County with important and critical life and safety protection for all residents. A lack of teamwork, cooperation, and rejection of this plan will only serve to drive away federal funding, federal assistance, and protection that the people of Skagit County need. This plan provides an inclusive framework for all entities to cooperate and to work together to resolve differences and complaints to achieve a plan that works for everyone.

II. PRACTICAL AND ADDITIONAL SYSTEM-WIDE RECOMMENDATIONS FOR APPROVAL AND IMPLEMENTATION OF THE CULI

A number of practical and system-wide recommendations would be beneficial in implementing the CULI. These include structural and non-structural proposals as well as suggestions for cooperative efforts by individual entities to obtain the full advantage of the CULI:

1. Existing organized drainage and dike districts should be recognized as critical elements of the CULI and consulted accordingly.
2. Ongoing or proposed District or City flood reduction projects consistent with and compatible with the CULI should be identified as such and supported by County, State and Federal agencies for the County, regional and national benefits they provide.

3. Existing levels of protection should be maintained and managed as part of the CULI. Operation of any system wide evacuation measures should include “triggers” that allow for the maintenance of the existing level of protection during lesser events for those areas identified as receiving increased risk by this alternative. Improving protection levels in some areas should also be considered as compatible with the CULI if managed appropriately. It is unclear to DD #12 how the CULI addresses current flood fight operations in Sterling and other areas.
4. Overland flow modeling should be completed and potential outlet structure locations identified before the CULI is finalized and put forward for authorization. Multiple project benefits should be considered during this process with improving existing drainage a priority.
5. County annual road maintenance should be evaluated to insure that all existing road surface elevations are currently or will be modified to be consistent with westerly conveyance requirements of projected flood waters as part of annual road maintenance and other transportation improvement projects. Planning, design and implementation of strategically located “swales” should be constructed as part of all County road resurfacing maintenance beginning immediately. One example of the impact of the ongoing practice of adding material to road surfaces during routine road maintenance on overland flow of flood waters is Chuckanut Drive. The impact on the flooding situation in Allen by the increase in the road surface elevation from the continued resurfacing of Chuckanut Drive was resolved years ago by an agreement with Washington State Department of Transportation (WSDOT) to maintain specific road surface elevations as required so as not to increase flooding in Allen and to facilitate the westerly conveyance of overland flood waters. The need for the installation of adequately sized and strategically located “at grade” swales in all roads perpendicular or within identified flow corridors will be exacerbated by the adoption of the Comprehensive Urban Levee Improvement Alternative (CULI) and should be included as a significant part of the proposed alternative.
6. All forms of Baker River storage should be included as part of the CULI including “imminent flood” drawdown. Storm predictions are becoming increasingly more accurate and provisions for including significant “draw down” of all reservoirs within the Baker and Skagit systems should be included as part of any flood damage reduction strategy. Evacuating as much water as possible in advance of any high flow event saves not only constructed storage but also natural storage within the basin for attenuation of peak flows.
7. Early warning actions such as financial support of USGS gauging systems and flood preparedness training and coordination should be identified as non-structural support for the CULI and associated costs treated as match.
8. Potential “Early action” projects such as protection of United General Hospital, Sedro Woolley Waste Water Treatment Plant and Improvements to HWY 9 that have been

included as part of the CULI with increased risk from the CULI should update construction designs and continue to move forward. Funding and construction of these and other projects recognized as CULI elements should be included in project costs and qualify as local match if completed within 5 years of initiation of construction of the CULI

9. Washington State Department of Transportation infrastructure planning should be consulted and referenced in the CULI and designed to be consistent with the increased risk from the CULI. Funding and construction of WSDOT transportation improvements within the CULI project area should be recognized as CULI elements and all project costs should qualify as local match if completed within 5 years of initiation of construction of the CULI.
10. Any Agricultural or other conservation easements strategically located to prevent development within any conveyance corridors within the CULI project area should be recognized as CULI elements and all costs should qualify as local match if completed within 5 years of initiation of construction of the CULI.
11. Any and all costs associated with elements identified within the CULI or that are designed to function as supporting an element within the CULI should qualify as project match. This is especially true for any ongoing County or District maintenance activities that are currently consistent with or are modified to be consistent with the CULI alternative purpose.

III. ENGINEERING ANALYSIS AND CONCERNS

There are also concerns based on engineering analysis and recommendations for implementing the CULI, and coordinating the plan with local and County entities. These include structural and non-structural elements and recommendations.

DD12 will serve both Rural and Urban levels of protection under this plan. The Rural areas are both upstream and downstream of the City of Burlington Urban area. Limitations in this plan as to how and why the District will provide different levels of protection to their constituents needs to be more clearly communicated by the Corps and County. DD12 is very concerned that their entire District continues to receive the current level of protection and to at least the same height of their existing levee system. DD12 believes this should include raising the downstream levees proportionally to the proposed increases in river stage that will occur through the three bridge corridor.

DD12 has both river levees and bay dikes. This CULI, to provide a higher level of protection to the Urban areas, needs to also include both the structural and non-structural components to get the flood water out of the Bay Dikes for the flood events above 4% when overtopping of the Rural levees will occur. This plan should include the frame work for coordinating this plan with the local District and County plan and planning components.

By not including hydraulic modeling on the CULI in the Draft Feasibility Report and Environmental Impact Statement, it becomes somewhat difficult to comment because we do not know the actual effect on different areas within our District. Fortunately, DD12 has had modeling done on the portion of the Burlington Urban Levee included in the Final Environmental Impact Statement published in July 2010 as a Co-Lead to the City of Burlington. DD12 has also had this modeling updated in May 2014 to the current GI study hydrology and hydraulics. DD12 would need to have input on the final location and placement of the Burlington Hill Cross Levee and the associated Gages Slough Culvert and Burlington Hill Flood Gate. How the new tieback levee to Burlington Hill affects the Rural portions of the District both upstream and downstream is still very important to DD12.

The CULI Alternative modeling and design needs to include the levee improvements required to provide the Rural level of protection to the Sterling area between the Burlington Hill Cross Dike and United General Hospital. Flood fight currently occurs along the top of the BNSF railroad. DD12 needs to know at what height a levee improvements along the south side of this RR needs to be constructed to continue to provide this portion of their District the current level of protection. This evaluation should also include whether or not this levee should be located along the south side of the houses along the south side of Lafayette Road or along the current RR embankment.

DD12 also needs to know what level of protection will be provided by the ring dike around United General Hospital. Will this be at the 1% flood or to the higher Urban 0.4% protection proposed for the City of Burlington?

As a part of the study and design leading up to the July 2010 EIS by the City of Burlington and DD12, geotechnical borings and design work concluded that higher setback levees, while leaving the current levee in place within the three bridge corridor, may be a better alternative for both construction cost and maintenance. DD12 wants to make sure that the CULI does not restrict the use of setback levees in this corridor to accomplish the proposed level of protection.

The estimated construction window of 2 years is not realistic. Typically the levees are not worked on during the flood season nor are the existing levee soils able to be worked in the winter months. Typically we have a two to three month work window each summer to do our levee work. A more realistic construction window to accomplish the improvements should be included in the EIS.

On one of the many pages that are number 38, the text quotes that the Urban reaches of Mount Vernon and Burlington account for approximately 46% of the total Expected Annual Damages (EAD). Table 3-5 on this same page indicates that Burlington alone accounts for approximately 38% of the total expected damage. This includes 69% of the Commercial, and 39% of the Industrial. Protection of these community economic resources to the 0.4% of the Annual Chance of Exceedance (ACE) is very important to all of the Skagit community.

IV. ADDITIONAL COMMENTS AND CONCERNS

Extensive engineering and hydrology have been done for the portion of the project for DD12 which will be included in the CULI. Models and analysis have been done using the 100 year flood standard. Areas upstream and downstream of the project were analyzed for the effects of the project on the increase of depth and floodwaters resulting from the project. This has been outlined in submittals from the City of Burlington, and the project engineer. These studies show that at the 100 year level, the project would result in increased water levels, of less than a few inches.

It should be noted, however, that this is almost an inconsequential increase, from the project, in the context of the 100 year flood level causing floodwaters of 10-15 feet. The point is that the consequences of a 100 year flood are devastating, and will inundate nearly all areas in the County, and any increase in water surface levels is inconsequential. Accordingly, all parties need to work together to control and manage risks in their community in the framework of this plan and obtain from our residents the best flood protection possible for any level of flooding below the 100 year, keeping in mind that the 100 year flood would be catastrophic in proportion.

As a related matter, and in line with the objective of teamwork within the framework of this proposed CULI, the District would also urge that both upstream and downstream drainage issues be addressed in further details in the study. The District's representatives had made these comments at the public hearing and reiterate the same here. District's downstream of DD12 and DD1, will receive more waters simply by virtue of being downstream, and when flooding occurs, it is important that once the water floods farmland and other areas, that it be drained from the property as soon as possible to protect farmland, and rural and agricultural areas.

This holds true in areas north and west of Burlington, as well as downstream areas including Fir Island and other Districts. Presumably other diking and drainage districts will be submitting comments for benefits and improvements in their area to be incorporated in this study. In any event, DD12 would urge that proposals for improvements in benefits to drainage both up and down the river be further addressed by the Corps in this study and provided within this system-wide framework for flood protection.

The Commissioners of DD12 appreciate the extensive and forward-looking plan adopting the CULI in the GI Study. The District Commissioners urge adoption and approval of the Draft Feasibility Report and EIS and final approval of the CULI, consistent with and including the above comments, engineering analysis, and recommendation. Please call if you have any questions or wish to discuss the above.

SKAGIT COUNTY DIKE, DRAINAGE AND
IRRIGATION IMPROVEMENT DISTRICT NO. 12

By: Eddie Tjeerdsma
Eddie Tjeerdsma, Commissioner/Chairman