



King County

Water and Land Resources Division

Department of Natural Resources and Parks

King Street Center

201 South Jackson Street, Suite 600

Seattle, WA 98104-3855

206.296.6519 Fax 206.296.0192

TTY Relay: 711

April 17, 2012

U.S. Army Corps of Engineers
Attn: CECW-CE, Tammy Conforti
441 G Street, NW
Washington, DC 20314-1000

RE: Docket Number COE-2010-007

Dear Ms. Conforti:

King County, Washington has a long history of partnering with the United States Army Corps of Engineers (Corps) on flood risk reduction actions and projects, dating back to the early 20th century. We greatly appreciate and value the continued support of the Corps in our efforts to reduce the risk of flooding on the major river systems throughout King County.

We share the Corps' position that public safety is paramount. King County's levee systems are essential to protecting public safety, jobs, and future economic development. We learned just how essential a few years ago when the Howard Hanson Dam needed urgent repairs. We greatly appreciate the efforts made by our Congressional delegation and the Corps to quickly restore the dam.

The problems at the dam also underscored just how dependent we are on the levee system in the Lower Green to protect public safety and economic investment. We cannot be complacent about flood protection, and we share an interest in ensuring levee safety. However, as a local sponsor, King County must meet requirements for removing vegetation from levees while protecting ESA-listed salmon and water quality. We've been working to implement federally approved watershed-based salmon recovery plans to try to secure federal and state grant funding to restore salmon habitat. But at the same time, we're spending local funds on removing trees from levees along the very same river corridors. In the last two years we removed and mitigated over 460 trees along the lower Green River at cost of \$5.6 million, money that could have been spent on other potentially higher priorities for public safety and habitat.

It is hard for the public why to understand why we are spending tax dollars and asking volunteers to help plant riparian vegetation to strengthen levees and provide habitat function, and then using tax dollars to remove vegetation before it matures.

King County firmly asserts that there is another path forward, one based on science and our collective experience in managing levees and restoring habitat in this region. Regional partners in the Seattle District have developed a framework that will keep our levees structurally sound, allow inspections, and protect habitat.

However, the draft Policy Guidance Letter (PGL) could require such extensive analysis and documentation for a vegetation variance that it would not provide a viable alternative to simply complying with the national standard and risking non-compliance with ESA and the Clean Water Act. The System-Wide Improvement Framework (SWIF) appears to be cause for optimism; it has the potential to look more holistically at outcomes we are trying to achieve through our capital investments, and focus our limited resources on the highest risks. A SWIF could provide the framework for us to jointly identify and fund opportunities to set back levees from the force of the river, *increasing* public safety and allowing for more natural habitat functions.

However, it takes time and significant financial investment, especially in highly urbanized areas along the lower Green River, to pursue levee setbacks. In doing so, we must address the worst public safety problems first, and we know that levee vegetation is not the highest priority risk to public safety along our levee system. We all want to achieve a higher level of flood protection consistent with the recommendations of the National Committee on Levee Safety, and need to provide assurance that economic development will be enhanced, not hampered.

As we work with the Corps, the federal services, tribes, Washington State Puget Sound Partnership, cities, and other regional partners to move this concept forward, potentially through development of a SWIF and a joint plan for funding, we will want to build on the strong work to date with these partners to develop a regional framework for vegetation management. If we do choose the SWIF path, we will request maximum flexibility from the Corps in review of variances to the national standard while the SWIF is being developed. We encourage the Corps to allow decision authority for SWIFs and variances at the District or Division level.

A critical element in the partnership between King County and the Corps is the resolution of conflicting federal mandates related to funding for levee repairs, recovery of salmonid species listed as “threatened” under the ESA, and requirements under the Clean Water Act. The SWIF approach holds promise for risk-based prioritization of limited resources, but the PGL as proposed perpetuates these conflicts among federal mandates. Because of these conflicts, and until such time they are resolved, we respectfully request the following to be considered as part of the proposed change to the levee vegetation variance process:

1. Although we don’t support the PGL as written, we ask that you employ maximum flexibility in review and application of variances until the SWIF process is complete and base any future levee vegetation policy changes on the best available science, drawing upon regionally-developed technical studies and scientific research conducted in partnership with local jurisdictions and other affected federal and state agencies; and

Ms. Tammy Conforti
April 17, 2012
Page 3

2. Consult with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service under Section 7 of the ESA regarding the impact of the Corps' levee vegetation requirements on listed species.

Our detailed response to the Federal Register notice follows as an enclosure. Thank you for your consideration of our comments and our continued partnership together. If you would like to discuss this matter further, please do not hesitate to contact me at 206-296-6587.

Sincerely,



Mark Isaacson
Division Director

Enclosures

cc: Jamie Shimek, Senior Policy Advisor to United States Senator Patty Murray
BG John McMahon, Commander and Division Engineer, US Army Corps of Engineers,
Northwestern Division
Col. Bruce Estok, Commander and District Engineer, US Army Corps of Engineers,
Seattle District
Edward Hecker, Contingency Operations, Northwestern Division Regional Integration
Team, Headquarters, US Army Corps of Engineers
Peter Rabbon, Director, National Flood Risk Management Program, Institute for Water
Resources, US Army Corps of Engineers
Witt Anderson, Director, Programs Directorate, US Army Corps of Engineers,
Northwestern Division
Doug Weber, Chief of Emergency Management, US Army Corps of Engineers, Seattle
District
Gerry O'Keefe, Executive Director, Puget Sound Partnership
Steven Landino, Director, Washington State Habitat Office, Habitat Conservation
Division, National Marine Fisheries Service
Kenneth Berg, Manager, Western Washington Field Office, US Fish and Wildlife
Josh Baldi, Special Assistant to the Director, Washington Department of Ecology
Bridget Moran, Environmental Policy Lead, Washington State Department of Fish and
Wildlife
Christie True, Director, King County Department of Natural Resources and Parks
(DNRP)
Steve Bleifuhs, River and Floodplain Management Section Manager, Water and Land
Resources Division, DNRP
Kjris Lund, Executive Director, King County Flood Control District

The purpose of this attachment is to document King County's responses to specific elements of the Federal Register notice for docket number COE-2010-007. Comments within this attachment may duplicate comments sent in response to the original version of COE-2010-007.

Supplementary Information

The Corps issued a draft Finding of No Significant Impact (FONSI) in accordance with the National Environmental Policy Act requirement for assessing the environmental impact of proposals. The FONSI was issued on the basis that "changing the process for applying for a variance does not itself affect the environment."

While the proposed change purports to be only a procedural change, the changes in fact will affect existing environmental conditions significantly. Under the proposal, all existing variances, some of which have been in place for many years, would be terminated and replaced with a future vegetation variance process that will be time consuming and expensive. Because of these effects, the proposed change would affect the environment in a way that would likely cause degradation to existing riparian conditions and preclude future improvement of riparian habitat necessary for recovery of salmonids listed as threatened under ESA.

The National Marine Fisheries Service's Biological Opinion to the Federal Emergency Management Agency, issued in September 2008, describes the serious adverse affects to ESA-listed salmonids in Puget Sound resulting from the removal of levee vegetation.¹ Similarly, the National Marine Fisheries Service's 2003 review of the Corps' Programmatic Biological Assessments of the Flood Control Projects Maintenance Inspection Program concluded that removal of riparian vegetation is an action that is "likely to adversely affect" listed fish species. A copy of the letter to the Corps documenting the National Marine Fisheries Service's findings is attached for your review. Removing existing riparian vegetation and precluding the growth of additional riparian vegetation would also exacerbate existing water temperature problems for rivers listed as impaired under Section 303(d) of the Clean Water Act.

As evidence of the deleterious effects of this policy, we offer some of the conclusions from a recently published water quality study by the State of Washington for the Green River in King County. The study examines the river's high temperature, which can cause lethal conditions for threatened Chinook salmon. The state's calibrated temperature model demonstrates that riparian vegetation can prevent these lethal high temperatures, even under critical summer conditions, if mature vegetation is established on the levees. However, due to the extensive presence of levees on the Green River banks, the calibrated model shows that lethal conditions will persist without increased levee vegetation. The state study, which was approved by the EPA in August of 2011, states: "When levees are not planted it is predicted that temperatures will be one to four degrees warmer and that lethal temperatures will occasionally be present" (Coffin, C., S. Lee, and C. DeGasperi. 2011. Green River Temperature Total Maximum Daily Load: Water Quality Improvement Report. Washington State Department of Ecology, Olympia, WA. Publication No. 11-10-046).

¹ A copy of the Biological Opinion can be found on the National Marine Fisheries Service website at https://pcts.nmfs.noaa.gov/pls/pcts-pub/sxn7.pcts_upload.download?p_file=F3181/200600472_fema_nflp_09-22-2008.pdf

Subsequent unpublished work by King County has used the same calibrated temperature model to further test the sensitivity of critical summer temperatures in the river channel to the size of vegetation that might be established on the levees. If existing vegetation was removed for compliance with Corps guidance, modeled critical summer temperatures would increase by as much as 1.3° C. On the other hand, if the most generous (Level 3) prescriptions of the draft Seattle District Matrix were applied to Green River levees, establishing an average 52-foot canopy with trees on levee slopes as large as 12 inches diameter at breast height (dbh), existing critical summer temperatures would be expected to decrease by as much as 1.2° C, which is roughly the entire existing excess above the lethal threshold.

As we have requested in the past, we believe that the Corps should reinitiate consultation with the National Oceanic and Atmospheric Administration’s National Marine Fisheries Service and the U.S. Fish and Wildlife Service regarding the impact of the Corps’ levee vegetation requirements on species listed under the ESA. The Corps initiated consultation with the National Marine Fisheries Service in 2003; however, the consultation process was subsequently halted by the Corps. Consultation is appropriate since the vegetation policy itself is a federal action, per 50 CFR 402.02, and subject to ESA Section 7 consultation requirements.

Definition of “Levee” and “Levee System”

The definition of levee systems is overly broad and would extend the need to apply for individual project variance requests to various river embankments and flood conveyance channels that, technically speaking, may not be levees. We request that this section be clarified to apply only to those systems that are enrolled in a current Corps program.

Variance Evaluation Criteria

The proposed policy presents no objective standard for evaluating when a proposed variance conflicts with safety, structural stability, and accessibility objectives. Until an objective threshold is defined, any attempt to apply the policy is subjective. We request that the Corps continue to partner on regionally-specific research to define the conditions in which levee vegetation increases or decreases the safety, structural integrity, and functionality of levees.

In recognition of the significant concerns surrounding levee vegetation management in the Puget Sound region, the Corps sponsored a levee vegetation symposium (“An Examination of Levee Vegetation Policy”) on February 26, 2009, in Renton, Washington. At this symposium, the Corps leadership in attendance committed to base any policy changes to the existing regional variance on valid scientific research, and until such time as this research is complete, the Corps stated that the Seattle District regional variance would remain in effect (see symposium summary document provided with March 2010 comments).

We view the commitments to be of critical importance in determining the most sensible and scientifically-valid levee vegetation management policy for our region. The national levee vegetation maintenance standards were developed decades ago and based primarily on the needs of river systems in regions outside of Puget Sound. A coordinated, locally-driven variance process, in which local jurisdictions collaborate with the local Corps district and which is based on scientifically-developed observations and results, has been and continues to be essential to reaching a result that effectively addresses the unique circumstances of our area. It has been and continues to be our view that the national levee vegetation standard is not appropriate for the Pacific Northwest given the unique needs and conditions of our rivers. As such, we request that

the Corps’ Seattle District regional variance from the national levee vegetation maintenance standards since 1995 continue to remain in place.

Appeals

This section outlines the variance request and approval process, but it offers no option for an appeal of variance decisions in the event requests are denied. Because the variance process affects the mandates of multiple federal agencies, an appeal process should be included in the proposal that draws upon input from the agencies impacted by the Corps’ decisions regarding vegetation variances.

Agency Coordination

The proposed PGL states that “The district shall notify the appropriate regional offices of the federal resource agencies when a vegetation variance request has been received.” However, the proposal does not define resource agency or indicate which agencies will be notified, nor does it describe the role these resources agencies may have with respect to commenting on the variance requests or the Corps’ decision to approve or deny the request. The role of the federal resource agencies charged with protecting resources affected by the variance process needs to be clearly defined.

“Mitigation” for Levee Vegetation

Suggesting that structural measures (such as armoring or overbuilt sections) are needed to preserve system reliability and resiliency and to mitigate vegetation impacts does not recognize that vegetation can actually enhance levee performance and resilience over time.

It has been the experience of King County that native vegetation on levees can provide structural reinforcement—and thus help to ensure the protection of public safety—due to the binding effect of root systems, as well as reduce fluvial erosion of the levee system by lowering flow velocities and boundary shear at the levee face. While we agree that some types of vegetation (i.e. non-native species or species with shallow root systems) are not appropriate for levees, our experience is that native vegetation can enhance levee stability and allow for routine inspections and the identification of damages or other structural issues associated with levees.

Engineering Analyses

Requiring an engineering analysis on a levee system scale as a precondition for a vegetation variance will be excessively costly and time consuming for nearly all jurisdictions attempting to obtain a variance. For example, the lower Green River levee system in King County is comprised of some 42 levees that extend for 19 miles, making any attempt to conduct an engineering analysis of the system extraordinarily difficult due to staff and resource constraints.

System Reliability

The proposed PGL states that vegetation poses a threat to levee system reliability; this is in conflict with the September 2011 findings from the Corps Engineering Research and Design Center (ERDC) which found that the impact of vegetation is context-specific, and may increase factors of safety in some situations and lower it in others. As noted by the Corps at the February 25, 2010, California Levees Roundtable meeting, documented science on the impacts of vegetation on levee systems is limited worldwide. In addition, the claim that vegetation poses a threat to observation of system response during high water conditions is contradicted by the fact

that observation of visible vegetation above the floodwater surface would be the only way to determine whether the system is performing to its designed standards during conditions where the system is completely or partially submerged by high water.

The vegetation-free area defined in this section does not offer significant opportunities to enhance structural stability with vegetation, nor does it allow for substantial enhancement of riparian habitat for threatened fish species. As a result, this provision of the proposal makes the benefits of vegetation on levees that we identify practically impossible to obtain.

Furthermore, in many areas the only vegetation currently present on leveed river reaches is on the landward side of the levee within the 15-foot vegetation-free zone identified in this section. The prohibition on vegetation in the 15-foot area landward of the levee backslope toe, especially when there are no structural concerns for levee integrity, will result in the removal of most of the remaining vegetation, resulting in a significant, and potentially irreversible, impact to natural resources.

Hydraulic Analysis Requirements

The hydraulic analysis requirements in section 5.b of Enclosure 3 require that a variance application demonstrate that, “geometry and roughness changes shall result in no increase in water surface elevations for the required range of flows.” The range of flows is further described as, “encompassing the lowest levee-toe elevation to the highest top-of-levee elevation.” The value and relevance of this requirement is not clear. Qualification for the PL84-99 Rehabilitation and Inspection Program requires only that an urban levee have two feet of freeboard over the 10-year profile, and agricultural levees need have only one foot of freeboard over the 5-year profile (see paragraph 5-3.a.(3) of ER 500-1-1). If these explicit criteria are met, the program has no reasonable basis to force expensive and pointless study of flow conditions as an eligibility requirement, especially at or near the toe of the levee. Further, as written, the draft PGL is completely silent on the baseline to which “worst case hydraulic conditions” are to be compared.

Environmental Compliance

Suggesting that the local sponsor is responsible for all Endangered Species Act compliance, including Section 7 consultation, implies that implementation of levee vegetation management—whether through a variance or through application of the national standard—has an effect on aquatic habitat and also implies that a federal action is present. We believe the national vegetation standard is itself a federal action, as defined by 50 CFR 402.02, that affects listed critical habitat. As a result, we encourage the Corps to consult with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service on the vegetation management policy to ensure that no negative impacts to endangered and threatened fish species or their critical habitat result through the implementation of the national vegetation standard. This consultation should include an analysis of the impacts of the national vegetation standard on Essential Fish Habitat, as regulated by the *Magnuson-Stevens Fishery Conservation and Management Act*.