

August 2, 2007

Bob Eaton
Executive Director
Peninsula Drainage District No. 2
1880 NE Elrod Drive
Portland, Oregon 97211-1810

Dear Bob:

We have received your letter of July 31, 2007. The Bridgeton Neighborhood Association strongly opposes and will not accept the Peninsula Drainage District No.2 (Penn2) plan to remove nearly all the trees and shrubs in our neighborhood. We believe the decision to remove over 150 trees and bushes along a two mile stretch of North and Northeast Bridgeton Road starting next month is hasty, unnecessary and wrong for a number of reasons.

Rather than destroy the tree cover of an entire North Portland neighborhood we ask that you join with the Bridgeton neighborhood in implementing a creative plan that will meet many of your FEMA and U.S. Army Corps of Engineers imposed mandates as well as improve the environment and livability of Bridgeton and a large stretch of North Portland. We believe our plan will result in a stronger levee, a healthy riparian environment and a better Bridgeton neighborhood and will maintain the FEMA and the U.S. Army Corps of Engineers' highest certification ranking for the Bridgeton levee. I will send you a copy of our plan within the week.

Following are the major reasons we believe the decision to remove Bridgeton neighborhood's tree cover is wrong:

- It is unnecessary. The commanding officer of the U.S. Army Corps of Engineers (COE) for the Sacramento River/Central California area has granted an exception for the Sacramento area districts. Why hasn't Penn2 requested an exception?
- It is not supported by science. Tree removal ignores recent scientific studies that indicate tree and shrub cover on levees strengthen levees and tree removal may actually weaken the levee.
- New scientific studies show that the FEMA/COE assumption that tree roots conduct water and weaken levees during high water events is false.
- Penn2 misread of the U.S. Army Corps of Engineers (COE) June 11, 2007 letter requesting removal of trees is contrary to COE Encroachment Standards.
- The large scale tree removal in Bridgeton ignores the new Levee Landscape Guidelines developed by a Penn2 committee and adopted by the Penn2 Board in 2006.
- The urban built up nature of Bridgeton Road provides additional structural strengthening to the levee not foreseen by FEMA and COE guidelines.

- Lack of an NEPA required Environmental Assessment.
- Insufficient notification of landowners and residents.
- Tree removal will have a major negative impact on the health and livability of the Bridgeton neighborhood.
- Tree removal will have a negative impact on the environment and riparian habitat along a two mile stretch of the Columbia River.
- Tree removal will have a major negative impact on Bridgeton home and land values, and therefore impact the very tax base Penn2 relies on for funding its operations.
- Tree removal ignores a current and ongoing major rewrite of COE levee landscaping and encroachment guidelines expected by early 2008.
- The Bridgeton levee with its existing tree cover has always received the highest COE certification and safety ranking throughout the districts 90 year history. Nothing structurally has changed on the Bridgeton levee to warrant the wide scale removal of trees.
- The Bridgeton levee with its current tree cover also received certification by an authority higher than FEMA and the COE, having been tested by the two 100 year flood events of 1996 as well as lesser flood events in prior years.
- Ornamental tree and garden shrub removal according to COE guidelines is designed to make it easier for COE and Penn2 to make levee inspections by air or vehicle. This simply makes no sense and does not apply in a built up urban neighborhood environment.

Following is an explanation and elaboration of a number of the main objections listed above:

• It is unnecessary. The commanding officer of the U.S. Army Corps of Engineers (COE) for the Sacramento River/Central California area has granted an exception for the Sacramento area districts. Why hasn't Penn2 requested an exception?

On July 27, 2007 the newly appointed national commander of the U.S. Army Corps of Engineers Lt. Gen. Robert Van Antwerp said he intends to create a new flexible levee maintenance policy that allows levee managers to keep trees and other vegetation that now covers many levees. He said the new policy "will be based on science and collaboration with local, state and federal agencies". He said "We'll be reasonable. These are multipurpose levees in that we have habitat and endangered species, and were concerned with that too." Van Antwerp said that the COE is now drafting a new national levee maintenance policy and that within a month it will issue a document that outlines steps required to comply. He said the goal is to "convey the intent" of the new policy.

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- New scientific studies show that the FEMA/COE assumption that tree roots conduct water and weaken levees during high water events is false.
- Bridgeton tree removal ignores a current and ongoing major rewrite of COE levee landscaping and encroachment guidelines expected by early 2008.

The June 2007 FEMA and COE notification to Penn2 and other drainage districts mandating a strict compliance of COE landscape and encroachment guidelines. The FEMA and COE policy stems from the belief that plant roots destabilize levees and create paths for seepage. However, a new study by University of California scientists at the UC Davis Amorochio Hydraulics Laboratory has found just the opposite. The scientists found that the brush and tree cover in a flood event protected the test banks from erosion, slow down water velocity creating a bottom layer of slow moving water that provides young chinook salmon with a refuge. Stefan Lorenzato, Watershed Management Coordinator of the California Department of Water Resources, said “The benefits start kicking in at high flows when flood risk is worse. It’s implying that plants may be helping us, not hurting us.” Joe Countryman, president of MBK Engineers, a prominent designer of California flood control projects, said “This is pretty exciting research....this demonstrates that plants slow erosion, that’s a real plus.”

Earlier research on the Sacramento River found no evidence that tree roots compromise levee strength or allow flood waters to seep through levees. A study by Douglas Shields a hydraulic engineer at the USDA Sedimentation Laboratory studied a 35 mile stretch of the Sacramento River before and after the major 1986 flood. He found levees with trees suffered less damage than those without them. He also found that trees did not impair levee performance. Levee vegetation, he reported in a 1991 study may have increased soil strength. In a 1992 study of large oak and cottonwood trees on a 10 kilometer stretch of the Sacramento River Shields found that “no evidence that trees compromised levee strength or caused ‘piping’ of water along roots. Instead roots tended to strengthen levees by binding the soil, and also grew downward, helping strengthen levees from within, rather than growing sideways. (See Exhibit A).

Army Corps of Engineers regional commander for central California Brig. General John McMahon was quoted as saying that removing trees won’t necessarily make levees safer. He hopes to tailor the guidelines and only remove trees where levee-strengthening is needed, but also to allow vegetation where strength is not a concern. General McMahon said that “headquarters would like one standard applied broadly across the full spectrum of levees. I personally don’t think that’s the right tack to take...not all vegetation on levees is bad”.

A COE spokesman, Dana Cruikshank, said the corps is drafting a new national standard to allow vegetation on levees. The new standards are expected by year end. Until the new guidelines are released local COE officials have directed the 34 central California districts not to cut trees.

- **Penn2 misread of the U.S. Army Corps of Engineers (COE) June 11, 2007 letter requesting removal of those trees that exist contrary to COE Encroachment Standards.**
- **The large scale tree removal in Bridgeton ignores the new Levee Landscape Guidelines developed by a Penn2 committee and adopted by the Penn2 Board in 2006.**

The June 11, 2007 Corps of Engineers letter noted “Trees in violation of the Corps Encroachment Standards and the PDD No.2 operation and maintenance manual that exist along Bridgeton area levee need to be removed.” We ascertain that very few if any of the over 150 trees and shrubs

Penn2 personnel marked for removal on July 17, 2007 are in violation of the Penn2 Levee Landscape Standards (LLS) adopted in early 2006. The decision to review, revise and rewrite the prior existing levee landscape guidelines was a result of Penn2's and Bridgeton's recognition that the existing COE national guidelines primarily detailed in EM 1110-2-301 "Guidelines for Landscape Planting and Vegetation Management at Floodwalls, Levees and Embankment Dams", PDR 1130-2-5 "Levee Encroachment Standards and Procedures" (1980), and FFCW Maintenance Requirements 33CFR, Sec 208.10 Title 33, Chapter 11 part 208 were written for rural areas and did not envision dense urban neighborhood environments with condos, apartments, row houses, moorages and parking built on top of and adjacent to the levee as defined the Bridgeton neighborhood. The impracticality of the COE landscape and encroachment guidelines cited above is glaringly evident in EM 1110-2-301 Chapter 2 Section 2-2 "Vegetation-Free Zone" which states that in areas on the landward and riverward side of the levee "where no type of vegetation, with the exception of grass, is permitted." Other COE documents implied that small vegetable and flower gardens are not allowed on or adjacent to the levee and even small trees and flowers in containers would not be allowed. The obvious impracticality and impossibility of the COE rules led Penn2 and Bridgeton residents to form in early 2005 a 9 member adhoc committee composed of two Multnomah County Drainage District employees, a Penn2 Board member and 6 Bridgeton residents with the Mission Statement: "To incorporate the current US Army Corps of Engineers regulations, guidelines, and standards into a working policy that will allow landscaping, improve esthetic and wildlife values, and protect the managed flood plain from catastrophic flooding." After 12 months of work the new guidelines were finalized and Penn2 informed us was subsequently approved by various city and state entities, the Corps of Engineers and the Penn2 Board of Supervisors. The point of the new 2006 Levee Landscape Standards was to recognize the unique landscaping challenges of the existing urban environment and put in place guidelines and procedures that would maintain the strength and safety of the Bridgeton levee while protecting the urban environment.

According to these guidelines trees and ornamentals would be allowed on the overburden or overbuilt sections of the Bridgeton Levee, there would be no large scale removal of trees in Bridgeton, a "case by case" approach would be taken and Penn2 and Bridgeton would work together in a cooperative manner. The July 17th notification that all of the 150+ trees and shrubs marked would be removed starting in 30 days is contrary to the intent and spirit of the 2006 LLS effort.

- **The urban built up nature of Bridgeton Road provides additional structural strengthening to the levee not foreseen by FEMA and COE guidelines.**

The Bridgeton neighborhood is primarily located along N and NE Bridgeton Road which sits directly on top of the critical cross section of the Bridgeton Levee. and has experienced very strong in-fill development over the last few years. Nearly all of the neighborhoods small cottages that were built prior to the 1930's have been replaced by two or three level row houses. On the western end of the neighborhood even denser development has taken place with five and six story condos and apartments plus three new four and five story hotels. Encouraged by the City of Portland the neighborhood developed the Bridgeton Neighborhood Plan which sought to direct and manage this overwhelming growth. The Plan, which was adopted by Ordinance (No. 171238) of the Portland City

Council, has been largely successful. The result, as envisioned by the Plan, has Bridgeton as a dense, pedestrian friendly urban environment. New row houses are primarily abutting the landward side of the Bridgeton levee. Houses are encouraged to have front porches facing Bridgeton Road (and the levee) with garage access in the rear. The result is a nearly continuous row of houses with their concrete foundations and structural walls abutting the landward toe of the levee. (See Exhibit A). Existing and new trees and shrubs grow adjacent to the homes and occasionally between the homes and the top of the levee. By a strict reading of COE guidelines nearly all of these trees, flowers and bushes would have to be removed. In reality, they represent absolutely no danger to the structural integrity of the levee. The trees, flowers and bushes are in effect contained in a defacto vault between the concrete of the row house foundations and the sidewalks and Bridgeton road surface. Similarly, the eleven cross streets (N. Haight to NE 5th) situated at a right angle to Bridgeton Road act as 100 foot long engineered buttresses to the levee. Larger trees growing in the overburden to riverward of the top of the levee do not endanger the critical cross section of the levee because of the support these buttresses supply.

Once again, it is obvious the COE guidelines were written for rural environments where the buttress support provided by the urban built up environment does not exist. The buttress support provided by the housing and side streets of Bridgeton strengthen the Bridgeton Levee far beyond what exists for a rural unbuttressed levee.

- **Lack of an Environmental Assessment.**

There can be no doubt that the large scale removal of nearly all of Bridgeton neighborhoods trees will have “a significant cumulative impact on the human environment” and the notice and marking of the trees and shrubs has generated “a high level of public controversy” with petitions circulated, complaints made to city, state and county agencies, a public protest demonstration and extensive print and electronic media interviews. Furthermore, the removal of the trees would have a negative environmental impact on a 2 mile stretch of Columbia River riparian zone. Therefore according to the National Environmental Policy Act (NEPA) an Environmental Assessment is required.

- **Insufficient notification of landowners and residents.**

Your letter of July 31, 2007 indicating that Bridgeton’s trees will be removed starting September 4th was not sufficient public notice for a major project with devastating environmental and livability impacts to the neighborhood. There was an initial “heads up” notification to officers of the neighborhood association on May 31. At that time it was explained that FEMA guidelines on levee certifications had changed and that there may be a negative impact on Bridgeton due to tree removal and Penn2 requested to be added to the agenda of the June 20th neighborhood association meeting. At the June 20th meeting Penn2 informed the audience that FEMA and COE had implemented new regulations and mandates that would have a negative impact on the neighborhood. Specific information as to the total impact of the mandates was not yet available. On July 17th, trees were marked throughout the neighborhood and a notice flyer indicating that the trees would start to be removed in mid August was posted. There was no notification by mail or email to the neighborhood association, Bridgeton residents and landowners, or the City of Portland’s North Portland

Office of Neighborhood Involvement. The first formal written notification the neighborhood received was your letter of July 31.

We have only elaborated on a few of the reasons we must oppose Penn2's plan to do irreparable harm to our neighborhood. Many of the trees marked for destruction are over 100 years old and can not be replaced. Penn2's plan is deeply troubling to our neighborhood and will change the character and livability of our neighborhood forever. Furthermore, Penn2's action is unnecessary considering that the commanding officer of the U.S. Army Corps of Engineers has announced that the COE is currently rewriting the national levee landscape guidelines and the new guidelines would allow significant trees and vegetation on top of the levees.

Sincerely,

Matt Whitney
Chair
Bridgeton Neighborhood Association

cc: Peninsula Drainage District No. 2 Board of Supervisors
Rich Halsten
Mike McBride
Richard W. Shafer Jr.
cc: Congressman Earl Blumenauer

Attachment