



Community Technical Group Meeting 2 Summary

12/16/15

OVERVIEW

On Oct. 28, 2015, Pierce County Storm Water Management hosted the second Community Technical Group (CTG) meeting for the System Wide Improvement Framework (SWIF) planning process.

Topics for the Oct. 28 meeting included:

- Building an understanding of the Pierce County levee system
- Learning about existing conditions of levees and vegetation

All presentations can be found at: <https://www.co.pierce.wa.us/index.aspx?nid=4351>

WELCOME AND INTRODUCTIONS

Meeting facilitator Penny Mabie welcomed everyone and led a round of introductions. She conducted an overview of the agenda and meeting handouts.

COMMUNITY TECHNICAL GROUP BUSINESS

Todd Essman, Pierce County Technical Lead, distributed a slide from his presentation at Meeting 1, which includes details about the cost of property acquisition and damage in the notes.

Penny reviewed the updates to the draft CTG Operating Guidelines. There were no further edits and the CTG agreed to finalize the Operating Guidelines. Pierce County will post these Guidelines to the SWIF webpage.

OVERVIEW OF THE LEVEE SYSTEM

Doug Thompson, Pierce County SWM Engineer, provided an overview of the Pierce County levee system, including maintenance and operations responsibilities, deficiencies, and needed corrections. Doug shared examples of levees to highlight the seven inspection criteria for the PL 84-99 program. These criteria include:

- Encroachments
- Closure structures
- Slope stability
- Erosion/bank caving
- Animal control
- Culverts/discharge pipes
- Underseepage relief wells/toe drainage systems

Doug requested the CTG familiarize themselves with Attachment B from their pre-meeting packet. This attachment provides a snapshot of the ratings for each of the levees prior to the start of the SWIF process. See slides 5-25 of the [Presentation](#) for details.

CTG members shared the following questions or comments and Pierce County staff provided answers where appropriate:

- A CTG member asked about the Potelco Levee in relation to the Lower White River Countyline Levee Setback project, specifically about the disconnect between the Countyline project and the levee needs, as well as concerns about the pedestrian bridge.

- Tony Fantello, Pierce County Project Sponsor, indicated that the SWIF Plan will focus on deficiencies, but that some of the solutions proposed may involve the Potelco Levee or the Countyline project. Pierce County Public Works has yet to share design plans for the bridge.
- Charles Ifft, CTG member USACE, indicated that projects that cross county lines have a few options for applying for the PL 84-99 program.
- A CTG member noted that the Calistoga Levee was rated unacceptable at the last USACE inspection.
 - Doug said that the County expects that the new levee will be rated as acceptable.
- A CTG member asked how the County is dealing with invasive weeds on their levees.
 - Doug indicated that the County is interested in input from the CTG about how best to combat invasive weeds. He also noted that the County is working on a Habitat Conservation Plan in conjunction with the SWIF Plan, which will address invasive weed issues.

EXISTING CONDITIONS

David Molenaar, Pierce County Environmental Biologist, provided an overview of the existing conditions of the levee system and vegetation, including an historical overview of the Puyallup River watershed. See slides 26-43 of the [Presentation](#) for details.

CTG members shared the following questions or comments and Pierce County staff provided answers where appropriate:

- A CTG member asked whether the SWIF Plan will include revetments as well as levees, since revetments offer more flexibility regarding vegetation management.
 - Rob indicated that the SWIF Plan will focus on levees, but that revetments will not be discounted. The focus of the SWIF is to get current PL 84-99 levees up to compliance standards. Revetments are not included in the PL 84-99 program.
 - Dave indicated that the County will likely want to conduct the same maintenance activities on revetments and levees moving forward.
- A CTG member noted that if the County could acquire enough land near the rivers, revetments and levees would not be needed.
 - Rob noted that the County has acquired land in the past, but that acquiring land is not necessarily the best option in more developed areas, such as Orting. The Setback Feasibility Study may identify additional areas where land acquisition is possible. These options could possibly be folded into the SWIF Plan

INTRODUCTION TO VEGETATION MANAGEMENT

Peter Hummel, Anchor QEA Landscape Architect, provided an overview of vegetation communities and vegetation management in preparation for the next CTG Meeting, which will focus on vegetation management. Peter shared information about the vegetation communities, which vary at different segments along the river. In addition, he shared the vegetation management techniques currently in use by the County, including:

- Mowing
- Brush cutting
- Hazard tree identification and removal
- Vegetation restoration

Peter presented three questions for discussion and consideration:

- What are the habitat benefits that levee vegetation provides?

- What management issues does vegetation and levee inspection raise?
- Next steps toward developing a draft levee vegetation management strategy?

See slides 44-70 of the [Presentation](#) for details.

CTG members shared the following questions or comments and Pierce County staff provided answers where appropriate:

- A CTG member asked whether the level of restoration depicted in some of the example images was reflective of how the PL 84-99 structures will be repaired.
 - Todd noted that once a levee structure is repaired, the County will mitigate for lost vegetation to a similar degree as depicted in the images. Replanting is not part of the PL 84-99 requirements, but is included in the Vegetation Management Agreement with the Puyallup Tribe. Todd also noted that the County is trying to mitigate vegetation removed for repairs, but also to reestablish plant communities and reduce the number of invasive species.
 - Rob said that these practices may seem to be in contrast with the USACE requirements. These contrasts are related to the previous variance granted to the County for vegetation. Initially, the plantings did not interfere with the Corps ability to inspect the levees.
- Penny noted that in their discussion, the group identified habitat benefits that levee vegetation provides in answer to Peter’s first discussion question. These benefits include, preventing invasive species, creating insect drop which acts as fish food, and shading the river.
 - Rob added that there is a cost associated with vegetation management and the County has to be efficient with their resources, in order to meet USACE standards for inspectability.
- A CTG member shared that vegetation is also crucial for the restoration of salmon; maintaining the integrity of the levee should not be the only consideration.
- A CTG member requested that the County share records of hazard trees that have been removed from levees to provide perspective on existing conditions. A request was also made to try to identify what was historical naturally occurring vegetation along the different river segments.
 - Rob indicated that the County would look at historic photos to try to determine historic natural vegetation.

Rob indicated that the County is working on a draft of vegetation management concepts, which will be shared at the next meeting. These concepts will provide details about types of vegetation and management strategies.

NEXT STEPS

Penny conducted a poll with the group to set a date for the Levee Tour. The group decided to do the tour on the morning of Thursday, Dec. 3.

PUBLIC COMMENT

There were no public comments.

ATTENDANCE

Community Technical Group Members

Chrissy Cooley	Agricultural Round Table
Russ Blount	City of Fife
J.C. Hungerford	City of Orting (Parametrix)
Steve Carstens	City of Puyallup
Karen Walter	Muckleshoot Indian Tribe
David Molenaar	National Oceanic and Atmospheric Administration
Ryan Mello	Pierce Conservation District
Hugh Taylor	Pierce County Council's Office
Jill Bushnell	Pierce County Emergency Management
Joseph Coppo	Pierce County Parks and Recreation (alternate for Kimberly Freeman)
Bill Sullivan	Puyallup Tribe of Indians
Charles Ifft	US Army Corps of Engineers
Jeffrey Stewart	Washington Department of Ecology
Doug Wiedemeier	Washington Department of Fish and Wildlife

Pierce County

Rob Wenman	Project Manager
Todd Essman	Project Technical Lead
Tony Fantello	Project Sponsor
Doug Thompson	SWM Engineer

Anchor QEA

Peter Hummel	Landscape Architect
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EnviroIssues

Penny Mabie	Facilitator
Chelsea Ongaro	Notetaker

Hackney Interests

Clint Hackney	Tribal Liaison
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Community Technical Group Meeting 1 Summary

11/19/15

OVERVIEW

On Oct. 21, 2015, Pierce County Storm Water Management hosted the first Community Technical Group (CTG) meeting for the System Wide Improvement Framework (SWIF) planning process.

Topics for the Oct. 21 meeting included:

- Convening the Community Technical Group
- Reviewing draft operating guidelines/rules for conducting business
- Building understanding for the System Wide Improvement Framework Planning process and goals

All presentations can be found at:

<https://www.co.pierce.wa.us/ArchiveCenter/ViewFile/Item/4014>

WELCOME AND INTRODUCTIONS

Meeting facilitator Penny Mabie welcomed everyone and led a round of introductions. Penny asked each CTG member to share their name, affiliation and goals for the SWIF process. The CTG shared the following goals and expectations, indicating that the CTG should:

- Feel free to address concerns and ask questions
- Bring many voices to the table
- Help the process
- Improve the Puyallup River Vegetation Management Agreement
- Balance flood protection and habitat needs
- Understand how levees are maintained and what the local implications are
- Understand the County's maintenance obligations
- Learn and understand the intersection with emergency management
- Understand how the flood control system addresses multiple benefits
- Be an advisor on the SWIF process
- Work collaboratively to put the SWIF Plan in place

Penny reviewed the meeting agenda and draft ground rules.

Tony Fantello, Pierce County Project Sponsor, introduced the SWIF process and the County's relationship with the US Army Corps of Engineers (USACE). He indicated that the County is working on three major projects related to surface water management: the SWIF Plan, the Habitat Conservation Plan (HCP), and the Sediment Management Risk Reduction Tool (SMRRT). He thanked the CTG for participating in the process.

INTRODUCTION TO PIERCE COUNTY FLOOD CONTROL

Todd Essman, Pierce County Project Technical Lead, provided an introduction to surface water maintenance and operations. He gave an overview of the key objectives and responsibilities for maintenance and operations, as well as a history of flood control in Pierce County. Todd closed his presentation with the problems, challenges and solutions facing Pierce County today. See slides 4-26 of the [Presentation](#) for details.

CTG members shared the following questions or comments and Pierce County staff provided answers where appropriate:

- A CTG member asked if the SWIF process applies only to levees that are eligible for the PL 84-99 program.
 - Todd indicated that the SWIF process focuses solely on the PL 84-99 levees, which are shown as red on the map (see slide 10). All of these levees are owned by Pierce County, but are eligible for cost sharing and rehabilitation under the program.
- A CTG member asked how much the County has spent on property acquisition compared to levee maintenance.
 - Todd explained that between 2000 and 2015, the County acquired 284 acres of floodplain property, costing \$4.7 million. This resulted in a 63% reduction in rehabilitation and replacement costs compared to prior years.

SWIF 101

Rob Wenman, Pierce County Project Manager, gave a broad overview of the PL 84-99 program and the SWIF Plan. Rob's presentation included the history, benefits and requirements for the PL 84-99 program, as well as the goals, objectives and work plan for the SWIF Plan. In addition, Rob shared the results of the County's last USACE inspection. Of the 28 levees enrolled in the PL 84-99 program, 13 received an unacceptable rating; six levees were not rated because they were deemed uninspectable due to vegetation conditions. See slides 27-64 of the [Presentation](#) for details.

CTG members shared the following questions or comments and Pierce County staff provided answers where appropriate:

- Rob shared that since 1991, PL 84-99 funding in Pierce County has totaled more than \$17 million in levee repairs. A CTG member asked if that figure included flood fighting costs.
 - Rob said that the \$17 million figure only includes repair costs.
- A CTG member asked how the funding for the PL 84-99 program works.
 - Tony noted that USACE is not a granting program. USACE comes out to do the work themselves; they cannot provide reimbursement later. If funding is tied up and a critical repair is needed, the County may need to take care of the repair themselves. The Federal Emergency Management Agency (FEMA) can offer assistance in some instances, but FEMA does not usually pay for levee repairs.
- A CTG member requested information about the detailed criteria USACE uses to inspect the levees.
 - Todd indicated that the County would share this information with the CTG members via email.
- A CTG member asked if the SWIF Plan will include acquisitions.
 - Rob indicated that acquisitions could be part of the SWIF Plan, but the main focus will be meeting maintenance deficiencies.
- A CTG member asked about the timeline for completing the SWIF Plan.
 - Rob said that the County plans to complete the SWIF by January 2016, but they asked for an extension to 2017. Tony indicated he had heard that it is unlikely that the County will be granted a full year extension.
- A CTG member asked if the objectives of the stakeholders will be folded into the objectives for the SWIF Plan.
 - Rob noted that the County is hoping to hear the positions and interests of the CTG members to inform the SWIF Plan.
- A CTG member asked how the County will be effected by any new policies that are put in place by USACE.

- Rob shared that the County intends for the SWIF to be adopted under the interim policy that is currently in effect. If the SWIF Plan is accepted by USACE while the interim policy is still in effect, Pierce County will be grandfathered into this interim policy.

CTG WORKPLAN AND PURPOSE

Rob reviewed the SWIF Plan Key Sections and how the CTG workplan aligns with those sections.

CTG members shared the following questions or comments and Pierce County staff provided answers where appropriate:

- A CTG member asked if the solutions in the SWIF Plan will be constrained by funding sources, or if the plan should simply include a prioritized list of projects and associated costs, and funding will be identified later.
 - Rob indicated that the Plan must include sources for funding, but these can be subject to change.

OPERATING GUIDELINES

Penny reviewed the draft CTG Operating Guidelines. The CTG members suggested the following edits:

- Include the url where meeting materials will be posted.
- Include a note that a contact list will be shared with the CTG members so they can communicate with each other if needed. This list will not be shared with the public.

Penny indicated that these edits would be made and the updated Operating Guidelines would be presented to the CTG at the next meeting for approval. She also noted that a public comment period will be included on future agendas as required by the Operating Guidelines.

NEXT STEPS

Rob noted that the County is planning a levee system tour for the CTG members. EnviroIssues will share a Doodle poll to find a date for the tour that works for the majority of CTG members.

Penny indicated that she noted several acronyms and technical terms used throughout the discussions. Definitions will be included in the glossary of future agendas. CTG members should feel free to ask for clarification as needed.

Finally, per a request from a CTG member, Penny agreed to share the Puyallup River Vegetation Management Agreement with the group before the next meeting.

ATTENDANCE

Community Technical Group Members

Chrissy Cooley	Agricultural Round Table
Russ Blount	City of Fife
J.C. Hungerford	City of Orting (Parametrix)
Steve Carstens	City of Puyallup
David Molenaar	National Oceanic and Atmospheric Administration
Ryan Mello	Pierce Conservation District
Hugh Taylor	Pierce County Council’s Office
Jill Bushnell	Pierce County Emergency Management
Kimberly Freeman	Pierce County Parks and Recreation
Russ Ladley	Puyallup Tribe of Indians

Charles Ifft US Army Corps of Engineers
Jeffrey Stewart Washington Department of Ecology
Doug Wiedemeier Washington Department of Fish and Wildlife

Pierce County

Rob Wenman Project Manager
Todd Essman Project Technical Lead
Tony Fantello Project Sponsor
Erick Thompson Surface Water Management
Sarah Motsenbocker Surface Water Management

EnviroIssues

Penny Mabie Facilitator
Chelsea Ongaro Notetaker

Hackney Interests

Clint Hackney Tribal Liaison



Community Technical Group Meeting 3 Summary

12/16/15

OVERVIEW

On Nov. 18, 2015, Pierce County Storm Water Management hosted the third Community Technical Group (CTG) meeting for the System Wide Improvement Framework (SWIF) planning process.

Topics for the Nov. 18 meeting included:

- Building understanding and providing input on different vegetation management concepts and how these fit into the SWIF Plan
- Discussing and identifying how to balance competing needs for inspections and maintaining vegetation for habitat
- Learning about riparian vegetation communities, issues, objectives and approaches
- Discussing a risk-based approach to vegetation management

All presentations can be found at:

<https://www.co.pierce.wa.us/ArchiveCenter/ViewFile/Item/4136>

WELCOME AND INTRODUCTIONS

Meeting facilitator Penny Mabie welcomed everyone and led a round of introductions. She conducted an overview of the agenda, meeting handouts and ground rules.

COMMUNITY TECHNICAL GROUP BUSINESS

Penny asked if the CTG had any objections to finalizing the Meeting 1 Summary. The summary was previously emailed to the group for review. There were no emailed responses. No objections were raised and the summary draft was accepted as final.

The CTG did not have enough time to review the Meeting 2 Summary prior to the meeting, so the Meeting 2 and Meeting 3 summaries will be reviewed for approval at the next meeting on Wednesday, Dec. 16, 2015.

VEGETATION MANAGEMENT CONCEPTS

Rob Wenman, Pierce County Project Manager, provided an overview of the proposed strategy goals, objectives and guidelines for levee vegetation management. These goals, objectives and guidelines will align with the Puyallup River Vegetation Management Program, the PL 84-99 Program and the PL 84-99 "Interim Policy."

The County proposed three main objectives for the levee vegetation management guidelines: risk, habitat and maintenance. In order to achieve these objectives, the County proposes the following deliverables:

- Vegetation communities mapping
- Risk analysis
- Levee structure schematics
- Vegetation inspection standards
- Vegetation risk matrix
- Planting plan
- Invasive species management plan

See slides 4-23 of the [Presentation](#) for details.

CTG members shared the following questions or comments and Pierce County staff provided answers where appropriate:

- A CTG member asked whether the objectives should specifically mention maintaining eligibility for the PL 84-99 program.
 - Rob indicated that eligibility for the PL 84-99 program would fall under the risk objective.
 - Penny noted that these objectives are for the vegetation management plan, and that maintaining eligibility is the objective for the overall SWIF Plan.
- A CTG member said that the Endangered Species Act (ESA) listed species have changed since the development of the Puyallup River Vegetation Management Plan in 1985. The Plan will have to be changed in order to address concerns for these species. The CTG member noted that this does not need to be included in the goal statement, but should be part of the overall plan.
- A CTG member noted that river flow regimes will change over the next several decades due to changes in precipitation levels and the severity of weather events.
- A CTG member indicated that the goal statement seems like the bare minimum to meet requirements and is not aspirational enough. The goal should include a statement about actually recovering species.
- A CTG member asked about the scope of the timeline for the SWIF Plan and whether this plan fits into a larger overarching strategy for the County.
 - Rob indicated that the SWIF Plan will fold into the Flood Hazard Management Plan (FHMP), which is the overarching directive for the Surface Water Management Department at the County. Habitat improvements, including species recovery, are part of the FHMP. The vegetation management proposed goal is focused on meeting USACE requirements, but other goals can be included. The County acknowledges that vegetation on the levees provides habitat for much of the river system.
 - Tony Fantello, Pierce County Project Sponsor, indicated that the SWIF is related to levee maintenance and operations, including vegetation management. The Habitat Conservation Plan (HCP) looks at the bigger picture of species recovery.
- A CTG member noted the County did not include any strategies to ensure that operations are practical and cost efficient.
 - Rob said that practical and cost efficient strategies are the County's main objectives. The implementation strategy will outline efficiencies.
- A CTG member asked what type of guidelines the County uses for hazard trees. For example, is the tree a hazard if a beaver has chewed through only part of the tree.
 - Rob indicated that the project team will discuss possible definitions for hazard trees and develop a matrix.
 - Peter Hummel, Anchor QEA Landscape Architect, said that the team will bring a draft definition to the December meeting.
- Penny asked if the proposed objectives were reasonable. There were no objections.

VEGETATION MANAGEMENT MAPPING

Erick Thompson, Pierce County Environmental Biologist, provided an overview of vegetation and land cover mapping along the river segments. This mapping provides a picture of vegetation communities on the levees and will be used for the development of the vegetation management plan, but also for the long-term monitoring of vegetation and enhancements. Erick shared

preliminary data on tree mapping and indicated that information on shrubs, invasive species and other types of land cover would be included in the SWIF Plan once it is finalized.

See slides 24-39 of the [Presentation](#) for details.

CTG members shared the following questions or comments and Pierce County staff provided answers where appropriate:

- A CTG member asked whether tree height was mapped.
 - Erick indicated that tree height was not collected. This information would need to be gathered separately.
- A CTG member asked about the mapping area.
 - Erick said that these data include 200 feet from the water's edge.

LEVEE STRUCTURE OVERVIEW

Todd Essman, Pierce County Project Technical Lead, presented levee vegetation management schematics, which detail the five typical levee structure types in the PL 84-99 program. Todd defined these levee schematics as follows and provided examples of each in his presentation:

- Schematic A: River channel adjacent to levee (without silt bench)
- Schematic B: Levee with silt bench/gravel bar (on levee structure)
- Schematic C: Concrete panel levee with silt bench/access road
- Schematic D: Concrete panel levee with silt bench and trail
- Schematic E: Setback levee with floodplain bench

See slides 40-56 of the [Presentation](#) for details.

CTG members shared the following questions or comments and Pierce County staff provided answers where appropriate:

- A CTG member noted that Schematic E – Setback levee with floodplain bench is the desired outcome from the fisheries perspective.
- A CTG member asked whether representatives from the Foothills Trails Association would be consulted because some of the levees include trails.
 - Rob indicated that the CTG has a representative from Pierce County Parks and Recreation to provide that perspective. Safety of trail users is part of vegetation management considerations.

VEGETATION MANAGEMENT ZONE & LEVEE SCHEMATICS

Peter Hummel, Anchor QEA Landscape Architect, provided an overview of the vegetation management zone and subzones. Different levee schematic types provide different opportunities for vegetation management. For each levee schematic type, Peter proposed vegetation management strategies. The five vegetation management subzones include:

- Riparian management zone
- Clear zone
- Backslope zone
- Upland zone
- Inspection zone

See slides 57-81 of the [Presentation](#) for details.

CTG members shared the following questions or comments and Pierce County staff provided answers where appropriate:

- A CTG member requested definitions for mature trees and clumps of younger trees.
 - Peter indicated that the team would come up with some parameters for mature trees by species, including recommendations for size range based on height and diameter, as well as a size range for understory vegetation.
- A CTG member noted that the river eventually migrates to the setback levee once it is set back. The member asked why the team would not plan vegetation management with the assumption that the river will migrate.
 - Peter noted that the river could migrate in either direction. If the river does migrate, a different vegetation management schematic would apply based on the situation.
- A CTG member asked whether there had been any analysis of the consequences of conditions (e.g., effect of a drought on young trees) and whether there were any short-term plans for addressing concerns with river temperature.
 - Rob noted that no analysis had been done, but that vegetation is beneficial for habitat in all cases. He also noted that the County could consider proactive planting as part of their vegetation management planning.
 - Several CTG members indicated that there are only long-term plans to address river temperature concerns.
- A CTG member asked whether the schematics reflect that most setback levees have riprap surfaces rather than grass.
 - Rob noted that the schematics represent maintenance efficiencies, and since mowing is the most efficient maintenance method, levee surfaces are depicted with grass.
- A CTG member noted that mowing can often increase the spread of certain invasive species, and that staff should be trained to properly deal with these species.
 - Tony indicated that the County is aware of these concerns and trains their staff appropriately.
- A CTG member asked whether volunteers could be used to supplement County maintenance.
 - Tony said that volunteers are a possibility, but that staff are still required to manage volunteers.

Penny asked the group whether the maintenance concepts presented in the schematics reflect the direction the County should pursue for vegetation management.

- A CTG member said that the group needs a better understanding of where hazard trees are and the risks associated with those trees. Hazard trees are usually large trees that take a long time to regrow to the same height.
 - Peter said that the County has not mapped hazard trees.
 - Rob indicated that some trees are evolving to become hazard trees as the river erodes roots. He suggested that there might be opportunities to perform routine maintenance (e.g., placing face rock around trees as protection) to prevent having to remove those trees.

Penny reviewed a list of topics for the next meeting, including:

- A more in-depth discussion about hazard trees including the following:
 - Proposed management of hazard trees
 - Number of hazard trees
 - How best to retain hazard trees that are large and valuable

- How to manage USACE expectations regarding hazard trees, including how hazard trees are defined and where they are acceptable
- What to do with wood from hazard trees that are taken down
- Further clarification of what constitutes mature trees

Penny asked whether there were any other topics the CTG would like to discuss at the next meeting.

- A CTG member said that trails should be a topic of discussion, since the repaving that occurs after levee maintenance is a huge benefit to trail users.
- A CTG member asked whether the team could conduct a mapping exercise to look at areas that are most critical for solar radiation shading.
 - Rob said that the team considered mapping that in their most recent mapping exercise, but those data were not available and the team was unsure how they would use the information.
 - Erick noted that if the goal is to maintain as many trees as possible regardless of solar radiation, the mapping is unnecessary, since the implementation strategy would be the same.
- Rob said that he would like to discuss specifications for vegetation clusters.
- A CTG member said that best practices for maintaining recruitment trees should be a topic for discussion.
- A CTG member noted that the schematics seem to depict elimination of all understory vegetation in the inspection zone.
 - Rob indicated that the County is not suggesting the removal of all understory, but maintaining clusters of vegetation.
 - Peter said that they can prepare schematics to clarify how understory clumps might be maintained.
 - Tony and Rob noted that maintenance must be efficient and practical in order to manage costs.

NEXT STEPS

Penny confirmed the details for the Levee Tour. The tour will take place on Thursday, Dec. 3, 2015 from 8:30 a.m. – 3:30 p.m. at the River Office on North Levee Road. Rob will share details via email.

Penny also confirmed that the CTG will continue their discussion of vegetation management concepts at their next meeting on Wednesday, Dec. 16, 2015 from 1:00 – 4:00 p.m.

PUBLIC COMMENT

There were no public comments.

ATTENDANCE

Community Technical Group Members

Chrissy Cooley	Agricultural Round Table
Ken Gill	City of Fife (alternate for Russ Blount)
Steve Friddle	City of Fife (alternate for Russ Blount)
J.C. Hungerford	City of Orting (Parametrix)
Steve Carstens	City of Puyallup
David Molenaar	National Oceanic and Atmospheric Administration
Ryan Mello	Pierce Conservation District
Hugh Taylor	Pierce County Council's Office
Jill Bushnell	Pierce County Emergency Management
Russ Ladley	Puyallup Tribe of Indians
Seth Klein	US Army Corps of Engineers (alternate for Charles Ifft)
Jeffree Stewart	Washington Department of Ecology
Doug Wiedemeier	Washington Department of Fish and Wildlife

Pierce County

Rob Wenman	Project Manager
Todd Essman	Project Technical Lead
Tony Fantello	Project Sponsor
Erick Thompson	Environmental Biologist

Anchor QEA

Peter Hummel	Landscape Architect
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EnviroIssues

Penny Mabie	Facilitator
Chelsea Ongaro	Notetaker

Hackney Interests

Clint Hackney	Tribal Liaison
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Community Technical Group Meeting 4 Summary

1/29/16

OVERVIEW

On Dec. 16, 2015, Pierce County Storm Water Management hosted the fourth Community Technical Group (CTG) meeting for the System Wide Improvement Framework (SWIF) planning process.

Topics for the Dec. 16 meeting included:

- Building understanding and providing input on different vegetation management concepts and how these fit into the SWIF Plan
- Building understanding of specifications for vegetation management, including definitions of hazard trees, mature trees and understory vegetation
- Finalizing proposed vegetation management goals, objectives and strategies

All presentations can be found at:

<https://www.co.pierce.wa.us/ArchiveCenter/ViewFile/Item/4182>

WELCOME AND INTRODUCTIONS

Meeting facilitator Penny Mabie welcomed everyone and led a round of introductions. She conducted an overview of the agenda, meeting handouts and ground rules. She also reminded the group that these meetings are an opportunity for the County to hear the perspectives of the organizations and agencies they represent.

- A CTG member asked about the process for the SWIF Plan and whether agencies besides the US Army Corps of Engineers (USACE) would be involved in environmental review and approval.
 - Rob Wenman, Pierce County Project Manager, indicated that the SWIF Plan would ultimately be submitted to, and accepted by, USACE. Other resource agencies are included in the CTG to provide their perspective, including the State Department of Ecology. The USACE's interpretation is that since they are accepting, not approving, the SWIF Plan, environmental review of the SWIF Plan itself is not needed. There will be additional environmental review of the SWIF Plan at the implementation stage.

COMMUNITY TECHNICAL GROUP BUSINESS

Penny asked if the CTG had any objections to finalizing the Meeting 2 and Meeting 3 Summaries. The summaries were previously emailed to the group for review. There were no emailed responses. No objections were raised and the summary drafts were accepted as final. They are available on the SWIF webpage.

LEVEE TOUR DISCUSSION

Pierce County staff led a tour of the levee system for CTG members on Dec. 3, 2015. Penny asked the group for observations of the tour.

- Several CTG members noted that there is a great deal of variation in vegetation and development near the levees along the river system, and in some cases there is development very near the levees.

- Rob indicated that one of the objectives for the tour was to introduce the concept of the five levee structure schematics shared at the previous meeting. The CTG members indicated that the tour was useful and showed these schematics in context.
- A CTG member noted that it was valuable to see how the river flow varies, and how the river channel can meander and move.

VEGETATION MANAGEMENT DEFINITIONS

Peter Hummel, Anchor QEA Landscape Architect, discussed vegetation management components and suggested recommendations, including hazard trees, mature trees, understory vegetation and replanting. See slides 5-39 of the [Presentation](#) for details.

Hazard Trees

Peter walked through what constitutes a hazard tree and suggested recommendations related to hazard trees, including:

- Training personnel with the appropriate qualifications to identify hazard trees
- Combining several existing hazard tree assessment forms to fit the needs of the County (i.e., Whatcom County Hazard Tree Assessment Form, International Society of Arboriculture (ISA) Basic Tree Assessment Form, and USACE Tree Checklist)
- Considering levee-specific targets and fish-related habitat needs

CTG members shared the following questions or comments and Pierce County staff provided answers where appropriate:

- A CTG member noted that it seems as if every tree is a hazard using these components.
 - Peter said that the County does not intend to do an inventory of every tree to determine if it is hazardous. Instead, these components outline under what circumstances a tree that has been identified as a potential hazard would need to be removed.
- A CTG member said that the risk associated with losing shading from a tree should be weighted equally with risk to the levee structure when determining if a tree is a hazard.
- A CTG member asked if the County is required by a code or regulation to assess and remove hazard trees.
 - Peter said that he does not know of a specific code or regulation that requires assessment of hazard trees. As the levee manager, the County is responsible for any trees that are posing imminent risk.
 - Tony Fantello, Pierce County Project Sponsor, noted that the County is looking to develop a series of guidelines about hazard trees to ensure best practices are followed. Tony indicated that it is the County's intention to keep as many trees as possible, but they will have to be more aggressive with thinning to maintain USACE inspectability standards.
 - Rob indicated that the County is trying to find a balance between risk, maintenance and habitat.
- A CTG member noted that restoring habitat needs to be a consideration so that habitat does not continue to diminish and endanger salmon species.
 - Rob indicated that the SWIF Plan is one component for managing the overall levee system, and that there are opportunities for enhancement through other programs (e.g., Habitat Conservation Plan(HCP)).
- A CTG member said that the levee tour focused on operations and maintenance and asked whether they could do another tour with a focus on vegetation management.

- Rob said that the County is hoping to wrap up the conversation about vegetation management at the next few meetings, and that there is not room in the schedule for another tour.
- A CTG member asked how the SWIF Plan relates to the HCP.
 - Rob shared that the HCP focuses on mitigation to offset incidental impacts that come from routine maintenance activities, restoration efforts, and the levee setback program. He noted that the Nested Goals Handout outlines how the Pierce County Surface Water Management Plans inter-relate. The HCP goals and objectives are not included in the document because they have not yet been determined.

Mature Trees and Understory Species

Peter reviewed the Vegetation Management Example Schematic Plan, which outlines the proposed plan for developing clusters of understory vegetation around mature trees. The plan allows for multi-story vegetation. He also reviewed the Vegetation Handout, which includes descriptions of what constitutes maturity for different tree and understory vegetation species. Peter also highlighted the advantage of conifers, since they are more shade tolerant. Conifers only make up 9 percent of the river system vegetation profile.

Peter shared recommendations for mature trees and understory vegetation, including:

- Recruiting an increased proportion of conifers
- Monitoring mature trees for hazardous tree characteristics
- Preserving mature trees as part of levee repairs, where possible
- Managing for regeneration of trees through understory development
- Managing for multi-layered understory canopy
- Managing invasive species to provide space for understory tree growth

CTG members shared the following questions or comments and Pierce County staff provided answers where appropriate:

- A CTG member asked if the trees in the Proposed Management Component Schematics (slides 24-25) were drawn to scale.
 - Peter indicated that there is no strict scale because the levee prism can vary greatly in height, but there is a proportionality to the height of the trees related to the height of the levee.
- A CTG member noted that it is important to recruit understory vegetation after mowing in order to manage invasive species.
 - Peter indicated that the County will account for that as well. There needs to be a plan in place to recruit mature trees.
- A CTG member indicated that an overstory is needed before conifers can be planted. They do not do well in isolation.
- A CTG member noted the importance of considering windthrow and how to prevent trees from getting blown over once they reach maturity.

Replanting

Peter reviewed current replanting methods. The County is required to replant after levee repairs as mitigation under the Puyallup River Vegetation Management Agreement, but the County employs these tactics along the whole system. Peter also suggested considerations for refining replanting methods, including:

- Toe stabilization through rock placement and the use of coir logs

- Maximizing availability of soil for roots (e.g., using sonotubes to give roots access to soil beneath riprap)
- Conifer planting
- Encouragement of natural colonization of native plants

CTG members shared the following questions or comments and Pierce County staff provided answers where appropriate:

- Todd Essman, Pierce County Project Technical Lead, noted that the brush layering example was a test project and not part of the County’s normal operating procedures. He also indicated that plant availability can limit what gets planted when repairs are completed.
- A CTG member said that King County has experimented with planting on soil benches, but the soil layer does not hold moisture. The thickness of the soil layer needs to be increased, or the rock layer needs to be filled with soil to increase moisture.
- A CTG member said that the sonotube method may not work on the Puyallup River. The waterway in the example does not have the same velocity.
 - Peter indicated that species that can withstand high velocity should be used. If the roots are under the rock layer, the trees may be able to handle the velocity.
- A CTG member suggested that silt benches and setback levees are the best option for vegetation growth.
 - Peter noted that silt benches offer great opportunities when they are available. These recommendations focus on other methods for planting when silt benches are not available.
- A CTG member suggested that natural colonization should be used whenever possible.

VEGETATION MANAGEMENT CONCEPTS

Penny reviewed the Nested Goals and Objectives handout and noted that maintaining eligibility for the PL 84-99 program falls under the SWIF Plan.

Proposed Goal

Penny asked if there were any objections to using the proposed goal for the Vegetation Management Plan:

To provide for the riparian vegetation habitat requirements of the fish and wildlife resources in conjunction with the basic requirements entrusted to Pierce County of revetment (and levee) integrity and inspection, emergency revetment repairs, river channel capacity, and County road maintenance along tributary streams.

There were no objections and the group agreed to use the proposed goal.

Proposed Objectives

Penny asked if there were any objections to using the proposed objectives for the Vegetation Management Plan:

Risk – *Vegetation management will be performed in a manner to minimize risk to both habitat and flood risk reductions structures.*

Habitat – *Vegetation management will be performed in a manner that avoids or minimizes impacts upon fish and wildlife habitat.*

Maintenance – *A vegetation management strategy will be developed that is cost-effective and practical to implement.*

There were no objections and the group agreed to use the proposed objectives.

Proposed Strategy Deliverables

Penny reviewed the proposed strategy deliverables for the Vegetation Management Plan:

Vegetation Communities Mapping – *Vegetation communities along the river*
Risk Analysis – *The level of risk to structural integrity posed by vegetation and the river*
Levee Structure Schematics – *Typical levee structure scenarios*
Vegetation Inspection Standards – *Maintenance specifications for levee type*
Vegetation Risk Matrix – *Protocols to manage hazardous trees*
Planting Plan – *Replanting standards, specifications and protocols*
Invasive Species Management Plan – *A strategy for managing invasive species*

Penny asked the group if they had any suggestions or concerns about these strategies.

CTG members shared the following questions or comments and Pierce County staff provided answers where appropriate:

- A CTG member emphasized that all trees will be kept unless they pose a risk.
 - Rob indicated that the County only intends to remove trees for USACE inspectability requirements, and that they will focus on trees over 6 inches in diameter.
 - Charles Ifft, USACE CTG representative, noted that large trees do not usually pose a risk for visibility and inspectability.
- A CTG member asked for clarification about what types of trees pose a risk, and how the County can cultivate large trees if small trees pose problems for USACE requirements.
 - Peter referred to the Levee Maintenance Schematic Plan and noted that the plan centers around mature trees, allowing for smaller shrubs and saplings to grow around those mature trees. Smaller vegetation between those clusters would be removed.
- A CTG member asked if there would be encouragement for recruitment of saplings in the riparian management zone between existing clusters.
 - Peter noted that part of the discussion should include the proposed dimensional distance between clusters.
 - Rob said that the County intends to retain as many mature trees as possible while still meeting minimum USACE requirements. He also noted that maintenance efficiency must also be a consideration; it is very labor intensive to maintain inspection windows.
 - Penny added that the Proposed Levee Vegetation Maintenance Guidelines suggest that clusters should be 10 to 15 feet in diameter, and there should be 10 to 20 feet between clusters.
- A CTG member asked how the County intends to handle blackberry growth and other invasive species while maintaining a multi-story canopy.
 - Rob said that the multi-story canopy will be provided by the riverside buffer of vegetation, as well as the clusters. Invasives will be controlled through mowing between clusters.
 - Tony noted that planting could be used to choke out invasives. Herbicides could also be used if needed.
 - A CTG member said that herbicides should not be used on the waterward face.
- A CTG member asked how often vegetation would be mowed.

- Rob noted that, at a minimum, the levees would need to be mowed prior to the USACE biannual inspection.
 - Peter also noted that whenever mowing occurs, planting opportunities arise.
- A CTG member asked if any of these proposed maintenance guidelines are problematic from the USACE perspective.
 - Charles indicated that grass is the USACE standard and provides for the best functioning levee. Modifications to this standard increase risk, but the County accepts that risk for the environmental benefit. Since vegetation is not currently part of the interim policy criteria, these guidelines do not pose a problem.
- A CTG member asked if allowances could be made during mowing for mature tree recruitment, especially shade tolerant conifers.
 - Tony suggested that shade tolerant conifers could be flagged along with noxious weeds that spread through mowing. The County's biologists would need to work with maintenance crews to retain young conifers and manage noxious weeds.
- A CTG member asked how the County would mitigate for decreased shade when trees are removed.
 - Rob said that the County would replant as mitigation under the Puyallup River Vegetation Management Agreement.
 - A CTG member indicated that replanting does not provide short-term mitigation for the decrease in shade.
 - Tony noted that replanting is currently the only mitigation as far as maintenance and operation under the SWIF Plan, but the issue could be discussed as part of the HCP. In order to mitigate for shade, the County would need to be able to adequately assess the impact.
 - Rob emphasized that there are very few instances where hazard trees have to be removed.
 - Penny noted the request to address the mitigation for loss of shade in the HCP.
- A CTG member indicated that habitat should be balanced with flood protection considerations.
- A CTG member asked whether acquisition of setback levees would be covered under the SWIF Plan.
 - Rob said that would fall under the HCP.
- A CTG member suggested that some of these maintenance practices may exacerbate issues with retaining vegetation and create more hazard trees (e.g., the overhanging vegetation buffer along the river may be too exposed to windthrow). A best practice for maintenance would be to do succession planting and create a multi-layered understory.
- A CTG member noted that the amount of trees that would need to be removed has varied in discussions. The group needs a better understanding of vegetation quantities in order to develop suggestions.
- A CTG member suggested that the tension between the loss of habitat and the effects on salmon and the goals of vegetation management are larger than the SWIF process. This conversation should be happening elsewhere in the policy structure; the Sustainability 2020 Plan might be the appropriate place.
- A CTG member asked how the General Investigation (GI) Study fits into this process.
 - Rob said that the County would bring in someone to talk about the GI Study at a later date.
- A CTG member noted that the issue of solar exposure continues to come up and that should be considered in vegetation management recommendations.

Penny noted that many of these suggestions are already included in the Proposed Levee Vegetation Maintenance Guidelines. She asked the CTG to review the Guidelines closely and provide suggestions, as well as indicating anything that might be missing prior to the next meeting. At the next meeting, the group will have a discussion about these suggestions and finalize the Proposed Strategy Deliverables.

NEXT STEPS

Penny reminded the group that the next meeting will take place on Wednesday, Jan. 20. At that meeting, the group will wrap up the discussion on vegetation management and begin discussing risk. On Jan. 27, the Department of Emergency Management will do a presentation on interim risk reduction measures.

Penny asked the CTG if they found the handouts helpful; the group indicated that they were. She also asked if the CTG had any suggestions about process. A CTG member indicated that it would be helpful for the County to clarify the objectives for each meeting by sharing how the information and more clearly articulating the expected outcomes of each meeting.

PUBLIC COMMENT

There were no public comments.

ATTENDANCE

Community Technical Group Members

Chrissy Cooley	Agricultural Round Table
J.C. Hungerford	City of Orting (Parametrix)
Steve Carstens	City of Puyallup
Martin Fox	Muckleshoot Indian Tribe
David Molenaar	National Oceanic and Atmospheric Administration
Ryan Mello	Pierce Conservation District
Hugh Taylor	Pierce County Council's Office
Jill Bushnell	Pierce County Emergency Management
Bill Sullivan	Puyallup Tribe of Indians
Russ Ladley	Puyallup Tribe of Indians
Charles Ifft	US Army Corps of Engineers
Kimball Ohsiek	US Army Corps of Engineers (alternate for Charles Ifft)
Jeffree Stewart	Washington Department of Ecology
Doug Wiedemeier	Washington Department of Fish and Wildlife

Pierce County

Rob Wenman	Project Manager
Todd Essman	Project Technical Lead
Tony Fantello	Project Sponsor
Erick Thompson	Environmental Biologist

Anchor QEA

Peter Hummel	Landscape Architect
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EnviroIssues

Penny Mabie	Facilitator
Chelsea Ongaro	Notetaker

Hackney Interests

Clint Hackney	Tribal Liaison
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Community Technical Group Meeting 5 Summary

2/17/16

OVERVIEW

On Jan. 27, 2016, Pierce County Storm Water Management hosted the fifth Community Technical Group (CTG) meeting for the System Wide Improvement Framework (SWIF) planning process.

Topics for the Jan. 27 meeting included:

- Finalizing proposed vegetation management strategies
- Reviewing risk reduction and how it fits into the SWIF Plan
- Reviewing history of flooding, repetitive loss and repetitive levee damage

All presentations can be found at: <https://www.co.pierce.wa.us/Archive.aspx?ADID=4268>

WELCOME AND INTRODUCTIONS

Meeting facilitator Penny Mabie welcomed everyone and led a round of introductions. She conducted an overview of the agenda, meeting handouts and ground rules.

COMMUNITY TECHNICAL GROUP BUSINESS

Penny announced that the American Public Works Association would be holding an event in Seattle on Feb. 10 about the Levee System Wide Improvement Framework program. Penny will share details about the event with the CTG.

A CTG member shared that City of Orting won a Washington State Chapter, American Council of Engineering Consultants Excellence Award for the Calistoga Setback Levee and is going to be considered for a national level award.

Penny asked if the CTG had any objections to finalizing the Meeting 4 Summary. The summary was previously emailed to the group for review. There were no emailed responses. A CTG member noted that the summary included a request for another levee tour with a focus on vegetation management and asked how that was resolved. Tony Fantello, Pierce County Project Sponsor, noted that another tour was unlikely, due to project schedule and he would follow up with the requesting member. No objections were raised and the summary draft was accepted as final. The summary is available on the SWIF webpage.

VEGETATION MANAGEMENT STRATEGIES

Penny and Rob Wenman, Pierce County Project Manager, led a conversation about the vegetation management strategies. Penny reminded the group that the team wants to hear their input in order to finalize the strategies, which will be submitted as part of the Regional Considerations, Approaches and Tools section of the SWIF Plan. See slide 4 of the [Presentation](#) for details.

Rob gave an overview of the comments the team had received via email about the strategies. Comments are included below and CTG members shared the following questions or comments and Pierce County staff provided answers where appropriate:

- Rob shared that Pierce County Parks and Recreation had indicated that their main concerns related to trails on the levees are hazard trees and making sure that there is clearance on either side of the trail for safety. Parks indicated that they do not feel that the proposed strategies interfere with their mandates and goals.

- A CTG member asked what the required clearance zone was on either side of the trail.
- Jessica Stone, Pierce County Parks and Recreation, indicated that the entire cleared area, including the width of the trail, is 10 feet.
- Rob noted that minimum access required by US Army Corps of Engineers (USACE) on the levee crown is 10 feet, so trail requirements should not have any additional impact. He also noted that the County would continue to work closely with Parks to ensure that proposed strategies and concepts are compatible with trail use.
- A CTG member noted that Parks and Recreation requirements related to trails add another level of complexity and requirements which may further impact trees and habitat.
- A CTG member asked if Parks and Recreation currently has any proposed trails on levees.
- Jessica indicated that she would attempt to acquire future plans for parks and share them with the group.
- Penny noted that it sounded like some members would like to see a statement in the strategy regarding mutual uses of levee tops and how those uses should fit within levee maintenance and habitat needs.
 - Rob indicated that the County has discussed developing a Memorandum of Understanding with Parks and Recreation related to joint use.
- A CTG member asked where the trail guidelines come from.
 - Jessica indicated that there are federal and local guidelines and that she would request a copy of the guidelines and share it with the CTG.
- A CTG member expressed concern that it is unclear how many trees will be removed to meet levee maintenance requirements.
 - Rob indicated that the Vegetation Management Guidelines outline that the County intends to keep as many trees as possible. He noted that the team needs to work out the details to provide assurance that there will be minimal impact to trees.
- Rob shared that a CTG member had expressed concern about the appropriate level of mitigation to offset impacts to river temperature and shading.
 - Rob noted that one of the proposed objectives in the guidelines focuses on habitat: “Habitat -Vegetation management will be performed in a manner that avoids or minimizes impacts upon fish and wildlife habitat.” He also noted that impacts to habitat will be analyzed in greater detail in the Habitat Conservation Plan (HCP). One way to address shade concerns is with vegetation on the backside of the levee; Rob noted that the proposed guidelines do not impact the ability to retain these trees. The County conducted a GIS study of the 1,200 feet from the water line on PL 84-99 levees and determined that on 80 percent of those levees, the County does not own the land on the backside of the levee and therefore does not have control of those trees. Rob suggested that the HCP would be the appropriate place to explore partnerships with other programs to work to retain those trees.
 - A CTG member suggested that the SWIF Plan incorporate language about what combination of tree height and density provides the best thermal buffer for fish species, especially on the southern and western exposures.
 - A CTG member noted that the Green River SWIF Plan established a buffer width and density of 80 to 150 feet, where possible. It takes time for trees to reach a height that allows for proper shading. A single row of trees is not enough, because new trees are required to fill the holes if trees come down. River depth also factors into temperature.

- In order to address concerns about temperature and shading, Penny said it sounded like there was a request to incorporate language to establish a buffer of trees on the backside of the levee of 80 to 150 feet where possible.
 - Rob noted that issue would be best addressed in the HCP.
 - A CTG member said that we should incorporate into the SWIF if possible.
 - Rob said that the team would work on some language and then determine if it would be most appropriate to include it in the SWIF or the HCP. He also noted that the County could work some language about being proactive about developing a multi-layered canopy into the SWIF Plan.
- A CTG member expressed appreciation for the County’s commitment to discuss language changes to the SWIF Plan to incorporate these concerns.
- A CTG member shared ideas about working to develop a buffer of trees on the backside of the levee on private properties.
 - A CTG member asked if there was a statement of agreement about tree buffers on private property easements along levees.
 - Rob noted that these properties are exempt under the Critical Areas Ordinance, but that there might be other avenues to work with them (e.g., through the Pierce County Conservation District).

Rob reviewed the handouts, including the revised Levee Maintenance Schematic Plan, the draft Hazard Tree Assessment Matrix, and the draft Levee Planting Program Recommendations Memo, highlighting the changes that have been incorporated based on CTG input. He noted that the vegetation clusters proposed in the schematic plan will require more hands-on maintenance, but that mowing will still be used around these clusters. He also noted that crews will identify and recruit saplings, as well as plant in areas where there is more than 25 feet of space between vegetation clusters. Rob also noted that the guidelines include a plan to choke out invasive species using proper procedures.

Rob requested that the CTG provide comments on the draft Levee Planting Program Recommendations Memo, draft Hazard Tree Assessment Matrix, revised Levee Maintenance Schematic Plan and the Proposed Levee Vegetation Maintenance Guidelines by Feb. 10.

- A CTG member asked if an arborist would make the final decision about whether a tree is a hazard and should be removed.
 - Rob clarified that the hazard tree matrix includes a note at the bottom about required qualifications to assess whether a tree is a hazard.
- A CTG member asked who funds mitigation efforts (i.e., replanting) after levee repairs.
 - Tony noted that the County is required to pay for mitigation.

RISK REDUCTION OVERVIEW

Todd Essman, Pierce County Project Technical Lead, provided an overview of risk reduction, including how it fits into the SWIF Plan, as well as a history of flooding, repetitive loss and repetitive levee damage. See slides 5-24 of the [Presentation](#) for details.

Todd outlined that in order to manage risk, the County utilizes a multifaceted maintenance program which includes:

- Developing an inventory
- Performing condition assessments
- Evaluating results

- Prioritizing actions / action plan
- Implementing actions
- Monitoring

Todd also shared a map of composite damages to levees and revetments between 1990 and 2012, which highlights areas of repetitive loss. This mapping helps the County identify possible areas for setback levees.

- A CTG member noted that the results of the General Investigation Study do not include plans to build setback levees in the lower river, which is where the map shows the most repetitive loss.
 - Kimball Ohsiek, USACE, said that he would connect with his team about this issue.
 - Rob indicated that the Feb. 24 meeting will include presentations about other efforts, such as the General Investigation Study and the Levee Setback Program.

Rob shared that the SWIF Plan must show how the County is optimizing risk reduction, which requires an understanding of where there are the greatest risks to the levee system and consequences of damages to those locations. The Plan must suggest how the County intends to improve the system over time and prioritize those plans.

Jill Bushnell, CTG member, Pierce County Emergency Management, noted that she will be presenting on the non-structural aspects of Interim Risk Reduction Measures (IRRM) at the next meeting. She asked if there were any particular topics that the CTG members wanted to know more about.

- A CTG member asked for a clear definition of non-structural IRRM.
- Rob suggested that the group should learn more about inundation maps, and populations and properties at risk.
- A CTG member asked that the presentation include information about notification to title holders related to the 100-year flood event.
- Penny asked whether it would be useful to hear about the emergency management strategies of other organizations.
 - Jill indicated that she would reach out to the Muckleshoot Tribe to learn about their strategies.

Penny asked the CTG members to email her if they had any other requests for information for Jill's presentation.

NEXT STEPS

Penny reminded the group that the next meeting will take place on Wednesday, Feb. 17. At that meeting, the group will continue discussing risk, including the IRRM and risk assessment and prioritization. The team will also share an updated version of the CTG Work Plan at the next meeting.

Penny asked if the CTG had any questions or suggestions about the process. CTG members shared the following questions or comments and Pierce County staff provided answers where appropriate:

- A CTG member noted that the project team brought a draft of the Proposed Vegetation Management Guidelines to the meeting for the CTG to look at and asked whether that same process would be used for the other sections of the SWIF.

- Rob indicated that the discussions at the meetings will inform chapters of the SWIF Plan, which will ultimately lead to the Action Plan. The Action Plan outlines the County’s goals for the next five to ten years. Based on the current schedule, the team expects to have a draft of the SWIF Plan by July.
- Penny said that the team would highlight the SWIF Key Sections handout, distributed at the first meeting, at the Feb. 17 meeting to remind the group of the elements of the SWIF Plan.
- A CTG member asked when the group could expect to see a new version of the Proposed Vegetation Management Guidelines incorporating CTG input.
 - Rob noted that all comments will be addressed but was not sure if an updated plan would be ready for the next meeting. He indicated that the County may reach out to address specific comments individually.

PUBLIC COMMENT

There were no public comments.

ATTENDANCE

Community Technical Group Members

J.C. Hungerford	City of Orting (Parametrix)
Steve Carstens	City of Puyallup
Martin Fox	Muckleshoot Indian Tribe
David Molenaar	National Oceanic and Atmospheric Administration
Jessica Stone	Pierce County Parks and Recreation
Jill Bushnell	Pierce County Emergency Management
Bill Sullivan	Puyallup Tribe of Indians
Russ Ladley	Puyallup Tribe of Indians
Kimball Ohsiek	US Army Corps of Engineers (alternate for Charles Ifft)
Jeffree Stewart	Washington Department of Ecology
Doug Wiedemeier	Washington Department of Fish and Wildlife

Pierce County

Rob Wenman	Project Manager
Todd Essman	Project Technical Lead
Tony Fantello	Project Sponsor
Erick Thompson	Environmental Biologist

EnviroIssues

Penny Mabie	Facilitator
Chelsea Ongaro	Notetaker



Community Technical Group Meeting 6 Summary

3/16/16

OVERVIEW

On Feb. 17, 2016, Pierce County Storm Water Management hosted the sixth Community Technical Group (CTG) meeting for the System Wide Improvement Framework (SWIF) planning process.

Topics for the Feb. 17 meeting included:

- Overview of SWIF interim risk reduction measures (IRRM) requirements
- Overview of Pierce County IRRM Program
- Discussion of risk assessment and prioritization

All presentations can be found at:

<https://www.co.pierce.wa.us/ArchiveCenter/ViewFile/Item/4410>

WELCOME AND INTRODUCTIONS

Meeting facilitator Penny Mabie welcomed everyone and led a round of introductions. She conducted an overview of the agenda, meeting handouts and ground rules.

COMMUNITY TECHNICAL GROUP BUSINESS

Penny asked if the CTG had any objections to finalizing the Meeting 5 Summary. The summary was previously emailed to the group for review. There were no emailed responses. No objections were raised and the summary draft was accepted as final. The summary is available on the SWIF webpage.

RISK ASSESSMENT AND PRIORITIZATION

Todd Essman, Pierce County Project Technical Lead, conducted an overview of how the County assesses risk, evaluates the results, and prioritizes results in an action plan. See slides 4-49 of the [Presentation](#) for details.

CTG members shared the following questions or comments and Pierce County staff provided answers where appropriate:

- A CTG member asked whether the County has considered using something like a rock barb to direct the flow of the river away from the levee.
 - Todd said that the County usually tries to put as little rock as possible into the river, but that rock barbs might work well in some areas.
 - Tony Fantello, Pierce County Project Sponsor, indicated that the County has considered using rock barbs or bendway weirs in the past, but the County tries to keep repairs within the existing footprint of the levee. Something like a rock barb would be considered new construction and would require a new permit.
- A CTG member asked how the County divides the levee sections for evaluation in the condition assessment.
 - Todd indicated that they divide the system into 1/10 of a mile segments to make inspection and damage locating easier. The crews also take photos to assist with damage assessments.
- A CTG member asked how often the County inspects the levees for condition assessment purposes and planning for future projects.

- Todd indicated that they conduct an annual inspection, usually sometime in winter when river flows are lowest. The County conducts additional assessments after major flood events and when river flows are high.
- A CTG member asked whether the condition assessment also includes an inspection of the vegetation on the slope of the levee.
 - Todd indicated that the County inspects for all of the US Army Corps of Engineers (USACE) criteria, including vegetation.
- A CTG member asked whether Surface Water Management (SWM) has ever had to request a budget adjustment.
 - Tony noted that during his time with the County, SWM has never had to request supplemental budget. SWM is required to have two years of operating expenses available at all times. After large flood events, SWM has had to dip into those funds.

INTERIM RISK REDUCTION MEASURE (IRRM) REQUIREMENTS

Sarah Motsenbocker, Pierce County Civil Engineer, provided an overview of the SWIF IRRM requirements. These requirements are outlined in the USACE Engineering and Construction Bulletin and include the following:

- Introduction
- Potential failure modes and inundation
- Populations at risk
- Environmental and economic considerations
- Interim risk reduction measures: structural and non-structural
- Risk communication plan
- Conclusion and recommendations

See slides 50-63 of the [Presentation](#) for details.

IRRM: STRUCTURAL & NON-STRUCTURAL

Sarah and Jill Bushnell, Pierce County Emergency Management, provided an overview of structural and non-structural IRRMs. In addition, Sarah led a discussion about prioritization factors. See slides 64-86 of the [Presentation](#) for details.

Structural

Sarah shared the structural IRRM components, which include: the annual maintenance program, increasing erosion protection at the levee toe, increasing resilience to overtopping, and evaluating internal drainage features.

Non-Structural

Sarah also shared the non-structural IRRM components, which include: comprehensive floodplain management, engineering investigations, risk communication plans, flood warning and emergency evacuation plans, flood emergency drills and exercises, and pre-positioning emergency supplies. Jill also shared specific non-structural IRRMs.

CTG members shared the following questions or comments and Pierce County staff provided answers where appropriate:

- A CTG member asked what the zone for the Federal Emergency Management Agency's (FEMA's) Community Rating System encompassed.

- Tony noted that Pierce County has received a rating of “2” through FEMA’s system, and that it applies to the whole County. This rating allows citizens to participate in flood insurance programs at discounted rates.
- A CTG member asked if the Pierce County Flood Risk Assessment is available online.
 - Todd noted that the Assessment is available online.
- A CTG member asked how many people have opted in to receive general information and updates through PCAlert.
 - Jill indicated that Emergency Management regularly conducts outreach to the community to encourage them to opt in. She will look into how many people have opted in.
- Doug Weber, USACE, asked whether the County was planning to develop contingency plans for specific high risk areas. IRRMs can be broad measures that look at risk for the whole system, but Doug suggested it might be a good idea to have contingency plans for specific high risk areas.
 - Tony indicated that the County has informal contingency plans in place for certain areas (e.g., Clear Creek).
 - Jill noted that they could describe the processes for notifying the individual cities to conduct door-to-door outreach and lead evacuation for specific situations. In addition, the County could describe the standard operating guidelines for flood events, followed by the PCAlert and PCWarn procedures, referencing the available templates.
 - Doug noted that there is no need to recreate existing procedures; instead, existing procedures can be referenced through a spreadsheet or some other appendix.

IRRM Prioritization Factors

Sarah shared a matrix detailing IRRMs and factors used to prioritize those measures. The County sees reducing inundation and reducing or maintaining life safety risk as the top priority for prioritizing measures. Sarah asked for input from the group on whether any measures are missing from the matrix and whether there any factors that should be weighted higher than others. The County will use this information to determine appropriate projects to address the IRRMs.

CTG members shared the following questions or comments and Pierce County staff provided answers where appropriate:

- A CTG member noted that the most efficient measure to reduce risk is to move people out of floodplain properties by purchasing the property behind the levee. The member indicated that a plan should be developed to start setting back levees in a cost effective manner. Acquiring properties to develop setback levees should be included in this matrix. In addition, the County should work to modify zoning codes to prevent new developments from going in behind levees.
 - Sarah noted that these issues are addressed in the Flood Hazard Management Plan. The County seeks to control development in the 100-year floodplain.
- A CTG member asked about the timeframe for these “interim” measures and how that compares to the long-range plans included in the Flood Hazard Management Plan.
 - Tony said that the IRRMs cover a 20-year timeframe, whereas the Flood Hazard Management Plan will drive capital projects for the long-term.
 - Sarah noted that these may be interim measures, but they are also best management practices.
 - Jill noted that IRRMs are looking at ways to reduce risk until all levees meet USACE standards.

- Todd indicated that the County’s main focus is risk reduction through maintenance for the next 20 years.
- A CTG member noted that the County should focus on setting back levees in high inundation areas to discourage people from moving into those areas and safeguard against habitat loss and increase flood protection. The SWIF Plan should not be too narrow, so that it does not preclude the kinds of things that reduce the need for maintenance (e.g., setback levees).
 - Sarah noted that there will be several presentations about capital projects at the next meeting on Feb. 24.
 - Todd noted that the County did a study of the general migration of the river and used that to develop a prioritized list of 32 setback levee projects.
 - Tony indicated that the County now has very stringent floodplain regulations which prevent further development in the floodplain. This was not always the case, and the County is slowly acquiring these properties. These long-term plans are part of the Flood Hazard Management Plan and require grants and other funding. The SWIF Plan focuses on maintenance and operations.
 - Erick Thompson, Pierce County Environmental Biologist, noted that the Habitat Conservation Plan is going to guarantee the largest four of those 32 setback levee projects that provide the greatest habitat and risk reduction. Since the SWIF Plan is a maintenance and operations document, setback levees should not be included.
 - A CTG member asked whether the County was using the Conservation Futures Program to purchase floodplain areas.
 - Tony noted that the County has explored that, but that it would be a good question for the capital projects group at the next meeting.
- A CTG member asked how the cost was calculated for the matrix.
 - Sarah noted that the cost included in the matrix represents costs for what the County typically does in a year. In addition, the cost shown here only includes the County’s contribution to the cost, and not the total cost. Sarah indicated that the team would work to flesh out the data and clearly define what is included, as well as provide a description for each measure. Once that is available, the team will share the updated matrix with the group for comment.
 - A CTG member suggested adding an additional column to highlight year to year cost as well as total cost.
 - A CTG member noted that it is important to make sure that the Pierce County Council understands that these data only apply to short-term measures to meet requirements for the SWIF, and that other projects outside of the SWIF are needed to address other issues (e.g., habitat).
 - Charles Ifft, USACE, noted that USACE does not need the cost to be included in the matrix, so the County can take it out if necessary.

NEXT STEPS

Penny reminded the group that the next meeting will take place on Wednesday, Feb. 24. At that meeting, the group will learn about river capital projects.

PUBLIC COMMENT

There were no public comments.

ATTENDANCE

Community Technical Group Members

Russ Blount	City of Fife
J.C. Hungerford	City of Orting (Parametrix)
Steve Carstens	City of Puyallup
Martin Fox	Muckleshoot Indian Tribe
Hugh Taylor	Pierce County Council's Office
Jill Bushnell	Pierce County Emergency Management
Jessica Stone	Pierce County Parks and Recreation
Russ Ladley	Puyallup Tribe of Indians
Charles Ifft	US Army Corps of Engineers
Doug Weber	US Army Corps of Engineers
Jeffree Stewart	Washington Department of Ecology
Doug Wiedemeier	Washington Department of Fish and Wildlife

Pierce County

Todd Essman	Project Technical Lead
Tony Fantello	Project Sponsor
Erick Thompson	Environmental Biologist
Sarah Motsenbocker	Civil Engineer
Doug Thompson	Civil Engineer

EnviroIssues

Penny Mabie	Facilitator
Chelsea Ongaro	Notetaker



Community Technical Group Meeting 7 Summary

3/16/16

OVERVIEW

On Feb. 24, 2016, Pierce County Storm Water Management hosted the seventh Community Technical Group (CTG) meeting for the System Wide Improvement Framework (SWIF) planning process.

Topics for the Feb. 24 meeting included:

- Overview of relevant River Capital Improvements and how they relate to the SWIF Plan

All presentations can be found at:

<https://www.co.pierce.wa.us/ArchiveCenter/ViewFile/Item/4415>

WELCOME AND INTRODUCTIONS

Meeting facilitator Penny Mabie welcomed everyone and led a round of introductions. She conducted an overview of the agenda, meeting handouts and ground rules.

COMMUNITY TECHNICAL GROUP BUSINESS

Penny noted that Tony Fantello, Project Sponsor, had followed up with Chrissy Cooley, CTG member from the Agricultural Round Table about her request for an additional tour. Tony shared with her that there is not room in the schedule for another tour. He confirmed with her that she is still interested in being part of the CTG, but she does not feel that her organization is directly affected by these issues. She will continue to attend as she is able.

Penny also reminded the group of the request for the number of people who had opted-in to PCAalert. Jill Bushnell, Pierce County Emergency Management, was unable to attend the meeting, but asked that Penny currently, 20,023 people have opted-in to PCAalert.

Finally, Penny said that the draft King County Interim System Wide Improvement Framework for the Green River had been released and that she would share it with the group via email.

RIVER CAPITAL IMPROVEMENTS DISCUSSION

Rob Wenman, Pierce County Project Manager, introduced the River Capital Improvements topic and how it relates to the SWIF Plan. The SWIF Plan focuses on operations and maintenance to address levee deficiencies identified by the US Army Corps of Engineers (USACE), whereas the River Capital Improvements address other types of projects to improve the system.

Levee General Investigation

Randy Brake, Pierce County Capital Improvement Program, provided an overview of the USACE General Investigation Study (GI Study), a flood risk management study to maximize national economic benefits and reduce life safety risk on the Puyallup. The draft GI Study will be released in March or April, and will include a 45-day public comment period and public meeting. The County is anticipating completing the GI Study in September 2017. See slides 4-14 of the [Presentation](#) for details.

CTG members and Pierce County staff shared the following questions or comments and Randy provided answers where appropriate:

- A CTG member asked how the draft GI Study would be released.

- Randy indicated that a few hard copies would be available at Pierce County, USACE and local libraries. In addition, a PDF of the GI Study would be available on the Pierce County and USACE websites.
- Rob asked how environmental review was conducted.
 - Randy said that an environmental review was conducted as part of the Feasibility Report, which will also be available for comment during the comment period.
- Tony highlighted that the County chose to conduct a General Investigation to be considered for federal appropriation of funds to address needs in the levee system.
 - Randy added that a partnership with the federal government would be required to undertake projects of the scale and magnitude identified by the County.

Countyline Setback Project

Jeanne Stypula, King County River and Floodplain Management, gave an overview of the Countyline and Pacific Right Bank Levee Setback Projects. Both of these projects are located at the King/Pierce County line and will affect Pierce County's Potelco Levee. The projects will remove existing levees and revetments to increase channel capacity and build setback levees. Once complete, King County will take responsibility for maintenance and operations.

Construction is set to begin on the Countyline Project in May 2016 and be completed by December 2017. King County has begun geotechnical work for the Right Bank Project and is continuing to work with land owners to acquire properties. King County is anticipating completing the Right Bank Project in 2018 or 2019. See slides 15-30 of the [Presentation](#) for details.

CTG members and Pierce County staff shared the following questions or comments and Jeanne provided answers where appropriate:

- A CTG member asked whether King County expects to excavate at Pacific Park as part of the Right Bank Project.
 - Jeanne indicated that the County is still in the early planning stages for the Right Bank Project, but excavation at Pacific Park will likely be necessary because it is a former dump site.
- A CTG member asked why the budget for the Right Bank Project (\$25 – \$30 million) is so much higher than the Countyline Project (\$18 million) budget.
 - Jeanne said that the Right Bank Project is a complex design effort involving more property acquisition.
- Tony asked if there is any concern about sediment infill in the area where the levees are removed.
 - Jeanne said that the river has been filling with sediment for years and King County has a good idea of the infill rate. King County will survey the river again this summer to check the sediment build-up. The Countyline Project is designed to account for sediment deposition, and by increasing channel capacity, the project will slow the rate of infill.
- A CTG member asked if King County estimates that the setback levee will buy them 30 years and how long it would be before the levee reaches capacity if no setback were built.
 - Jeanne said that they are predicting 50 to 75 years assuming the same rate of infill, but climate change or other conditions may impact this prediction. Without any changes, the current levee would no longer be sufficient in a handful of years.
- Rob noted that the Potelco Levee is currently part of the PL 84-99 program. Pierce County will continue to maintain their portion of the levee until the setback levee is constructed.

- A CTG member asked whether the Countyline Setback Project would be a certified levee under the Federal Emergency Management Agency (FEMA).
 - Jeanne said that the Countyline Setback Levee will not be a certified levee under FEMA, but it will be part of FEMA's Levee Analysis and Mapping Procedures.

Setback Feasibility Program

Tom Nelson, Pierce County SWM, provided an overview of the Setback Feasibility Study, which seeks to improve salmon habitat through prioritized levee setback projects. In 2008, a Setback Feasibility Study identified 32 potential levee setback sites and prioritized them with the help of a technical committee.

Tom showed a Levee Setback Feasibility Study Project video available at <https://youtu.be/-IzU0BU1V4E>. The video details the potential levee setback sites from the 2008 Study, so some of the sites are out-of-date. In 2014, Pierce County updated the study to include additional criteria. The ranking priority for some of the sites changed between 2008 and 2014. When funding becomes available, the County would like to do another update to the Study to include all of the land in the floodplain from valley wall to valley wall. See slides 31-46 of the [Presentation](#) for details.

CTG members shared the following questions or comments and Pierce County provided answers where appropriate:

- A CTG member asked whether cost was a component of the rankings.
 - Tom explained that cost was a factor in the 2008 rankings, but when they did the update in 2014, they modified the cost ranking. If all property in the floodplain can be acquired, building an actual levee (and the associated cost) may no longer be necessary. Therefore, cost is not a straight forward component in the rankings.
- A CTG member noted that nine out of the 32 identified sites were compromised by development and asked for clarification about why those sites were compromised.
 - Tom explained that the sites were compromised by development on the backside of the levee. Once developed, it became cost prohibitive to acquire that land and a setback levee was no longer feasible.
 - The CTG member followed up to ask if the County is doing enough to prevent development in these area, or whether more coordination with the cities is needed.
 - Tom said that there are some prohibitions in the County code which seek to limit development. Tom will share these with the CTG member.
 - Rob noted that the team will need to consider the proposed levee setback sites with levees enrolled in the PL 84-99 program to assist with operation and maintenance planning efforts. At some point, it may make sense to forego levee maintenance work if it will soon be transitioned to a setback levee.

Flood Hazard Management Plan Levee Improvements

Rob shared several handouts to provide an overview of the Flood Hazard Management Plan (FHMP) Levee Improvements. These handouts included, a list of FHMP Capital Improvement Projects (CIP) and how they align with levees in the PL 84-99 program, a corresponding map detailing the location of those levees, and a packet describing levee setback projects.

CTG members and Pierce County staff shared the following questions or comments and Pierce County provided answers where appropriate:

- A CTG member asked what was included in the estimated cost for the Nisqually Park levee.
 - Rob noted that the ultimate solution has not yet been determined and the current estimate only includes property acquisition.

- Tony added that a small segment of levee may be required to protect the road, but this will not have a major effect on the cost.
- Randy noted that the County and the City of Orting are currently seeking funding for a Preliminary Feasibility Design Report and Cost Estimate for the Bridge Street/Carbon River setback levee.
 - Rob asked whether there has been any property acquisition and when they anticipate beginning construction.
 - Randy explained that property acquisition would come later, but that most of the land in that area is undeveloped. He also noted that construction is at least five years out.
- A CTG member asked whether there has been an assessment of the cost of all properties behind the proposed setback levee up to the valley wall, so that the cost could be compared to the cost of building the levee structure itself. The CTG member also noted that acquiring property all the way to the valley wall would be better for salmon habitats.
 - Randy said that the County did not do that comparison. For the Alward setback levee specifically, acquisition to the valley wall may not be possible because of a road that allows access to the nearby development.
 - Ziad Farrah, Pierce County Capital Improvement Program, added that this is a slow process and the current focus is to acquire as much property as possible up to the proposed setback levee. Further property acquisition could be considered once those initial properties have been acquired. Ziad noted the proposed comparison is a new idea and sounds like a good idea.
- A CTG member asked what portion of the estimated cost for the Alward setback levee is for levee construction.
 - Randy said that the levee structure would cost upwards of \$15 million. He added that the estimate includes other features, such as an engineered log jam to train the flow against the opposite bank.
 - The CTG member noted that the other features would also not be necessary if land was acquired up to the valley wall.
- A CTG member noted that the estimated costs would lead someone to assume that funding had been secured for these projects through the CIP and suggested that the County add clarifying text to the document.
 - Rob said that the projects listed in bold are included in the CIP, but only a fraction of the estimated cost has been funded. Money is appropriated on a yearly basis.

Rob indicated that the team would like to work with the Flood Control District and the CIP team to establish protocols for how these projects get prioritized and share that with the CTG in March or April.

VEGETATION MANAGEMENT STRATEGIES

Rob thanked the group for sharing their comments on the strategy and supporting documents. He noted that the team would be working to respond to those comments and this agenda item will be discussed at a later meeting when those responses are available.

NEXT STEPS

Penny reminded the group that the next meetings will take place on Wednesday, March 16 and March 23. At the March 16 meeting, the group will learn about protocols for prioritizing projects, including discussions about maintenance, betterments and improvements.

Rob said that the team is working to pull together the draft Action Plan, which will be shared at a future meeting. The Action Plan will be framed around deficiencies identified by USACE, as well as near-term, mid-term and long-term projects.

PUBLIC COMMENT

There were no public comments.

ATTENDANCE

Community Technical Group Members

Chrissy Cooley	Agricultural Round Table
Steve Carstens	City of Puyallup
Doug Beagle	City of Sumner
Martin Fox	Muckleshoot Indian Tribe
David Molenaar	National Oceanic and Atmospheric Administration
Hugh Taylor	Pierce County Council's Office
Russ Ladley	Puyallup Tribe of Indians
Kimball Oshiek	US Army Corps of Engineers
Doug Wiedemeier	Washington Department of Fish and Wildlife

Pierce County

Tony Fantello	Project Sponsor
Rob Wenman	Project Manager
Todd Essman	Project Technical Lead
Erick Thompson	Environmental Biologist
Tom Nelson	Environmental Permitting & Planning
Randy Brake	Capital Improvement Program
Ziad Farrah	Capital Improvement Program

King County

Jeanne Stypula	River and Floodplain Management
Stephanie Shelton	River and Floodplain Management

Washington Department of Fish and Wildlife

Chris Conklin

EnviroIssues

Penny Mabie	Facilitator
Chelsea Ongaro	Notetaker

Hackney Interests

Clint Hackney	Tribal Liaison
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Community Technical Group Meeting 8 Summary

4/4/16

OVERVIEW

On March 16, 2016, Pierce County Storm Water Management hosted the eighth Community Technical Group (CTG) meeting for the System Wide Improvement Framework (SWIF) planning process.

Topics for the March 16 meeting included:

- Overview of the Puyallup River system baseline
- Update on the Habitat Conservation Plan (HCP) and how the SWIF goals and objectives relate to the HCP
- Overview of funding for levee work and the Flood Control Zone District (FCZD) Comprehensive Plan of Development (CPOD)
- Overview of levee maintenance, betterments and improvements
- Discussion of risk assessment and prioritization protocols
- Discussion of the SWIF Action Plan Draft Outline

All presentations can be found at:

<https://www.co.pierce.wa.us/ArchiveCenter/ViewFile/Item/4487>

WELCOME AND INTRODUCTIONS

Meeting facilitator Penny Mabie welcomed everyone and led a round of introductions. She conducted an overview of the agenda, meeting handouts and ground rules.

COMMUNITY TECHNICAL GROUP BUSINESS

Penny asked if the CTG had any objections to finalizing the Meeting 6 and 7 summaries. The summaries were previously emailed to the group for review. There were no emailed responses. No objections were raised and the summary drafts were accepted as final. The summaries are available on the SWIF webpage.

PUYALLUP RIVER SYSTEM BASELINE

Erick Thompson, Pierce County Environmental Biologist, and Todd Essman, Pierce County Project Technical Lead, provided an overview of the Puyallup River system baseline. The baseline is the current state of the environment and is used to evaluate the effects to listed species of actions along the river. The baseline will be used to document and show improvements over a 30 year period for the Habitat Conservation Plan (HCP). See slides 4-24 of the [Presentation](#) for details.

HABITAT CONSERVATION PLAN (HCP) UPDATE

Angela Angove, Pierce County Public Works, provided an update on the HCP and its relationship to the SWIF goals and objectives. The HCP is a required part of an application for an Incidental Take Permit (ITP). The ITP is necessary under the US Endangered Species Act for the undertaking of projects that might result in the destruction of an endangered or threatened species.

The HCP will describe measures designed to minimize and mitigate the effects of activities along the river. Those activities include:

- Levee and revetment maintenance
- Culvert maintenance
- Flood fighting and emergency work

- Imminent threat
- Levee vegetation management

Four large projects are proposed in the HCP as mitigation for these effects on listed species and habitat: Neadham Road Flooding/Channel Migration Protection, Orville Road Channel Migration Project, Clear Creek Acquisition/Levee Project and Alward Road Floodplain Acquisition and Setback Levee Project. These projects were proposed as part of the Flood Hazard Management Plan (FHMP) and will be implemented through the HCP.

The County has begun drafting portions of the HCP and seeks to publish a draft in fall 2016 and receive the ITP in spring 2017. See slides 25-36 of the [Presentation](#) for details.

CTG members and Pierce County staff shared the following questions or comments and Pierce County provided answers where appropriate:

- A CTG member asked what time frame would be covered in the HCP.
 - Angela said that the HCP covers a 30 year period.
- A CTG member noted that it is difficult to capture the baseline of fish species.
 - Erick indicated that the HCP will focus on habitat rather than a species recovery plan, since any species could utilize and benefit from the habitat.
- Rob asked how the mitigation project sites were selected.
 - Erick said that the team conducted an analysis of levee repairs and activity impacts for the past 15 years and extrapolated that to project the next 30 years. He explained that the team selected projects that were already included in the FHMP.
- A CTG member asked how the team would assess the quality of the mitigation.
 - Erick said that the quality of mitigation will be assessed through the monitoring component to the HCP. The team will monitor levee repairs and activity impacts along the river so that they can be compared to the 30 year projections. In addition, the team will monitor the mitigation components to determine their effects on habitat lift.
 - Angela noted that the team is working to develop more details on the effects and mitigation. Once that is established, the team will reach out to Tribes and interested stakeholders.

FLOOD CONTROL ZONE DISTRICT (FCZD) & PIERCE COUNTY SWM PRIORTIZATION FOR FUNDING

Teresa Lewis, Pierce County SWM, provided an overview of the Flood Control Zone District (FCZD) Comprehensive Plan of Development (CPOD), and funding for the levee work. The FCZD is funded by County property owners and provides funds for large flood risk reduction projects, maintenance projects and an Opportunity Fund. Capital improvement projects from the FHMP are ranked to help the FCZD decide which to fund; projects are funded at different levels. See slides 37-55 of the [Presentation](#) for details.

CTG members and Pierce County staff shared the following questions or comments and Pierce County provided answers where appropriate:

- A CTG member asked if cities outside of the flood zone were eligible for funds and if those funds had to be used for construction projects.
 - Teresa said that cities outside of the flood zone can get funds through the Opportunity Fund. These cities pay into the district and are eligible for water related projects, such as water quality issues and localized flooding. Projects do not have to

be related to construction; they can be related to watershed planning and other studies.

- A CTG member asked if cities not affected by flooding pay in more money than they receive back through the Opportunity Fund.
 - Teresa explained that property owners are charged \$0.10 for every \$100,000 in property value. This results in those cities paying in more than they get back through the opportunity fund.
 - Tony said that the justification for taxing cities outside of the floodplain is that they are still affected by flooding (e.g., road protection).
- A CTG member asked if the FCZD supplied funds for the Sediment Management as a Risk Reduction Tool (SMRRT) project.
 - Teresa said that funds have only been spent on planning for SMRRT.
- Rob asked if the FCZD used a projected growth rate to estimate revenue.
 - Teresa said that the FCZD has used a conservative one percent growth rate in their estimates.
- Tony explained that SWM has requested a level of service increase from the Pierce County Council in order to increase SWM funding for projects. SWM did not receive the increase, but the Council has agreed to hear SWM again later this year. An increased level of service in conjunction with FCZD funds will aid SWM in completing large projects.

MAINTENANCE, BETTERMENTS AND IMPROVEMENTS

Todd Essman, Pierce County Project Technical Lead, shared information about levee maintenance, betterments and improvements. Pierce County seeks to make repairs within the existing levee footprint. For the SWIF, the County will focus on maintenance and refinements, but not betterments. Betterments will occur through capital projects. Todd defined the following types of work:

- **Maintenance:** Actions taken to preserve flood risk reduction infrastructure (e.g., replacing toe rock, cleaning culverts)
- **Betterments:** Actions taken that increase the area protected, provide features that did not exist prior to the flood event or increase the level of protection (e.g., increasing levee height, adding a culvert)
- **Refinements:** Actions taken to provide added resiliency without changing the basic character of the structure (e.g., laying back slopes)
- **Capital Maintenance:** Projects that are beyond the scope of typical maintenance (e.g., setback levee)
- **Capital Improvements:** Projects, programs and policies that implement long-term strategies to reduce flood risk (e.g., dolo jam)

See slides 56-83 of the [Presentation](#) for details.

SWIF ACTION PLAN DRAFT OUTLINE

Rob Wenman, Pierce County Project Manager, presented a draft outline of the SWIF Action Plan. The Action Plan will outline Pierce County's plan for addressing deficiencies identified by US Army Corps of Engineers (USACE). The Action Plan will include the following elements:

- Deficiency action plan
- Maintenance program
- Interim Risk Reduction Measures (IRRM) plan
- Capital maintenance program
- Capital improvement plan
- Funding and implementation

See slides 86-103 of the [Presentation](#) for details.

NEXT STEPS

Penny reviewed outstanding action items with the group, including sharing an updated IRRM factor prioritization matrix and discussing comments on the vegetation management strategy.

Penny told the group that the meeting on Wednesday, March 23 would be cancelled. At the next meeting on April 20, the group will discuss a more detailed Action Plan describing the path toward SWIF implementation.

PUBLIC COMMENT

There were no public comments.

ATTENDANCE

Community Technical Group Members

Chrissy Cooley	Agricultural Round Table
Steve Carstens	City of Puyallup
Martin Fox	Muckleshoot Indian Tribe
Jessica Stone	Pierce County Parks and Recreation
Jill Bushnell	Pierce County Emergency Management
Russ Ladley	Puyallup Tribe of Indians
Charles Ifft	US Army Corps of Engineers
Jonathan Moen	US Army Corps of Engineers
Jeffree Stewart	Washington Department of Ecology
Doug Wiedemeier	Washington Department of Fish and Wildlife

Pierce County

Tony Fantello	Project Sponsor
Rob Wenman	Project Manager
Todd Essman	Project Technical Lead
Erick Thompson	Environmental Biologist
Teresa Lewis	Education and Outreach Coordinator
Angela Angove	HCP Project Manager
Sarah Motsenbocker	Civil Engineer

Envirolssues

Penny Mabie	Facilitator
Chelsea Ongaro	Notetaker

Hackney Interests

Clint Hackney	Tribal Liaison
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Community Technical Group Meeting 9 Summary

4/26/16

OVERVIEW

On April 20, 2016, Pierce County Storm Water Management (SWM) hosted the ninth Community Technical Group (CTG) meeting for the System Wide Improvement Framework (SWIF) planning process.

Topics for the April 20 meeting included:

- Discussion of SWIF Action Plan Draft
- Review of response to comments on proposed Vegetation Management Strategy

All presentations can be found at:

<https://www.co.pierce.wa.us/ArchiveCenter/ViewFile/Item/4619>

WELCOME AND INTRODUCTIONS

Meeting facilitator Penny Mabie welcomed everyone and led a round of introductions. She conducted an overview of the agenda, meeting handouts and ground rules.

COMMUNITY TECHNICAL GROUP BUSINESS

Penny noted the draft of the Meeting 8 summary had not been provided to the group for review. Penny will share the summary with the group via email requesting feedback. The summary will be finalized over email and made available on the SWIF webpage.

SWIF ACTION PLAN DRAFT

Action Plan Review

Rob Wenman, Pierce County Project Manager, reviewed the SWIF Action Plan Draft, which describes the actions, funding and implementation of the SWIF over time. The action plan establishes key activities aligned with milestones for implementation and includes the following elements:

- Deficiency action plan
- Maintenance program
- Interim risk reduction (IRRM) plan
- Capital maintenance program
- Capital improvement program
- Funding (schedule and milestones)

Rob requested that the group provide comments via email on the SWIF Action Plan Draft by May 13. After receiving comments, the County will work to revise the action plan and full SWIF Plan to share with the CTG in July. See slides 4-22 of the [Presentation](#) for details.

CTG members shared the following questions or comments and Pierce County provided answers where appropriate:

- A CTG member asked if the Pierce County Planning Department's priorities were being considered in the action plan.
 - Rob indicated that the team is working closely with the Planning Department. The Flood Hazard Management Plan (FHMP) outlines the County's comprehensive

approach to levee repair work and flood risk reduction measures. The suite of projects outlined in the FHMP will be folded into the SWIF Action Plan.

- A CTG member asked when the group would have the opportunity to provide input on the planting program monitoring fields.
 - Rob indicated that the team would be working to develop standard operating procedures, but was unsure of the timeline. This information will also be studied as part of the Habitat Conservation Plan (HCP). Through the monitoring program, the County intends to capture what was planted and where, and how the vegetation does over time.
 - A CTG member noted that thermal buffering should be addressed in the action plan.
 - Erick Thompson, Pierce County Environmental Biologist, added that pieces of the monitoring program may be included in the strategy, but the planting program included in the SWIF will only include plantings associated with levee repairs.
- A CTG member indicated that the action plan should include assurances of habitat restoration, suggesting that the County acquire a 200-foot easement behind the levee for vegetation as part of the SWIF. The member indicated that environmental and habitat protection must receive the same priority as flood protection.
 - Rob noted that only 20% of the system is in public ownership on PL 84-99 levees and SWM is not able to use funds to work with private property owners on those issues. He also noted that the County would consider addressing these issues more fully in both the vegetation strategy and the action plan.

Maintenance Prioritization

Todd Essman, Pierce County Project Technical Lead, provided an overview of maintenance prioritization, which is an element of the action plan. Todd outlined how the County uses worksheets to conduct condition assessments in order to systematically and consistently prioritize work. The worksheet uses the following four criteria that are calculated into an overall score:

- General land use at risk
- Perceived threat to public safety
- Infrastructure at risk
- Frequency of damage

See slides 23-40 of the [Presentation](#) for details.

CTG members and Pierce County staff shared the following questions or comments and Pierce County provided answers where appropriate:

- A CTG member asked whether mapping like that of the Water Ski Levee on slides 28 and 30 had been done for all of the PL 84-99 levees.
 - Charles Ifft, US Army Corps of Engineers (USACE), noted that USACE developed these maps as part of their Screening Study. There will be maps for every levee but USACE is still working to complete the final maps.
- A CTG member asked if USACE completes a cost-benefit analysis before conducting repairs, specifically noting that property acquisition might be more cost effective than continual repair.
 - Charles said that USACE looks at the cost of repairs for each site before completing the repairs, but that they do not aggregate the analysis over multiple years and repairs. Property acquisition is an option only when the cost of repairs for a single year is greater than the cost of the property.

- A CTG member suggested that USACE do a project to project the cost of future repairs in order to justify property acquisition, which would ultimately reduce tax payer expenses and result in floodplain restoration.
- Charles noted that such a project would be beyond the scope of USACE's emergency rehabilitation program, but could be part of the General Investigation Study. He also noted that the cost-benefit analysis must also consider the economic impacts of the loss of tax revenue from property acquisition.
- A CTG member added that the analysis should also include fisheries resources.
- Rob asked what was included in the total assets identified for each levee.
 - Todd indicated that total assets refer to the value of everything that the levee is protecting.
 - A CTG member asked whether replacement costs for infrastructure (i.e., bridges, roads) is included as part of the assets.
 - Charles indicated that these data come from the USACE Risk Management Center, which uses 2010 CENSUS data. Properties and structures, but not roads or other infrastructure, that were present in 2010 are likely the only elements considered, but updated information from the County can be used to recalculate if needed.
- A CTG member noted that the damage history includes a lot of repetitive loss.
 - Todd said that many of the repetitive loss areas are areas where the County is considering doing setback levees. He also noted that the damage history does not currently include severity and he is working to include that in the chart to provide a more complete picture.
- A CTG member asked how the land use description ranking criteria were ordered on the worksheet.
 - Todd indicated that he designed the worksheet to be similar to the FHMP's criteria.

VEGETATION MANAGEMENT STRATEGY

Rob conducted an overview of the Vegetation Management Strategy Draft and how it has been updated to incorporate the CTG's comments and ideas where appropriate. Detailed responses to CTG comments and questions are included in the Vegetation Management Guidelines Comments. Rob noted that the SWIF is happening in conjunction with other habitat restoration efforts (i.e., Levee Setback Feasibility Study, Habitat Conservation Plan), and that the SWIF will not address all habitat concerns. The Vegetation Management Strategy that will be included as part of the SWIF Plan is meant to address the direct short-term impacts of levee maintenance.

CTG members and Pierce County staff shared the following questions or comments and Pierce County provided answers where appropriate:

- Charles noted that USACE will continue to conduct their assessments to the national standard, meaning that the County will receive "U" ratings related to vegetation. However, based on the interim policy, these "U" ratings will not impact the County's eligibility for the PL 84-99 program.
 - A CTG member asked if this "U" rating would have any other implications, such as an increase in flood insurance rates.
 - Charles said that flood insurance rates would not be affected.
- A CTG member asked whether the SWIF can include efforts to develop conservation easements within the 200-foot buffer.
 - Rob explained that SWM funds are limited to operations and maintenance expenses. He indicated that those who are interested in developing conservation easements along the 200-foot buffer can work through other avenues (e.g., Conservation District, land trust groups) to pursue those efforts.

- A CTG member noted that habitat protection should be considered equally with flood protection. Flood Control Zone District (FCZD) funding should be spent on the whole picture, including habitat protection. Opportunities for increasing shade on the river should be considered, such as establishing easements or property owner incentives.
- Tony Fantello, Pierce County Project Sponsor, noted that the FCZD is not currently funded to a level that would allow for a system wide program like vegetation restoration. Vegetation restoration is, however, included as part of the mitigation elements of individual capital projects. The County is working with the Council to advocate for additional funds.
- A CTG member suggested that the Conservation Future Fund or tax programs might be good avenues for acquiring easements.
- Rob noted that these ideas cannot move forward as part of the SWIF and would need to be pursued through other avenues. He suggested that the Pierce County Executive's Office or the Conservation District would be a good place to start. He indicated that these conversations and ideas would be documented as an appendix to the SWIF.
- A CTG member liked the idea of including the appendix but said that the SWIF should include certainty for habitat protection beyond the ideas put forth in the appendix.
- Tony said that the SWIF will only cover mitigation for impacts to vegetation related to maintenance and operations work. The HCP will focus on system-wide impacts and is the place for further discussion.
- Rob indicated that the appendix with ideas and opportunities discussed will be forwarded to Pierce County elected officials as well.
- A CTG member noted that the King County Green River SWIF included areas of opportunity for developing 80-foot and 100-foot buffers as part of their SWIF process.
- Tony asked whether there is anything built into existing codes which would preclude new development so that those areas could naturally vegetate.
 - Rob indicated that existing codes require a 200-foot setback distance from rivers and streams for development, except in cases where there is a structure, such as a levee. This exemption essentially allows property owners to clear out all vegetation right up to the backside of the levee. In addition, the floodplain is not considered a critical area under the critical areas ordinance; that only applies to channel migration areas.
 - Hugh Taylor, Pierce County Council's Office, noted that the Council reviewed those codes in the 1990s and updated them in 2005. While it would not be part of the SWIF, the Council could potentially do another review of the codes that may have some impact on vegetation.
- A CTG member noted that vegetation is also having an impact on the fishing season in the Puget Sound, not just for listed species.
- A CTG member noted that there are many placeholders in the strategy and asked when the group would get to comment on an updated draft.
 - Rob noted that the strategy would be updated and included in the overall draft plan. The CTG will be able to comment on the draft plan in July.

NEXT STEPS

Penny reviewed the next steps for the SWIF process, noting that the County is working to develop the SWIF Plan and will share that with the CTG for comment at a meeting on July 20. The County

will then revise the SWIF Plan based on input from the CTG and initial feedback from USACE. The County plans to submit the final SWIF Plan to USACE on Jan. 27, 2017.

Penny also reminded the group that the team would be asking for their feedback on the SWIF Action Plan Draft and the Meeting 8 summary by May 13, as well as the Vegetation Management Strategy by May 20.

PUBLIC COMMENT

The Honorable Tim Reynon of the Puyallup Tribe of Indians Tribal Council was in attendance and shared a few comments. He thanked the County for bringing the group together to discuss this topic, noting that maintaining fish habitat is of paramount importance to the Puyallup Tribe. He encouraged the County to consider the suggestion to incorporate habitat enhancements into the SWIF Plan.

ATTENDANCE

Community Technical Group Members

Russ Blount	City of Fife
Steve Carstens	City of Puyallup
Martin Fox	Muckleshoot Indian Tribe
David Molenaar	National Oceanic and Atmospheric Administration
Hugh Taylor	Pierce County Council's Office
Hon. Tim Reynon	Puyallup Tribe of Indians Tribal Council
Russ Ladley	Puyallup Tribe of Indians
Cathie DesJardin	US Army Corps of Engineers
Charles Ifft	US Army Corps of Engineers
Jon Moen	US Army Corps of Engineers
Alex Callender	Washington Department of Ecology
Jeffree Stewart	Washington Department of Ecology
Doug Wiedemeier	Washington Department of Fish and Wildlife

Pierce County

Tony Fantello	Project Sponsor
Rob Wenman	Project Manager
Todd Essman	Technical Lead
Erick Thompson	Environmental Biologist

EnviroIssues

Penny Mabie	Facilitator
Chelsea Ongaro	Notetaker

Hackney Interests

Clint Hackney	Tribal Liaison
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