

**INTERAGENCY AGREEMENT
BETWEEN
WASHINGTON STATE
RECREATION AND CONSERVATION OFFICE
AND
CITY OF ABERDEEN**

PARTIES TO THE AGREEMENT

This Interagency Agreement is made and entered into by and between the Washington State Recreation and Conservation Office, hereinafter referred to as "RCO", and the City of Aberdeen, hereinafter referred to as "City of Aberdeen", pursuant to the authority granted by Chapter 39.34 RCW.

PURPOSE

The objective of the project is to assemble a document and design package for a levee system to submit to the Federal Emergency Management Agency (FEMA) for a Conditional Letter of Map Revision (CLOMR). A CLOMR is a legally-binding document guaranteeing that if a levee system is built as submitted to FEMA and is in agreement with effective FEMA models and maps at the time of construction, it will result in a Letter of Map Revision (LOMR) for the protected area. A CLOMR is the first step towards an eventual LOMR for removing areas of Aberdeen and Hoquiam from the floodplain and placing them in a mapped Zone X, eliminating mandatory flood insurance through the National Flood Insurance Program for mortgages while also providing comprehensive protection to frequently flooded areas. Levee system will include a levee and interior drainage pump system as required by FEMA.

The objective of this project is to produce a preliminary levee design and an associated binding CLOMR, ensuring that the constructed levee will result in a FEMA map revision. CLOMRs do not expire and are valid indefinitely provided that the design is in agreement with effective FEMA models and maps at the time of construction. At a minimum, the levee design will meet existing FEMA requirements for a CLOMR. To account for potential future sea level rise, the levee design height will be increased wherever feasible. Allowance for future expansion and modification will also be included wherever possible. The goal is to anticipate future conditions and maximize the lifespan of the levee, maximizing the value of the investment and benefit to the community.

Additionally, the Cities of Aberdeen and Hoquiam and the Levee Design Team will work proactively with local, state, and federal authorities to identify, understand, and document regulatory requirements for future construction and operation of the levee system.

Project timeline is:

- July 2016 – Alignment Analysis & Concept Design.
- October 2016 – 60% Plans.
- February 2017 – CLOMR Submittal & FEMA Review.

Read more at https://www.ezview.wa.gov/site/alias_1775/overview/34768/overview.aspx

PERIOD OF PERFORMANCE

This Agreement shall become effective **February 18, 2016** or once fully signed, whichever is later, and will expire on **June 30, 2017**, except as clarified in this term below and/or unless terminated sooner or extended as provided herein.

Funding for this project is appropriated through June 30, 2017. This agreement may be extended to include work in FY 2017 as needed and if funding is available.

STATEMENT OF WORK

City of Aberdeen shall provide the following services to RCO related to flood hazard reduction in the Chehalis Basin and in support of the Chehalis River Basin Flood Authority:

See Attachment A - Updated 2015-17 Small Projects Recruitment Form (dated February 10, 2016).

COMPENSATION

RCO shall reimburse the City of Aberdeen, an amount not to exceed Nine Hundred Eighty-Eight Thousand Dollars (**\$988,000**), including any applicable tax and indirect costs, for the performance of all things necessary for, or incidental to, the work as set forth in this Agreement.

Allowable costs shall include costs incurred by the City of Aberdeen from the first date of the Agreement period until the Agreement is terminated or expires as provided herein, but in no event shall allowable costs exceed the maximum amount of the Agreement. Costs allowable under this Agreement are based on the following agreed budget.

CATEGORY	DOLLARS
Salaries and Wages	\$0
Goods and Services	\$988,000
Construction Contracts	\$0
TOTAL	\$988,000

City of Aberdeen, shall be allowed to move amounts not to exceed ten percent of any object or expenditure total between objects. However, no change or transfer can be made that would have the effect of increasing the total budget. Budget changes in excess of this ten percent may be made only upon the written approval of both parties to this Agreement.

BILLING AND PAYMENT

RCO will pay the City of Aberdeen upon acceptance of service provided and receipt and approval of a properly completed invoice, which shall be submitted not more frequently than monthly to RCO's representative as designated in the Administration section below.

The invoice shall describe and document, to RCO's satisfaction, a description of the work performed, staff charges, any travel costs, indirect cost calculations, and fees. City of Aberdeen shall also include adequate supporting documentation and include a reference to RCO Interagency Agreement Number 15-1527. If expenses are invoiced, the City of Aberdeen shall provide a detailed breakdown of each type.

Payment shall be considered timely if made by RCO within thirty (30) calendar days after receipt of the properly completed invoice. Payment shall be sent to the address designated by the City of Aberdeen.

RCO may, in its sole discretion, terminate the contract or withhold payments claimed by the City of Aberdeen for services rendered if the City of Aberdeen fails to satisfactorily comply with any term or condition of this contract.

No payment in advance or in anticipation of services or supplies to be provided under this contract shall be made by RCO.

ADMINISTRATION

The following individuals are designated as representatives of the respective parties. The representatives shall be responsible for the administration of this Agreement and for coordinating and monitoring performance under this Agreement. In the event such representatives are changed, the party making the change shall notify the other party.

City of Aberdeen's representative shall be Rick Sangder, City Hall, 200 East Market Street, Aberdeen, WA 98520; 360/537-3228, rsangder@aberdeenwa.gov or his successor.

RCO's representative shall be Scott Robinson, PO Box 40917, Olympia, WA 98504-0917, 360/902-0207, scott.robinson@rco.wa.gov or his successor.

DISPUTES

Disputes arising under this Agreement shall be resolved by a panel consisting of one representative from RCO, one representative from the City of Aberdeen, and a mutually agreed upon third party. The dispute panel shall thereafter decide the dispute with the majority prevailing. Neither party shall have recourse to the courts unless there is a showing of noncompliance or waiver of this section.

TERMINATION

Either party may terminate this Agreement upon thirty (30) days written notice to the other party. In the event of termination of this Agreement, the terminating party shall be liable only for performance rendered prior to the effective date of termination.

CHANGES, MODIFICATIONS AND AMENDMENTS

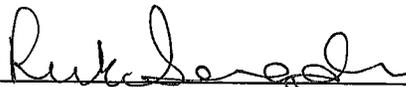
This Agreement may be waived, changed, modified, or amended only by written agreement executed by both parties hereto.

EXECUTION

We, the undersigned, agree to the terms of the foregoing Agreement.

CITY OF ABERDEEN

**STATE OF WASHINGTON
RECREATION AND CONSERVATION OFFICE**



Rick Sangder, Public Works Director
City of Aberdeen



Scott Robinson, Deputy Director

Date 2/19/16

Date 2/23/16

RECEIVED

RCO Interagency Agreement Number: 15-1527

FEB 23 2016



2015-17 Small Projects Recruitment Form

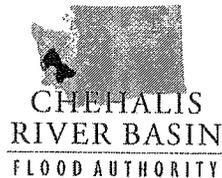
Chehalis River Basin Flood Relief

What are small projects? -- In general, small projects are those projects that provide predominantly localized benefit, are capable of being completed within the funding cycle, are supported by the jurisdiction within which the project is proposed, and are vetted and advanced through the Chehalis River Basin Flood Authority's Chehalis Basin Projects Committee.

Instructions:

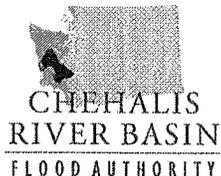
- a. Please submit project requests (via this form) to Scott Boettcher (scottb@sbgh-partners.com) ~~no later than 5:00 p.m. September 10, 2014, September 30, 2014.~~
- b. Please submit individual project request forms for each project in your jurisdiction, even those projects previously or partially funded in the past.
- c. Note: Parts III and IV below [marked by "(**)"] will be scored as part of the Chehalis Basin Projects Committee's review and evaluation. Part I and II will not be scored.

Part I General	
1. Date:	February 10, 2016
2. Project Name:	North Shore Levee
3. Project Location -- Please identify the location of the project as precisely as possible, preferable with latitude/longitude coordinates.	The project will be located in the Cities of Aberdeen and Hoquiam. The project is generally bound on the west by the Hoquiam River, on the east by the Wishkah River, and on the south by Grays Harbor and the Chehalis River. Approximate latitude and longitude: 46°58'00" N, 123°50'00" W
4. Project Contact -- Please identify who will be responsible for overseeing and managing the project (i.e., name, email, telephone number, etc.).	Rick Sangder, Public Works Director City of Aberdeen Public Works 200 East Market Street, Aberdeen, WA 98520-5207 (360) 537-3228 rsangder@aberdeenwa.gov
5. Lead Organization -- Please identify the lead organization, agency, entity, etc. responsible for this project.	The City of Aberdeen will administer the project. The project will occur in the Cities of Aberdeen and Hoquiam.

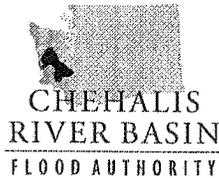


Part II
Description, Timing and Cost

<p>6. Project Description -- Please describe the project, what it is intended to accomplish, and the benefits that will accrue and to whom.</p>	<p>The objective of the project is to assemble a document and design package for a levee system to submit to the Federal Emergency Management Agency (FEMA) for a Conditional Letter of Map Revision (CLOMR). A CLOMR is a legally-binding document guaranteeing that if a levee system is built as submitted to FEMA and is in agreement with effective FEMA models and maps at the time of construction, it will result in a Letter of Map Revision (LOMR) for the protected area. A CLOMR is the first step towards an eventual LOMR for removing areas of Aberdeen and Hoquiam from the floodplain and placing them in a mapped Zone X, eliminating mandatory flood insurance through the National Flood Insurance Program (NFIP) for mortgages while also providing comprehensive protection to frequently flooded areas. The levee system will include a levee and an interior drainage pump system as required by FEMA.</p> <p>The objective of this project is to produce a preliminary levee design and an associated binding CLOMR, ensuring that the constructed levee will result in a FEMA map revision. CLOMRs do not expire and are valid indefinitely provided that the design is in agreement with effective FEMA models and maps at the time of construction. At a minimum, the levee design will meet existing FEMA requirements for a CLOMR. To account for potential future sea level rise, the levee design height will be increased wherever feasible. Allowance for future expansion and modification will also be included wherever possible. The goal is to anticipate future conditions and maximize the lifespan of the levee, maximizing the value of the investment and benefit to the community.</p> <p>Additionally, the Cities of Aberdeen and Hoquiam and the Levee Design Team will work proactively with local, state, and federal authorities to identify, understand, and document regulatory requirements for future construction and operation of the levee system.</p>
<p>7. Project Timeline -- Please describe the overall timeline for completion of the project as well any interim stages or phases.</p>	<p>A CLOMR is anticipated to be obtained within one year of notice-to-proceed (NTP). The current project schedule has NTP in early March 2016 and completion in mid February 2017. Three months contingency should be included for potential delays due to agency commenting and review.</p>
<p>8. Project Cost and Funding -- What is the cost of this project? What are the on-going maintenance and operation requirements?</p>	<p>The project includes the data collection, modeling, analysis, design, and planning required by the Code of Federal Regulations (CFR) for the CLOMR submittal to FEMA. This</p>



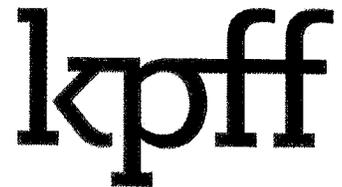
<p>Is it clear who will be responsible for on-going maintenance and operations costs?</p>	<p>includes extensive surveying, hydraulic modeling, geotechnical analyses, drainage analyses, biological evaluation, and design drawings. Project costs are anticipated to be \$938,000 to assemble the documentation and design required by CFR for a CLOMR. An added design contingency of \$50,000 is proposed to account for unanticipated scope changes that may arise with a project of this type and scale, bringing the grant total to \$988,000.</p>
<p>9. Other Funding -- Please explain the extent to which other funding sources or funding partners are available.</p>	<p>The Chehalis River Basin Flood Authority (Flood Authority) is the sole funding source for this phase of the overall project. Final design and construction (future phase) may have a variety of funding sources.</p>
<p>Part III (**) Completion and Doability by June 30, 2017</p>	
<p>10. Project Completion -- Does the funding requested complete (or substantially complete) a project that has already been started? If so, please explain.</p>	<p>This project is an expansion of the Aberdeen Northside Levee project funded by the Flood Authority in 2014. Work on the Northside Levee began in December 2014. The Northside Levee included a CLOMR submittal for a levee that protected the city center of Aberdeen. The CLOMR for the Northside Levee is anticipated to be complete in February 2016. The North Shore Levee will re-use data, modeling, analysis, and design from the Northside Levee and will expand the area protected to include the majority of the lowlands east of the Hoquiam River, west of the Wishkah River, and north of Grays Harbor and the Chehalis River.</p>
<p>11. Project Doable -- Can this project or the stage/phase for which funding is sought be completed by June 30, 2017?</p>	<p>Yes. The project is anticipated to be complete within one year of notice-to-proceed (NTP). The current project schedule has NTP in early March 2016 and completion in mid February 2017. Three months contingency should be included for potential delays due to agency commenting and review.</p>
<p>12. Project Impacts -- Please identify how any project impacts will be mitigated and if that mitigation will be accomplished by June 30, 2017?</p>	<p>There are no physical impacts for this phase of work. This phase of the project is to obtain a CLOMR and provide a viable preliminary design that will reduce the burden of flood insurance and protect lives and property. Final design and construction will occur after a CLOMR has been obtained. The CLOMR is an assurance that the investment of final design and construction will gain the intended outcome.</p>
<p>Part IV (**) Benefits Stated and Quantified</p>	
<p>13. Emergency Response -- Please explain how this project enhances our ability to respond in a flood emergency (e.g., does it keep critical access roads, transportation facilities, etc. open and functional.)</p>	<p>This phase of the project is to produce a preliminary design and obtain a CLOMR. Once the levee system has been constructed, the protected area will benefit from comprehensive flood protection including a levee and an interior drainage pump system.</p>



<p>14. Essential Infrastructure Protection -- Please explain how this project protects essential infrastructure (as well the risks or consequences of not acting this funding cycle).</p>	<p>The completed levee system will provide comprehensive flood protection to large areas of Aberdeen and Hoquiam, including fire stations in both cities, Aberdeen's police station and jail, Aberdeen schools, and other essential infrastructure. It is estimated that 3,400 parcels in Aberdeen and Hoquiam that are under an estimated Base Flood Elevation (BFE) of 13.5 feet NAVD88 will be protected by the levee. The final BFE or BFEs and number of protected parcels will be determined as design progresses.</p>
<p>15. Public Health, Safety and Welfare -- Please explain how this project protects public health, safety and welfare.</p>	<p>The constructed levee will provide comprehensive flood protection as described above. The LOMR obtained after final construction will eliminate mandatory flood insurance for mortgages in the area. Citizens in the City of Aberdeen paid over \$1.1 million in flood insurance premiums in 2014. Since the NFIP's adoption in Aberdeen in 1984, total paid claims have totaled less than \$600,000. The project goal is to provide flood protection and to eliminate systemic economic losses due to flood insurance premiums. Detailed data from NFIP has been requested through a Privacy Act Request and will be further analyzed to understand the details of the economic drain.</p>
<p>16. Residential, Commercial and/or Agricultural Protection -- Please explain how this project protects residential, commercial and/or agricultural interests and communities and the benefits of acting (or consequences of not acting) this funding cycle. Consider factors like number of structures at risk, number of people at risk, historic frequency of flood damage, magnitude of benefit to be gained for the cost, etc.).</p>	<p>It is estimated that 3,400 parcels in Aberdeen and Hoquiam that are under an estimated Base Flood Elevation (BFE) of 13.5 feet NAVD88 will be protected by the levee. As described above, the constructed levee will curb significant long-term economic losses in these areas. Flood insurance payments have historically been subsidized. Recent Federal legislation has dramatically increased flood insurance premiums by as much as 500% as full-risk premiums are implemented. The consequence of not proceeding with this project would be continued flooding, increasing economic loss due to rising flood insurance premiums, and missed opportunity to work in conjunction with the Coastal Resiliency Master Plan as described below.</p>
<p>17. Other Project Impacts -- Please explain how this project impacts or is potentially impacted by another project.</p>	<p>This project is proposed to occur in conjunction with the Coastal Resiliency Master Plan (Master Plan) that was kicked off in Aberdeen and Hoquiam in January 2016. The Master Plan aims to identify options for reducing flooding, improving public space, and improving habitat. The schedule of the Northside Levee Phase 2 project has been coordinated with the Master Plan such that the two projects will be mutually beneficial. The alignment of the levee will be coordinated through the Master Plan's public outreach and education process while data, modeling, analyses, and design required by the CFR for a</p>



	CLOMR application will be available to complement the Master Plan project.
18. Anything Else -- Please feel free to offer any additional information (e.g., photos, maps, drawings, etc.) that would be helpful to better understand the scope, timeline and benefits of this project.	Attachment 1: Field Visit Meeting Notes Attachment 2: Preliminary Levee Concept Attachment 3: Preliminary Schedule



MEETING NOTES

Attendees:	Company:	Date:	Dec 10, 2015
Mike Randich	City of Aberdeen	Job #:	414040
Rick Sangder	City of Aberdeen	Project:	Northside Levee
Kathi Hoder	City of Aberdeen Council	Subject:	Expanded
Alan Richrod	City of Aberdeen Council		Alignment
Brian Shay	City of Hoquiam	Mtg. Place	Field Visit
Bruce Stirling	GeoEngineers		
Lyle Stone	GeoEngineers		
Kris Koski	KPFF		
Mark Steepy	KPFF		
Larry Karpack	Watershed		
Amy Spoon	WDFW		
Rick Mraz	WSDOE		
Aria Alexandra	Aberdeen Revitalization Movement		

The City of Aberdeen, City of Hoquiam, Ecology, WDFW, and the Northside Levee Design Team jointly toured the conceptual alignment of the expanded, comprehensive Aberdeen-Hoquiam levee in order to:

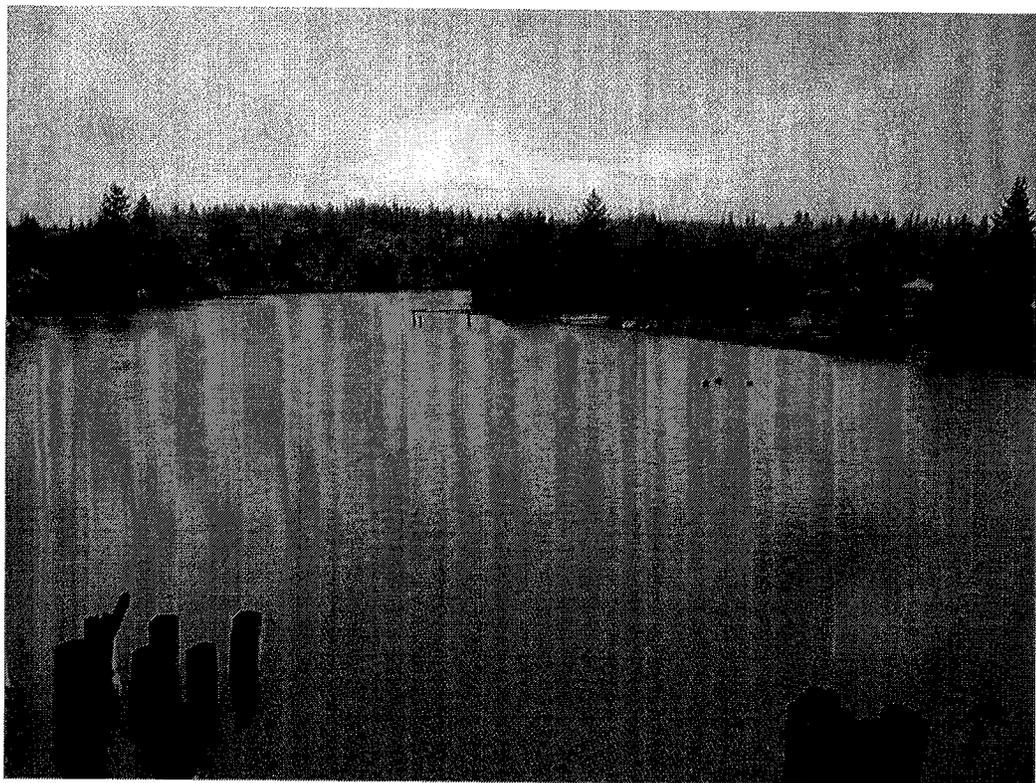
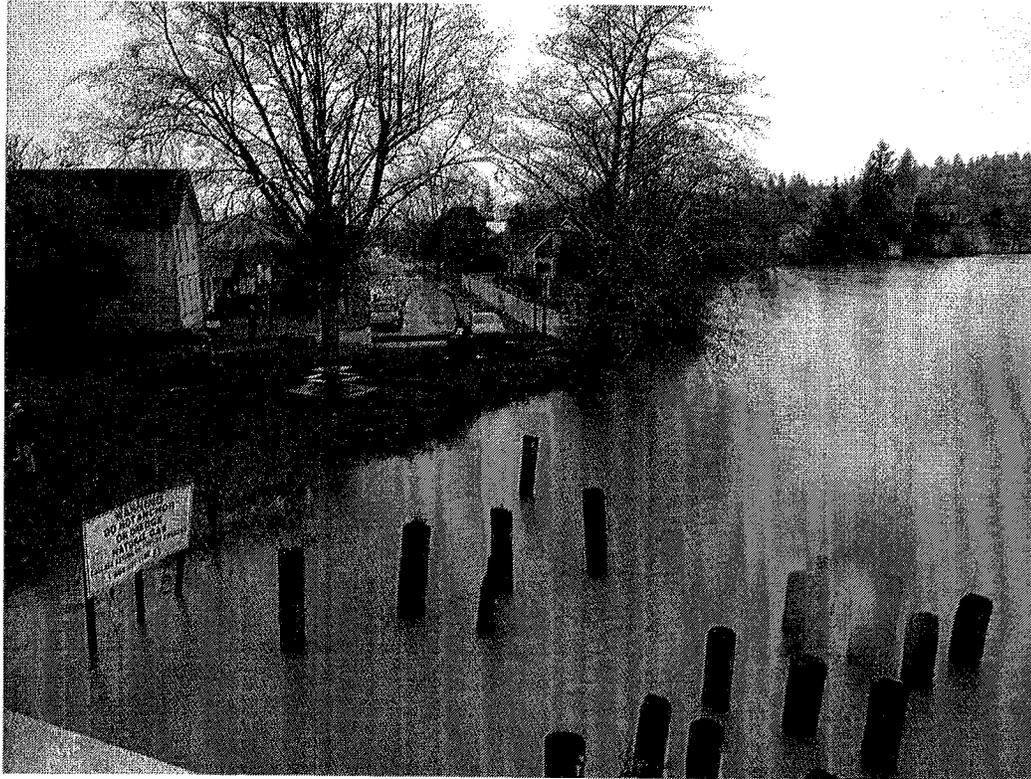
1. Commonly understand the intent of a new levee
2. Conceptually identify and discuss the ordinary high water line
3. Identify potential wetland area likely needing further delineation
4. Identify alignment alternatives and relationships with shoreline
5. Identify permitting issues and challenges as well as mitigation alternatives

During the visit, no wetlands were observed along the conceptual levee alignment. The ordinary high water mark (OHWM) was observed to be submerged during the visit.

High tide was at approximately noon. The group rendezvoused at City Hall at 10:30 AM and carpooled to the following locations for observations:

- Young Street Bridge, Aberdeen (approx. 10:55 AM, incoming tide)
 - Kris described the concept of a hybrid levee utilizing different construction types (earthen levee, concrete wall, and sheet pile wall -- in order of escalating cost) depending on what fit between improvements and the river. Other possibilities include buying properties for demo or moving buildings.
 - Rick Mraz believed that the OHWM was below the water level seen in the river.
 - Larry said that with the predicted tide plus low pressure and wind, today would be a very high tide.
 - Rick Mraz asked about flooding on the left bank if a levee is built on the right bank. Larry said that at this location, the river stays in its banks during the 100-year coastal flood so a levee on one bank would not increase flooding on the other for that flood event.
 - Logs and debris were observed to be moving upriver.

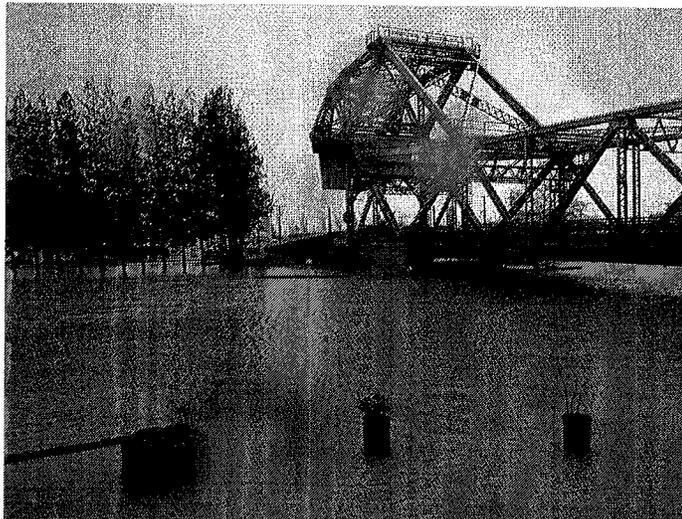
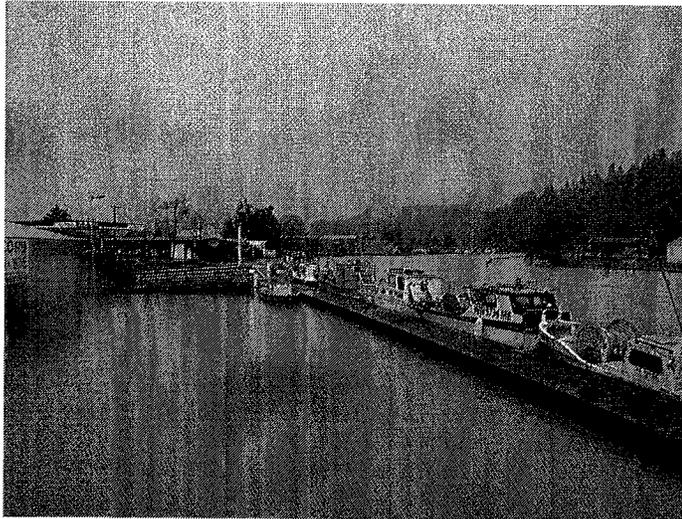
- Young Street Bridge photos:



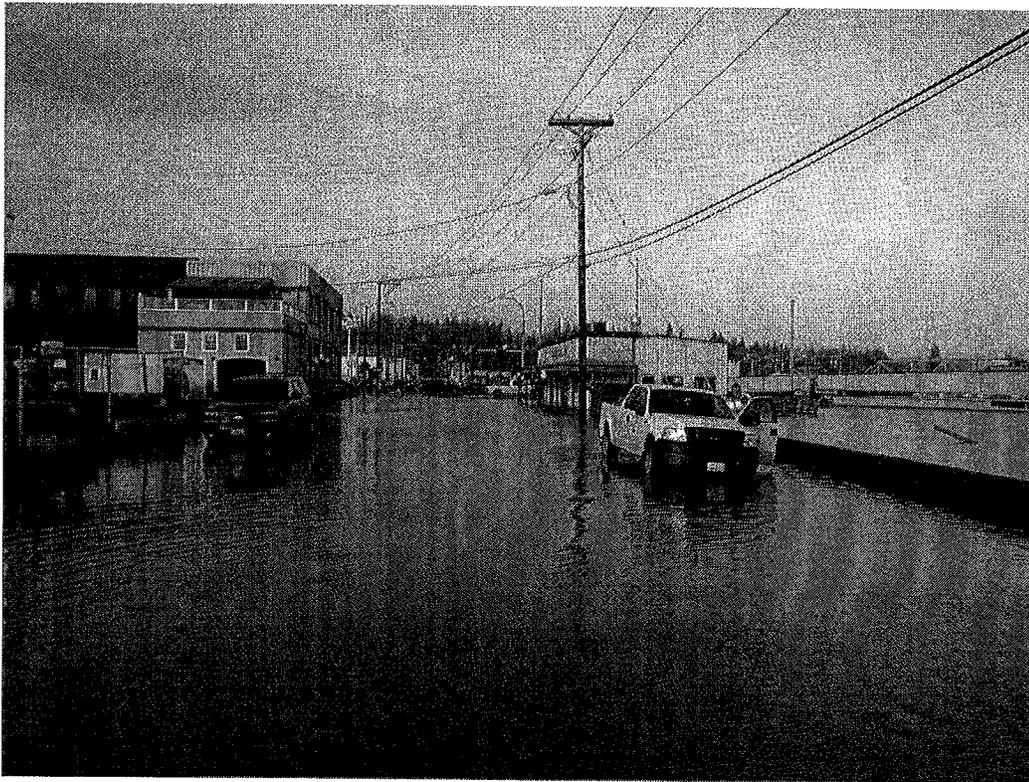
- Arthur Street Pump Station, Aberdeen (approx. 11:10 AM, incoming tide)
 - The storm pump station has two pipes that discharge below the water level (at time of visit). The pump was intermittently turning on and off during the stop.
 - Rick Mraz said that the OHWM is sometimes at the top of the bank. On shallow gradient floodplains, especially where tidal influence is involved, OHWM may “spill” landward of the riverbank due to regular inundation. This situation can be identified by fringing salt-tolerant vegetation (in estuarine systems) or palustrine hydrophytes (freshwater systems). Sediment deposits and other geomorphological indicators can be used to identify this circumstance.
 - Various low ecology block and backfill dikes were observed along the waterfront near the pump station and adjacent apartments.
 - Logs and debris were observed to be moving upriver.



- E Street at Q-Mart II, Aberdeen (approx. 11:20 AM, incoming tide)
 - On the way to this stop it was observed that the Wishkah had begun overtopping its bank along Market St. When leaving this area, it was observed that the flooding of Market St had reached the centerline of the road.
 - Kris explained the concept here of squeezing in what is possible. Lyle discussed the need not just to fit a levee in between the river and buildings, but to provide maintenance and flood-fighting access to it as well. Lyle mentioned a typical access width of 10 feet (USACE).
 - Mike said that the Quinault Nation planned to turn their newly acquired property into a fuel dock. This is an important item to coordinate with QIN so that any new design they develop accounts for a future levee.
 - The nearby pump station was leaking water through risers. The pump station creates head by lifting water from one structure to an adjacent one, and the head in the structure downstream of the pump was causing the leak.
 - Logs and debris were observed to be moving upriver.



- F Street near Breakwater Seafood, Aberdeen (approx. 12:00 PM, incoming tide but near to high tide)
 - Kris explained the concept of streetscape improvements including walls and planters.
 - Water was running in off the river and around the end of the concrete wall just south of Breakwater Seafood. The water was causing the ramp to the dock to float. Breakwater was not yet flooding inside the building. I spoke to the Breakwater folks and they loved the idea of a patio.
 - F Street was flooding in front of Breakwater and Rick started radioing in for the City to close down the street.
 - The group walked to the south. An employee at Grays Harbor Equipment said the water wasn't inside yet but it was the highest she's seen it in 32 years.
 - Water was trickling around the south side of Grays Harbor Equipment and the area by the railroad bridge abutment was flooded, though it appeared to be lower than the river (tide valve on outfall?).
 - A man from the building on pilings over the river most downstream on the river said that it was the highest he'd seen it in over 20 years.
 - Logs and debris were observed to be moving upriver.



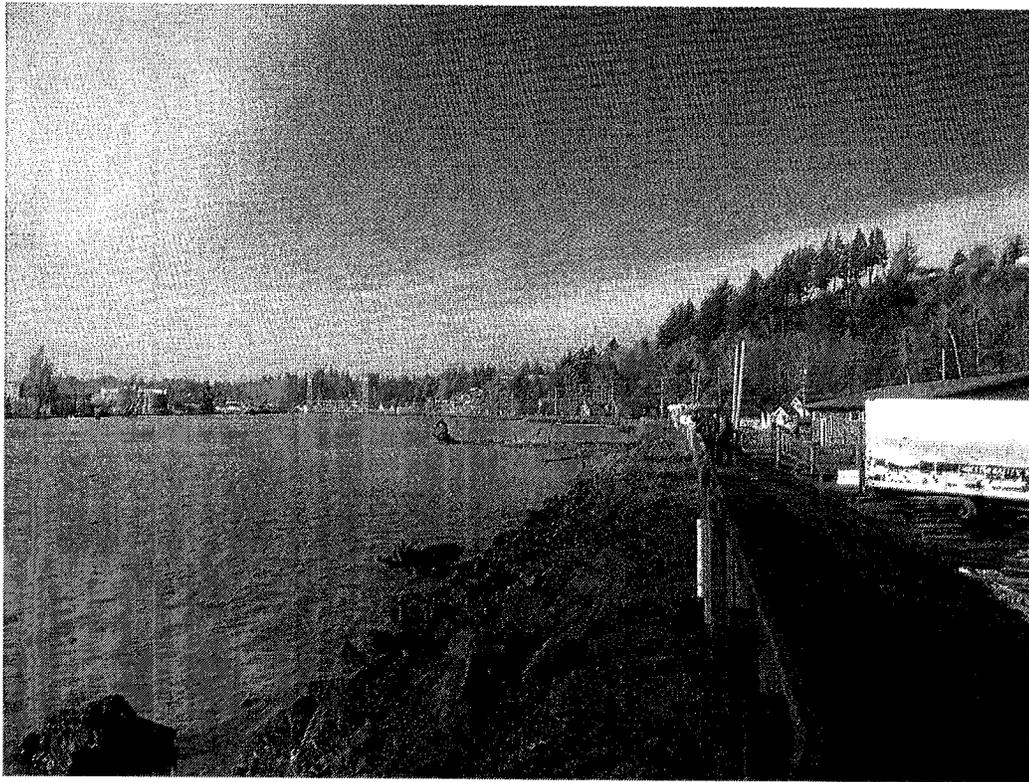
- Waterfront near rail yard, Aberdeen (approx. 12:20 PM, approx. slack tide)
 - The water looked high on the bank as it was flooding blackberries and alder there. Rick Mraz stated that blackberry (*Rubus armeniacus*) does not tolerate saltwater inundation, thus the area where it was growing was not an estuarine wetland or below OHWM. However, blackberry will sometimes occurs in wetlands. It has a wetland indicator of Facultative Upland (FACU) which means that the plant can occur in wetlands, albeit uncommonly. The site where the blackberry was growing was likely non-wetland because of a few factors: the presence of a dominance of FACU vegetation (Scot's broom, blackberry, elderberry), the landscape position, and Rick's familiarity with the area. This area should still be evaluated for wetland presence during the early part of the growing season.
 - Kris explained how the levee was very low here or just a line on the already high ground.
 - Kris explained to Mike how the levee line cut across the corner of the Quigg's property. He asked how long the crossing was across the Quigg's land and I said maybe a couple hundred feet.



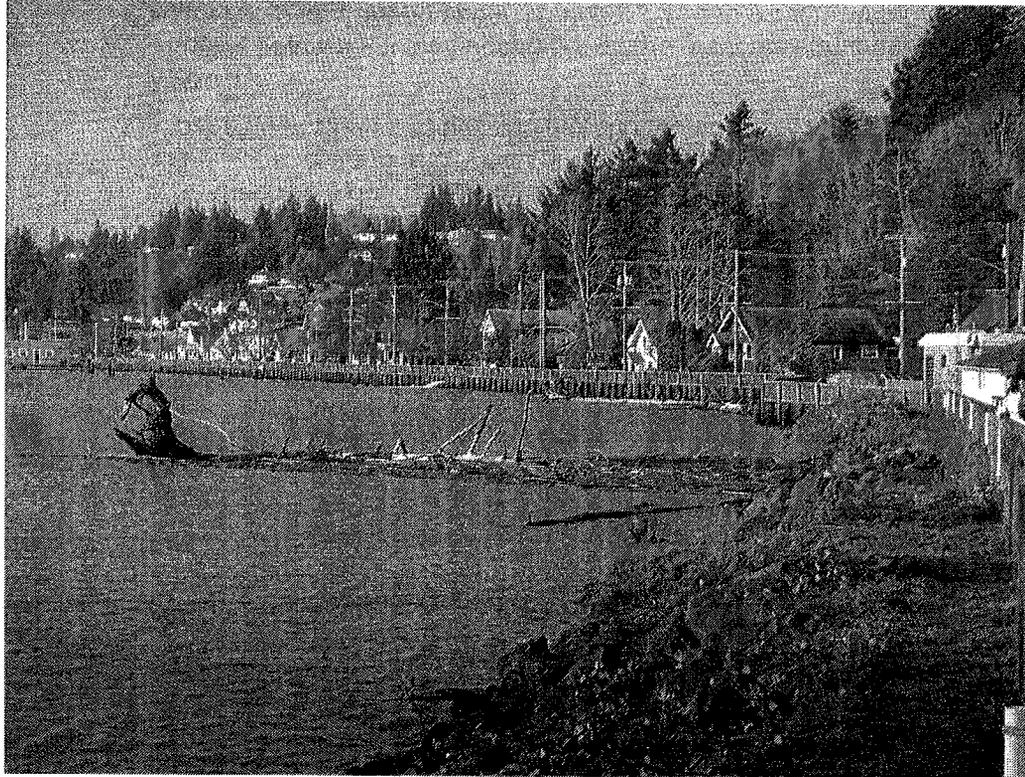
- Port Industrial Road at Fry Creek, Aberdeen (approx. 12:45, approx. slack tide)
 - The pump station at Fry Creek was on. The water level in the channel south of the Port Dock Rd was high but the water could be seen swirling due to the outfall.
 - Rick Sangder said that the pump was old and was likely not designed to modern fish standards. Amy said that she thought a pump station could be designed for this location that was acceptable from a fish health and survival standpoint.
 - Rick Sangder described a concept to build the new pump station at the mouth of the channel into the harbor so the channel could be used for storage. Kris explained that that would work in theory but that the levee would need to extend through the pump station, so the levee (either actual levee or line through high ground) would need to run out there.
 - Rick's vision includes a divider down the middle of the channel to separate water with fish from water without.



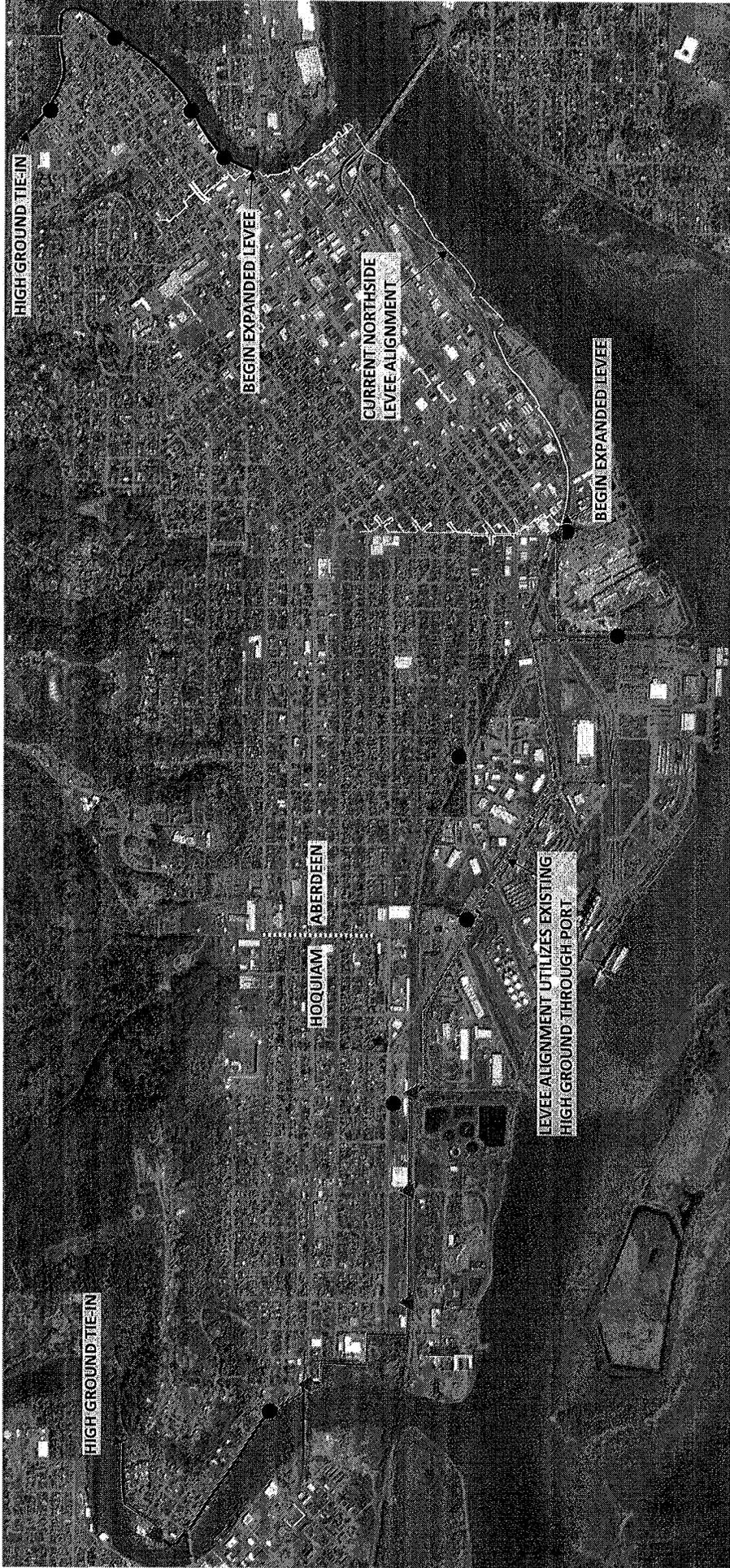
- Grays Harbor Public Market, Hoquiam (approx. 1:10 PM, outgoing tide)
 - Brian Shay joined the group.
 - The nearby pump station was turning on and off and discharging into the river above the water level. Brian said that that is the only pump station within the levee from that point up the river to the proposed high ground tie-in.
 - The group discussed that it may be possible for the existing levee at this area to be used if it met requirements.
 - Where piles and lagging retained earth farther upstream, a new levee could be built landward while leaving the piles and lagging as-is (or removing them and improving the bank?)
 - Kris explained to Brian the intent to include as many people as possible in the levee, and that this levee could be a flagship to usher in more levees for other areas. (It had been asked if the levee would run on the right bank of the river as well.) Brian said that this levee should be one part of the master plan.



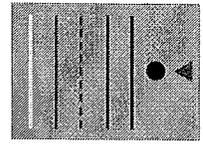
- Additional Grays Harbor Public Market photos:



NORTH SHORE LEVEE



NOTE:
LAYOUT SHOWN IS CONCEPTUAL FOR PLANNING PURPOSES.



CURRENT LEVEE DESIGN
EARTHEN LEVEE
EXISTING HIGH GROUND
CONCRETE T-WALL
SHEET PILE WALL
ADDITIONAL PUMPS
ROAD CROSSING



ENGINEER: KPK
DECEMBER 9, 2015

North Shore Levee | Cities of Aberdeen & Hoquiam | Preliminary Schedule

