

Scott Boettcher

From: Brian Shay <BShay@cityofhoquiam.com>
Sent: Friday, October 12, 2018 2:15 PM
To: Scott Boettcher
Subject: FW: West Hoquiam CLOMR Costs-Info needed today

Hi Scott,

Thanks again for the great news today on potential early funding for the Northshore Levee-West Segment. With \$250,000 this is what we would achieve by July 1, 2019 according to Mark Steepy.

Task 1 General Project Management	\$10k
Task 2 Surveying	\$140k (Extend the aerial topographic mapping into West Hoquiam, field survey of existing stormwater infrastructure for use in the interior drainage analysis, and develop preliminary ROW mapping)
Task 3 Hydraulic Analysis	\$30k (Review of base flood elevations and levee crest height)
Task 4 Alignment Analysis and Concept analysis)	\$20k (Develop preliminary alignment for use in the interior drainage analysis)
Task 7 Interior Drainage Analysis	\$50k (Delineation and modeling of existing storm drainage systems within the proposed levee alignment to determine potential ponding areas and depths)

The goal of the work would be to:

- Develop the BFE and freeboard; shouldn't be different from the NSL, but we have to do the science and modeling work.
- Develop a topographic basemap for use in alignment concepts and interior drainage analysis; including looking at possible ponding areas based on the H&H work.
- Provide preliminary alignment alternatives for consideration and use in modeling
- Establish a detailed understanding of the City's drainage system and its capacity

-Brian

Brian Shay
City Administrator
City of Hoquiam
360-538-3983
bshay@cityofhoquiam.com

City Mission Statement: The City of Hoquiam is committed to improving the quality of life for our citizens by diversifying the industrial base, increasing business, housing and recreation opportunities, while providing safe neighborhoods for all.

From: Mark Steepy [mailto:Mark.Steepy@kpff.com]
Sent: Friday, October 12, 2018 1:07 PM
To: Brian Shay; Steve Schmitz
Subject: RE: West Hoquiam CLOMR Costs-Info needed today

Mark R. Steepy

Principal



O 360.292.7230 D 360.292.4949
M 360.870.1921 F 360-292-7231
612 Woodland Square Loop SE, Suite 100
Lacey, WA 98503
mark.steepy@kpff.com

From: [Steve Schmitz](#)
To: [Scott Boettcher](#); [Brian Shay](#)
Cc: colronjanaverill@comcast.net; [Mark Steepy](#)
Subject: RE: City of Hoquiam 2019-21 Local Projects Recruitment Form-Chehalis Basin Local Flood Relief
Date: Tuesday, July 17, 2018 10:00:18 AM
Attachments: [Funding Exhibit \(7-17-2018\).pdf](#)

Hi Scott,

Attached is the revised figure for the West Hoquiam Levee Application. Please let me know if you have any questions.

Thanks, Steve

Steve Schmitz, PE
Project Manager
 [O 360.292.7230](tel:360.292.7230) [D 360-292-4696](tel:360.292.4696)
[F 360-292-7231](tel:360.292.7231) [C 360-581-4310](tel:360.581.4310)
612 Woodland Square Loop SE, Suite 100
Lacey, WA 98503

From: Scott Boettcher [mailto:scottb@sbgh-partners.com]
Sent: Saturday, July 14, 2018 9:31 AM
To: Brian Shay
Cc: Steve Schmitz; colronjanaverill@comcast.net
Subject: RE: City of Hoquiam 2019-21 Local Projects Recruitment Form-Chehalis Basin Local Flood Relief

Brian – A clarifying information need from our 2019-21 local projects reviewing team re your proposed project (<https://www.ezview.wa.gov/DesktopModules/Documents2/View.aspx?tabID=28124&alias=1492&mid=69498&ItemID=6159>):

1. Can you please send the proposed alignment (as is contemplated at this point in time)? A map showing major physical features and the levee route would be terrific.
Thanks.

Thanks for your help. **Please get back to me by the end of the day July 20th at the latest.**

Thanks again.

Scott

Scott Boettcher, Staff
Chehalis River Basin Flood Authority
360/480-6600
scottb@sbgh-partners.com

From: Scott Boettcher
Sent: Tuesday, July 3, 2018 8:21 AM
To: Brian Shay <BShay@cityofhoquiam.com>
Cc: Steve Schmitz (Steve.Schmitz@kpff.com) <Steve.Schmitz@kpff.com>; colronjanaverill@comcast.net
Subject: RE: City of Hoquiam 2019-21 Local Projects Recruitment Form-Chehalis Basin Local Flood Relief

Thank you Brian. Your proposal has been rec'd on time.
Scott

Scott Boettcher, Staff
Chehalis River Basin Flood Authority
360/480-6600
scottb@sbgh-partners.com

From: Brian Shay <BShay@cityofhoquiam.com>
Sent: Friday, June 29, 2018 11:19 AM
To: Scott Boettcher <scottb@sbgh-partners.com>
Cc: Steve Schmitz (Steve.Schmitz@kpff.com) <Steve.Schmitz@kpff.com>
Subject: City of Hoquiam 2019-21 Local Projects Recruitment Form-Chehalis Basin Local Flood Relief

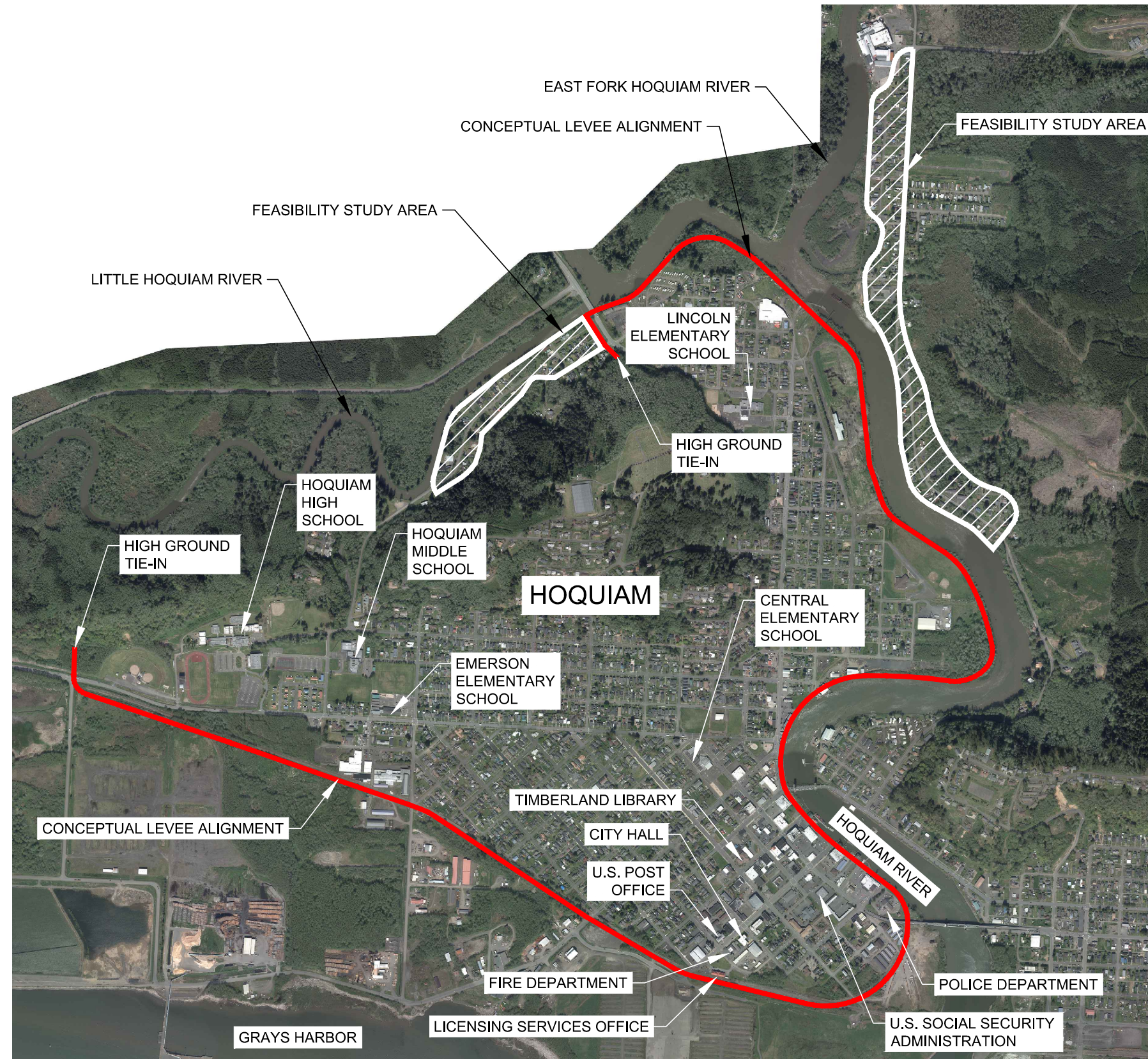
Hello Scott,
Please fine out application attached. If you see anything we might have missed or should change between now and Monday, please let us know. Thanks!
-Brian

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ATTACHMENT 1 - PRELIMINARY LEVEE CONCEPT

HOQUIAM WEST LEVEE



LEGEND:

CONCEPTUAL
LEVEE ALIGNMENT

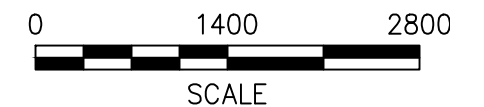


FEASIBILITY
STUDY AREA



NOTE:

LAYOUT SHOWN IS CONCEPTUAL
FOR PLANNING PURPOSES



July 2018

Scott Boettcher

From: Scott Boettcher
Sent: Tuesday, July 3, 2018 8:29 AM
To: 'Brian Shay'
Cc: Steve Schmitz (Steve.Schmitz@kpff.com); colronjanaverill@comcast.net
Subject: RE: City of Hoquiam 2019-21 Local Projects Recruitment Form-Chehalis Basin Local Flood Relief

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Subject: City of Hoquiam 2019-21 Local Projects Recruitment Form-Chehalis Basin Local Flood Relief

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**2019-21 Local Projects Recruitment Form
Chehalis Basin Local Flood Relief**

A. What are local flood relief projects? -- In general, local projects provide predominantly localized, quantifiable 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 a public entity like a City, County, Conservation District, Port, etc. Local projects are additionally envisioned as helping with local flood relief (reducing flood damage and impacts), not adverse to fish, wildlife, or habitat, and (where possible) providers of multiple, quantifiable benefits (per Part IV below).

B. What kinds of local flood relief projects are likely to be logical funding candidates for 2019-21?

- Projects that complete an effort previously funded/started.
- Projects that advance improved emergency response.
- Projects that advance improved public infrastructure protection.
- Projects that advance improvements in local or community flood hazard reduction, including local flood proofing projects (e.g., elevations, buy-outs, foundation venting, etc.).
- Projects that advance Conservation District initiated flood hazard reduction (e.g., farm pads, evacuation routes, bank erosion/bank stabilization, etc.)
- Projects that demonstrate innovation (e.g., thinking beyond traditional bank stabilization techniques in favor of natural system designs), partnerships, cost-sharing/leveraging resources, multiple benefits, public engagement and community planning, and proactive vetting with agencies and tribes.
- Projects that demonstrate informed decision-making through hydraulic analysis/understanding.
- Projects that demonstrate early planning involvement, information exchange with regulatory agencies.
- Projects typically not in excess of \$3M for the stage/phase being funded.

C. Are there projects that would not be good candidates?

- Projects that seek to utilize State Capitol Budget dollars for uses not typically allowed (e.g., maintenance and repair work, cost-sharing under select circumstances, etc.).
- Projects likely to increase potential for flood damage upstream or downstream.
- Projects with unmitigable adverse environmental impacts, significant uncertainty regarding potential environmental impacts, or significant concerns about obtaining regulatory approval.
- Projects not sponsored by a public entity.
- Projects not located in the Chehalis Basin.
- Projects that do not show quantifiable benefit.

Instructions:

- a. Please submit project requests (via this form) to scottb@sbgh-partners.com no later than 5:00 p.m., 7/03/2018.
- b. Please submit one request form for each project proposed, even past projects previously or partially funded.
- c. Note: Parts III and IV [marked by "(**)"] will be scored for review/evaluation. Parts I, II, and V will not be scored.
- d. See Appendix A for overview of 2019-21 Local Projects Recruitment Process (and schedule), or https://www.ezview.wa.gov/site/alias_1492/37282/2019-21-Local-Projects-Recruitment-Process.aspx.

Part I General	
1. Date:	June 29, 2018
2. Project Name:	Hoquiam West Levee
3. Project Location -- Please identify location of the project as precisely as possible, including providing decimal degree latitude/longitude coordinates.	The project will be located in the City of Hoquiam. The project is generally bound by railroad tracks to the south, the Hoquiam River to the east, and the Little Hoquiam River to the west. Approximate latitude and longitude: 46° 58' 57" N, 123° 53' 38" W.
4. Project Contact -- Please identify who will be responsible for overseeing and managing the project (i.e., name, email, telephone number, etc.).	Brian Shay City of Hoquiam City Administrator 360-538-3983 bshay@cityofhoquiam.com 609 8 th Street, Hoquiam, WA 98550
5. Sponsor -- Please identify the sponsor, lead organization, primary entity, etc. responsible for this project. Please identify key partners responsible for assisting in delivery or implementation of project.	The City of Hoquiam will administer the project. The project will occur within the City of Hoquiam city limits.

Part II Description, Timing, and Cost	
6. Project Description -- Please describe the project, what is intended to be accomplished, the benefits to be accrued (flood hazard reduction and otherwise) and to whom. Please also identify what phase/stage of the project funding is being sought for (e.g., planning, preliminary engineering, final design and permitting, construction, etc.).	<p>A large portion of Hoquiam is located within FEMA's floodplain hazard area in a Zone AE. The base flood elevation (BFE) is mapped at elevation 14'.</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 Hoquiam from the floodplain hazard area 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 an interior drainage pump system as required by FEMA. FEMA requirements include certification that the interior drainage system can handle a 100-year flood event. 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.</p>

	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, the value of the investment, and benefit to the community.
7. Project Timeline -- Please describe the timeline and phases for completion of the overall project and describe the timeline for completion of the phase to be funded by 19-21 funding.	A CLOMR is anticipated to be obtained within one year of notice-to-proceed (NTP). The current project schedule has NTP in early March 2019 and completion in mid-February 2020. Three months contingency should be included for potential delays due to agency commenting and review.
8. Project Cost and Funding -- What is the cost of the overall project (or anticipated cost)? What is the cost of the phase to be funded by 19-21 funding? What are the on-going maintenance and operation requirements and costs? Is it clear who will be responsible for covering on-going maintenance and operation costs?	<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 includes extensive surveying, hydraulic modeling, geotechnical analyses, drainage analyses, biological evaluation, and design drawings. Project costs are anticipated to be \$772,500 to assemble the documentation and design required by CFR for a CLOMR. An added design contingency of \$27,500 is proposed to account for unanticipated scope changes that may arise with a project of this type and scale, bringing the grant total to \$800,000.</p> <p>Future projects costs would include full PS&E design and permitting (est. \$2M - \$4M) and construction costs (\$50M - \$75M)></p>
9. Other Funding -- Please explain the extent to which other funding sources, funding partners are available for this phase and any other phase of the project.	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.

Part III (**) Completion, Do ability, Alternatives, and Impacts	
10. Project Completion -- Does the funding requested complete, substantially complete, or continue a project already started? If so, please explain.	Yes. The Hoquiam West levee will build upon the TimberWorks Master Plan while re-using parts of the data, modeling, and analysis from the North Shore Levee. The funding requested will complete the first phase of the West Levee Project, submittal of a CLOMR. For Hoquiam, the West Levee is the next phase of flood levee construction, building upon the North Shore Levee Project which is currently in final design, scheduled for bid in 2019. The Hoquiam West Levee will protect a majority of the lowlands west of the Hoquiam River, north of Grays Harbor, and south of the Little Hoquiam River.

<p>11. Project Doable -- Can this project or the stage/phase for which funding is sought be completed by June 30, 2021? Please describe any circumstances with potential to impact the project's do ability or timeline (e.g., permitting or regulatory unknowns, lack of availability of other cost-share funding resources, etc.). Please describe any advance coordination or vetting with agencies, tribes, other entities, etc. and the outcomes of that effort.</p>	<p>Yes. This planning phase of the project is anticipated to be complete within one year of notice-to-proceed (NTP). The current project schedule has NTP in early March 2019 and completion in mid-February 2020. Three months contingency should be included for potential delays due to agency commenting and review. Permitting is not required for a CLOMR; however we will likely utilize relationships with the permitting agencies currently involved in the North Shore Levee project and engage them in early consultation to ensure the project can be permitted.</p>
<p>12. Project Alternatives -- Please describe alternatives to the project that were considered (including doing nothing), and the rationale for selecting the project described, proposed here.</p>	<p>Alternatives considered include doing nothing, elevating nearly 1,000 properties, and construction of the levee. The levee project is the only feasible alternative available that will allow for the removal of the burden of flood insurance and protect lives and property within West Hoquiam. Raising structures above the flood plain is not feasible given the number and age of the structures. A no-action alternative is not viable, and will not ensure the sustainability of the community.</p>
<p>13. Project Impacts Avoided, Mitigated -- Please identify how project impacts will be avoided and mitigated, and if that mitigation will be accomplished by June 30, 2021?</p>	<p>There are no physical impacts for this phase of work therefore all impacts are avoided. 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. Impacts will be identified during the CLOMR process, but mitigation and permitting will occur during the final phase of the project. 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 align="center">Part IV (**) Benefits Stated and Quantified</p>	
<p>14. Emergency Response Benefits -- Please describe (and quantify) how this project enhances emergency response in a flood emergency (e.g., does it keep critical access roads and transportation facilities open/functional, does it enable easy movement of cattle, equipment and farm chemicals out of harm's way, is it part of a larger hazard mitigation plan, etc.).</p>	<p>This phase of the project is to produce a preliminary design and obtain a CLOMR; to include impact identification and potential mitigation options for emergency response. 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. The levee and pump system will keep critical infrastructure safe and allow emergency services to perform all regular operations during a flood emergency. Therefore, the project will enhance emergency response during a flood emergency by preventing the flooding from occurring.</p>
<p>15. Essential Infrastructure Protection Benefits -- Please describe (and quantify) how this project protects essential infrastructure and 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 Hoquiam and critical infrastructure including fire stations, City Hall, police station and jail, 4 schools, and other essential</p>

	infrastructure. It is estimated that 2,000 parcels and over 1,000 permanent jobs in Hoquiam are under an estimated Base Flood Elevation (BFE) of 14 feet NAVD88 and will be protected by the levee.
16. Public Health, Safety and Welfare Benefits -- Please describe (and quantify) how this project protects public health, safety, and welfare.	In addition to those benefits described in question 15 above, the completed levee system will prevent localized flooding from insufficient drainage systems, including connivance capacity issues and improving aging facilities. Currently, this localized flooding that does occur damages properties and impacts business operations.
17. Residential, Commercial and/or Agricultural Protection Benefits -- Please describe (and quantify) how this project protects residential communities, commercial, and/or agricultural interests and benefits of acting (or consequences of not acting) this funding cycle. Consider factors like number of structures and people at risk, historic frequency of flood damage, magnitude of benefit for the cost, etc.	It is estimated that 2,000 parcels in Hoquiam that are mapped in FEMA's Floodplain hazard area are under an estimated Base Flood Elevation (BFE) of 14 feet NAVD88 will be protected by the levee. These parcels have a combined assessed value in excess of \$200 million dollars and encompass multiple schools, fire stations, police station and other structures critical to the community. As described above, the constructed levee will curb significant long-term economic losses in these areas while protecting vital community and emergency facilities. 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. Historically these areas see regular flooding, but not to the levels that cause claims against their flood insurance. With increasing concerns of sea level rise, the consequence of not proceeding with this project would be continued flooding, increased flood insurance claims and increasing economic loss due to rising flood insurance premiums.
18. Habitat Benefits -- Please describe (and quantify) how this project benefits or improves existing or future habitat conditions.	Construction of the West Hoquiam Levee will keep flood waters from inundating commercial and residential properties thus reducing potential contamination from hazardous materials, sewage, and other pollutants into the ecosystem. Native plantings and habitat restoration are also planned to be incorporated into the final construction of the Levee.
19. Costs and Benefits -- Project funders (and the public they represent) value cost-effective, sound funding decisions. To that end, please describe (and quantify) in general terms benefits gained for funds requested and frequency, time-scale benefits will be realized. Please also describe (and quantify): a. Funds requested. b. Costs avoided if funded (and on what frequency, time-scale). c. Costs incurred if funded (and on what frequency, time-scale).	Obtaining a CLOMR is the first step towards an eventual LOMR for removing areas of Hoquiam from the floodplain hazard area 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. Citizens in the City of Hoquiam paid over \$1.1 million in flood insurance premiums in 2014. Since the NFIP's adoption in Hoquiam in 1978, total paid claims have totaled less than \$3.7 million dollars.

<p>d. Benefits gained if funded (and on what frequency, time-scale).</p> <p>e. Impacts incurred if funded (and on what frequency, time-scale).</p> <p>f. Impacts and implications of not funding (and on what frequency, time-scale).</p> <p>Guidance Note (1): For this question, it will be helpful to think in terms of what will be the dollar value of assets protected, dollar value of impacts avoided, dollar value of monies retained or recouped, etc. for the amount of public monies invested.</p> <p>Guidance Note (2): Part V is intended to help project reviewers concisely summarize, compare funding requests. Answers here (and in related questions on this form) should be consistent with Part V.</p>	<p>Once completed the levee will protect a large area, including 2000 parcels, fire stations, Hoquiam City Hall, police station and jail, schools, and other essential infrastructure.</p> <ul style="list-style-type: none"> a) \$800,000 for this initial CLOMR planning phase for data collection, modeling, analysis, design, and planning required by the Code of Federal Regulations (CFR) for the CLOMR submittal to FEMA b) Citizens in the City of Hoquiam paid over \$1.1 million in flood insurance premiums in 2014 alone, yet claims in the community c) There will be no costs to the environment or public if this CLOMR planning phase is funded. Costs could be incurred during the following PS&E and construction phase (see question 13 above). d) This project would provide a CLOMR paving the way for the second phase for PS&E and construction. Once constructed, the levee system would provide protection to approximately 2000 properties, 1,000 jobs, eliminate systemic economic losses due to flood insurance premiums, and protect vital infrastructure. The CLOMR can be completed within 9-12 months from start date, and PS&E and construction completion would require 2-5 additional years depending on funding sources and permitting. e) There are no physical impacts for this initial CLOMR planning phase of work, however impacts associated with constructing the project will be identified in the CLOMR process, along with possible mitigation concepts f) The impact of not proceeding with this project would be continued flooding, increasing economic loss due to rising flood insurance premiums, and the potential damage to critical community and private infrastructure.
<p>20. Other Project Benefits -- Please describe (and quantify) any other project benefits not already discussed. This could include how this project compliments, leverages, or implements another project or planning process already underway.</p>	<p>The West Hoquiam Levee is an element of the TimberWorks Master Plan. TimberWorks was developed through a community planning process in 2016 and includes 34 recommended actions to reduce food risk while achieving other benefits including water quality improvements, habitat enhancement, and community and economic development. The project will further provide flood protection to the City of Hoquiam which they began with the North Shore Levee project, and will leverage studies and materials already</p>

	completed and available from the NSL project. Construction of this flood levee was identified in the City of Hoquiam's 2000 Comprehensive Surface Water management Plan however it has never moved forward due to a lack of funding.
21. Anything Else -- Please offer any additional information (e.g., photos, maps, video, drawings, drone, etc.) that would help to better understand the scope, timing, and benefits of this project.	Attachment 1: Preliminary Levee Concept Attachment 2: 2018 Flood Insurance Data from French Wetmore and Associates Attachment 3: Flood Photographs

Part V Summary of Benefits, Impacts, Costs			
	22. Benefits -- Please summarize, tally project economic and non-economic benefits as described.	23. Impacts -- Please summarize, tally project economic and non-economic impacts as described.	24. Costs -- Please summarize, tally project economic and non-economic costs as described.
Quantify	<ul style="list-style-type: none"> 2000 parcels removed from the flood plain Hazard area zone AE Removal of approximately \$1 million in annual flood insurance premiums from the community Protection of ±1000 permanent jobs Removal of restrictive building codes from 2000 properties to allow redevelopment 	<ul style="list-style-type: none"> ROW / Easement acquisition may effect up to 50 properties 	<ul style="list-style-type: none"> Costs of future phases of the project would include full PS&E design and permitting (est. \$2M - \$4M) and construction costs (\$50M - \$75M) including LOMR.
Describe	<p>Improved water quality by potential contamination from hazardous materials, sewage, and other pollutants caused by frequent flooding of commercial and residential areas.</p> <p>Project will allow for community and economic redevelopment while protecting jobs.</p> <p>Project will eliminate systemic economic losses due to flood insurance premiums</p> <p>Protection of critical infrastructure vital to the community.</p>	<p>Without proceeding forward with this project, sea level rise will increase the frequency and damage caused to structures and properties.</p> <p>Impacts will be identified during the CLOMR process, but mitigation and permitting will occur during the final phase of the project.</p>	<p>Without this project, the community will continue to pay over \$1 million per year in flood insurance premiums and recent history is showing these insurances rates are increasing at dramatic rates. In some cases, insurance premiums are equal to, or higher than mortgages.</p> <p>Funding for future phases will be sought from various Local, State, and Federal sources.</p>

Appendix A

Process/Schedule Overview (current as of 6-12-2018)	
June 12, 2018	<ul style="list-style-type: none"> Post and distribute local projects recruitment request. Allow three weeks for project proposals/submittals (i.e., due no later than 5:00 p.m., Tuesday, July 3, 2018). Due to Scott Boettcher, scottb@sbgh-partners.com.
July 3, 2018	<ul style="list-style-type: none"> Receive proposals/submittals.
July 5, 2018 (or July 12, 2018)	<ul style="list-style-type: none"> Update Chehalis Basin Board on numbers received, types of projects received, distribution, dollar value, etc.
July 19, 2018 (or August 16, 2018)	<ul style="list-style-type: none"> Update Flood Authority on numbers received, types of projects received, distribution, dollar value, etc.
September 20, 2018	<ul style="list-style-type: none"> Update Flood Authority on status of Projects Committee's effort to review, rank, discuss with Tribes, discuss with agencies, sort and rank, etc. Review/discuss PRELIMINARY DRAFT ranked and prioritized list.
October 4, 2018	<ul style="list-style-type: none"> Update Chehalis Basin Board on status of Projects Committee's effort to review, rank, discuss with Tribes, discuss with agencies, sort, and rank, etc. Review/discuss DRAFT ranked and prioritized list.
October 18, 2018 (SPECIAL MEETING)	<ul style="list-style-type: none"> Seek Flood Authority approval of FINAL ranked and prioritized list.
November 8, 2018	<ul style="list-style-type: none"> Seek Chehalis Basin Board approval of FINAL ranked and prioritized list.
June 2018 through November 2018	<ul style="list-style-type: none"> Work with agency, OCB, and CBB technical staff on refining and finalizing recruitment instrument, scoring criteria, scoring instrument, categorization, and ranking, developing draft and final lists, etc.

Legend:

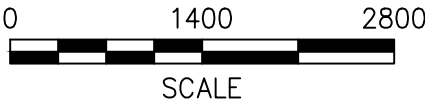
Chehalis Basin Board	Flood Authority
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ATTACHMENT 1 - PRELIMINARY LEVEE CONCEPT

HOQUIAM WEST LEVEE



NOTE:
LAYOUT SHOWN IS CONCEPTUAL
FOR PLANNING PURPOSES



Chehalis Basin Flood Insurance Data

NFIP Coverage as of 3/14/2018						
Community	Premium	V Zone	A Zone	X Zone	Total	Coverage
ABERDEEN, CITY OF	\$ 809,378	0	472	71	543	\$ 93,266,200
BUCODA, TOWN OF	\$ 40,210	0	40	7	47	\$ 7,590,100
CENTRALIA, CITY OF	\$ 641,138	0	470	257	727	\$ 167,272,200
CHEHALIS, CITY OF	\$ 351,758	0	206	27	233	\$ 66,348,300
COSMOPOLIS, CITY OF	\$ 4,968	0	4	7	11	\$ 1,898,800
ELMA, CITY OF	\$ 3,414	0	0	8	8	\$ 1,412,800
GRAYS HARBOR COUNTY*	\$ 409,975	13	151	258	422	\$ 95,629,100
HOQUIAM, CITY OF	\$ 971,404	0	649	14	663	\$ 85,003,200
LEWIS COUNTY *	\$ 748,587	0	529	468	997	\$ 236,337,800
MONTESANO, CITY OF	\$ 10,538	0	4	2	6	\$ 2,424,400
NAPAVINE, TOWN OF	\$ 351	0	0	1	1	\$ 280,000
OAKVILLE, CITY OF	\$ 3,762	0	0	6	6	\$ 1,648,100
PE ELL, TOWN OF	\$ 3,497	0	2	2	4	\$ 1,167,100
THURSTON COUNTY *	\$ 403,966	6	255	435	696	\$ 175,345,300
Total	\$4,402,946	19	2,782	1,563	4,364	\$935,623,400

NFIP Claims 1978 - 2017			
Community	Claims	Paid	
ABERDEEN, CITY OF	333	\$2,824,657	
BUCODA, TOWN OF	43	\$257,008	
CENTRALIA, CITY OF	735	\$26,012,107	
CHEHALIS, CITY OF	514	\$28,128,923	
COSMOPOLIS, CITY OF	4	\$5,928	
ELMA, CITY OF	18	\$487,641	
GRAYS HARBOR COUNTY*	225	\$4,675,351	
HOQUIAM, CITY OF	237	\$3,658,789	
LEWIS COUNTY *	749	\$22,972,093	
MONTESANO, CITY OF	15	\$195,095	
NAPAVINE, TOWN OF	0	0	
OAKVILLE, CITY OF	8	\$231,456	
PE ELL, TOWN OF	1	\$37,771	
THURSTON COUNTY *	237	\$3,580,011	
Total	3,119	\$93,066,830	

* County numbers are for unincorporated areas only and include policies on properties outside the Chehalis Basin

Loss of Coverage 2014 - 2018				
Community	5/31/2014	3/14/2018	Loss	
Aberdeen	905	543	40%	
Bucoda	66	47	29%	
Centralia	910	727	20%	
Chehalis	252	233	8%	
Cosmopolis	15	11	27%	
Elma	N/A	8	N/A	
Grays Harbor County *	545	422	23%	
Hoquiam	1,146	663	42%	
Lewis County *	1,233	997	19%	
Montesano	3	6	N/A	
Napavine	0	1	N/A	
Oakville	10	6	40%	
Pe El	6	4	33%	
Thurston County *	802	696	13%	
Total	5,893	4,364	26%	

Elevation Rated – October 2017 Flood Insurance Manual

Single family house, one floor, slab on grade foundation

Building coverage: \$100,000 CRS Class: 6

Deductible factor: 1.000

Zone	Height	First \$60,000		Additional Coverage		ICC Premium	Sub Total	CRS Discount	Sub Total	Reserve Fund	HFIAA Surcharge	Federal Policy Fee	Total Premium
		Rate	Cost	Rate	Cost								
page Rate 2													
AE	Pre-FIRM	\$0.99	\$594.00	\$0.90	\$360.00	\$70.00	\$1,024.00	20%	\$819.20	\$122.88	\$25.00	\$50.00	\$1,017
AE	With basement	\$1.05	\$630.00	\$1.33	\$532.00	\$70.00	\$1,232.00	20%	\$985.60	\$147.84	\$50.00	\$50.00	\$1,233
page Rate 7													
AE	3 feet > BFE	\$0.32	\$192.00	\$0.08	\$32.00	\$5.00	\$229.00	20%	\$183.20	\$27.48	\$25.00	\$50.00	\$286
AE	2 feet > BFE	\$0.47	\$282.00	\$0.09	\$36.00	\$5.00	\$323.00	20%	\$258.40	\$38.76	\$25.00	\$50.00	\$372
AE	1 foot > BFE	\$0.87	\$522.00	\$0.13	\$52.00	\$5.00	\$579.00	20%	\$463.20	\$69.48	\$25.00	\$50.00	\$608
AE	At BFE	\$2.02	\$1,212.00	\$0.20	\$80.00	\$5.00	\$1,297.00	20%	\$1,037.60	\$155.64	\$25.00	\$50.00	\$1,268
AE	1 foot < BFE	\$5.26	\$3,156.00	\$0.25	\$100.00	\$5.00	\$3,261.00	20%	\$2,608.80	\$391.32	\$25.00	\$50.00	\$3,075
AE	2 feet < BFE	\$7.51	\$4,506.00	\$0.52	\$208.00	\$34.00	\$4,748.00	20%	\$3,798.40	\$569.76	\$25.00	\$50.00	\$4,443
AE	3 feet < BFE	\$9.25	\$5,550.00	\$0.91	\$364.00	\$34.00	\$5,948.00	20%	\$4,758.40	\$713.76	\$25.00	\$50.00	\$5,547
page Rate 2													
X	N/A	\$1.06	\$636.00	\$0.29	\$116.00	\$5.00	\$757.00	10%	\$681.30	\$102.20	\$25.00	\$50.00	\$858
X	With basement	\$1.19	\$714.00	\$0.41	\$164.00	\$5.00	\$883.00	10%	\$794.70	\$119.21	\$25.00	\$50.00	\$989

Letter D - A Zone, Pre-FIRM, Primary Residence



FEMA



INSURANCE COMPANY: [NAME]
POLICY NUMBER: 1234567890
EFFECTIVE DATES: MM/DD/YYYY to MM/DD/YYYY
BUILDING COVERAGE: \$XXX,XXX
BUILDING DEDUCTIBLE: \$X,XXX
CONTENTS COVERAGE: \$XXX,XXX
CONTENTS DEDUCTIBLE: \$X,XXX
CURRENT FLOOD ZONE: XX
RATED FLOOD ZONE: XX
PREMIUM: \$X,XXX

Month DD, YYYY

John Smith Jones
123 Main Street
Anywhere, US 12345

RE: FLOOD INSURANCE POLICY FOR
[Property Address]

Dear **Mr./Ms. Jones:**

Thank you for being a valued policyholder of the National Flood Insurance Program. This letter discusses your flood risk and some important changes and options for your flood insurance policy.

Your building is at high risk for flooding. According to a recent report your insurer sent to FEMA, your building was built before the community's first Flood Insurance Rate Map (FIRM) was issued—meaning it is pre-FIRM—and it is located in a high-risk flood area on the current flood map. The cost of flood insurance for pre-FIRM buildings in high-risk flood areas has been based on discounted rates that do not reflect the actual flood risk. Federal law now requires flood insurance rates for buildings receiving this discount to increase over time until they reflect the building's true risk of flood damage. For primary residences like yours, this means you will see rate increases of at least 5 percent, and up to 18 percent each year. However, there are options to consider.

The 5 to 18 percent yearly rate increases may not stop without an Elevation Certificate (EC). An EC is based on your building's specific features and provides elevation detail not available on flood maps. The EC works with the flood map for your property to help determine the actual risk of flood damage. Having an EC will help predict when the 5 to 18 percent yearly increases will stop, but they cannot stop without one. Your insurer cannot determine how much you should pay for flood insurance until you get an EC. When you decide to get an EC, your insurer will either charge you an amount that accurately reflects your property's current flood risk (keep in mind, your rate will change from year to year because of adjustments like inflation), or allow you to continue getting the discounted rate, whichever amount is less. To obtain an EC, you will likely need to hire a licensed engineer, architect, or land surveyor.

Keep your flood policy in force. If you ever allow your flood insurance policy to lapse for either more than 90 days, or twice for any number of days, you may be required to provide an EC, and you may no longer be eligible for the discounted rate you have been receiving.

See the back of this letter for information about your insurance options. Read more about **LETTER D** and find some guidance about when having an EC could be beneficial, at www.FEMA.gov/cost-of-flood. Speak with your insurance agent or company if you have questions about what this letter means.

Our goal is to provide information to help you make the best decision about your policy.

Sincerely,

Roy E. Wright
Deputy Associate Administrator for Insurance and Mitigation

What Will Your Flood Risk Cost?

Get the Lowest Rate You Can Qualify For.

Your situation (LETTER D): Your property is at high risk for flooding. You can expect your discounted rate to increase by at least 5 percent, and up to 18 percent, each year. Until you get an Elevation Certificate, there's no way to predict when the 5 to 18 percent yearly increases will stop. Keep in mind, all rates are subject to change from year to year because of adjustments like inflation. Know your options.

Option 1 Do Nothing

Your discounted rate will increase by up to 18 percent each year.



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Option 2 Get an Elevation Certificate

There's no way to know exactly when having an Elevation Certificate will be beneficial, but www.FEMA.gov/cost-of-flood provides some guidance. If you get an Elevation Certificate, you can continue to pay the discounted rate if it's lower.



How to Get an Elevation Certificate

An Elevation Certificate verifies the elevation of your building. Before you take any action to get an EC, check with your insurance agent or company to see if there is already one on file. If not, you can hire a licensed surveyor to provide one.



See Your Agent for Your Rate.

Knowing this, you'll know you're getting the best protection at the rate which fits your risk.

Keep Your Policy in Force.

If you ever allow your flood insurance policy to lapse for either more than 90 days, or twice for any number of days, you may be required to provide an Elevation Certificate, and you may no longer be eligible for the discounted rate you have been receiving.

Contact your agent for more information or visit www.FEMA.gov/cost-of-flood.



FEMA



Attachment 3

December 10th 2015 Flood Event



December 10th 2015 Flood Event

