



## ***Another Chehalis Basin Flood Protection Project***

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### ***North Shore Levee Project (Design Phase)***

*Schedule* → February 2016 to July 2017

*Budget* → \$988,000

*Benefit* → Providing Aberdeen and Hoquiam with essential flood relief



[www.ezview.wa.gov/aberdeenfloodrelief](http://www.ezview.wa.gov/aberdeenfloodrelief)



**kpf**

# What's the Problem?

- Aberdeen and Hoquiam lowlands experience chronic flooding from coastal floods, riverine floods, creek floods, and conveyance issues
- Lowlands are in mapped flood zones that require mortgages to include flood insurance through the National Flood Insurance Program
- Significant long-term economic loss through NFIP
  - Aberdeen in program since 1984, Hoquiam since 1979
  - 2016 annual premiums: \$2.3 million
  - Paid losses since program inception: \$5.1 million
  - Total paid losses prior to January 2015 storm: \$0.9 million
  - Policies in force dropped from 1,780 in 2015 to 1,632 in 2016



# The Plan – Step 1 (This Phase)

- Design a comprehensive levee and pump system to protect cities from external floods and convey stormwater out
- Submit the design and analysis to FEMA for review
- Obtain a Conditional Letter of Map Revision stating that if the levee system is built as proposed, it will result in protected areas being placed in a Zone X, removing mandatory flood insurance requirements

# The Plan – Step 2 (Next Phase)

- With CLOMR “pre-approval”, levee system cost estimate, and flood insurance historical data in hand, seek funding for final design and construction
- Construct levee system
- Obtain Letter of Map Revision from FEMA and place protected lowlands in Zone X
- Flood protection and flood insurance relief!

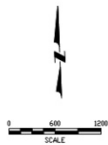


# Project Area

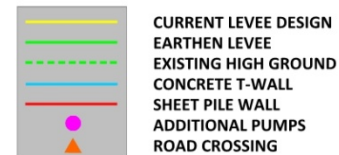


# Proposal (Preliminary Concept)

## NORTH SHORE LEVEE



NOTE:  
LAYOUT SHOWN IS CONCEPTUAL FOR PLANNING PURPOSES.



kpff

ENGINEER: KPK  
DECEMBER 9, 2015

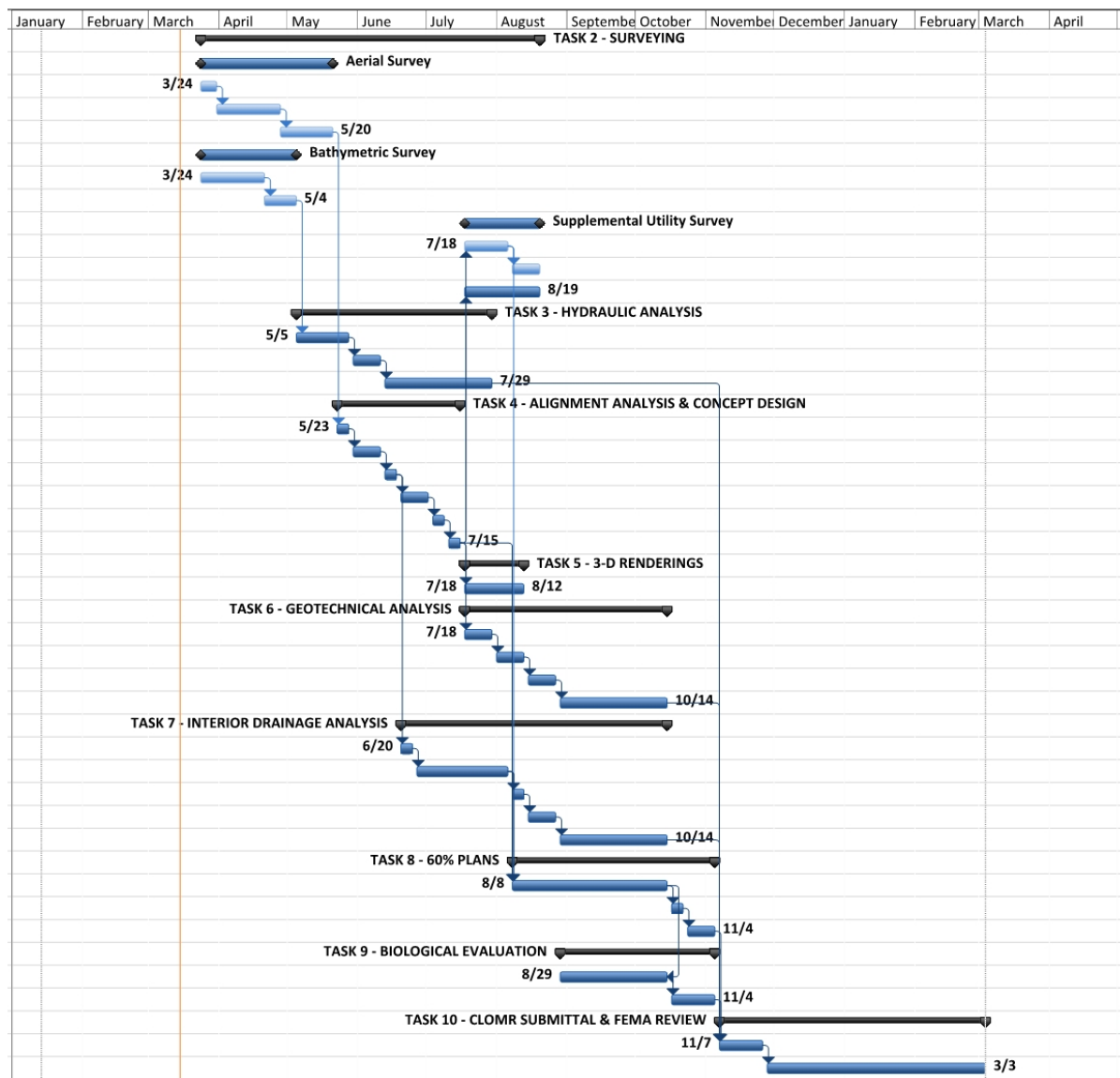
FIGURE 1

# What's Been Done?

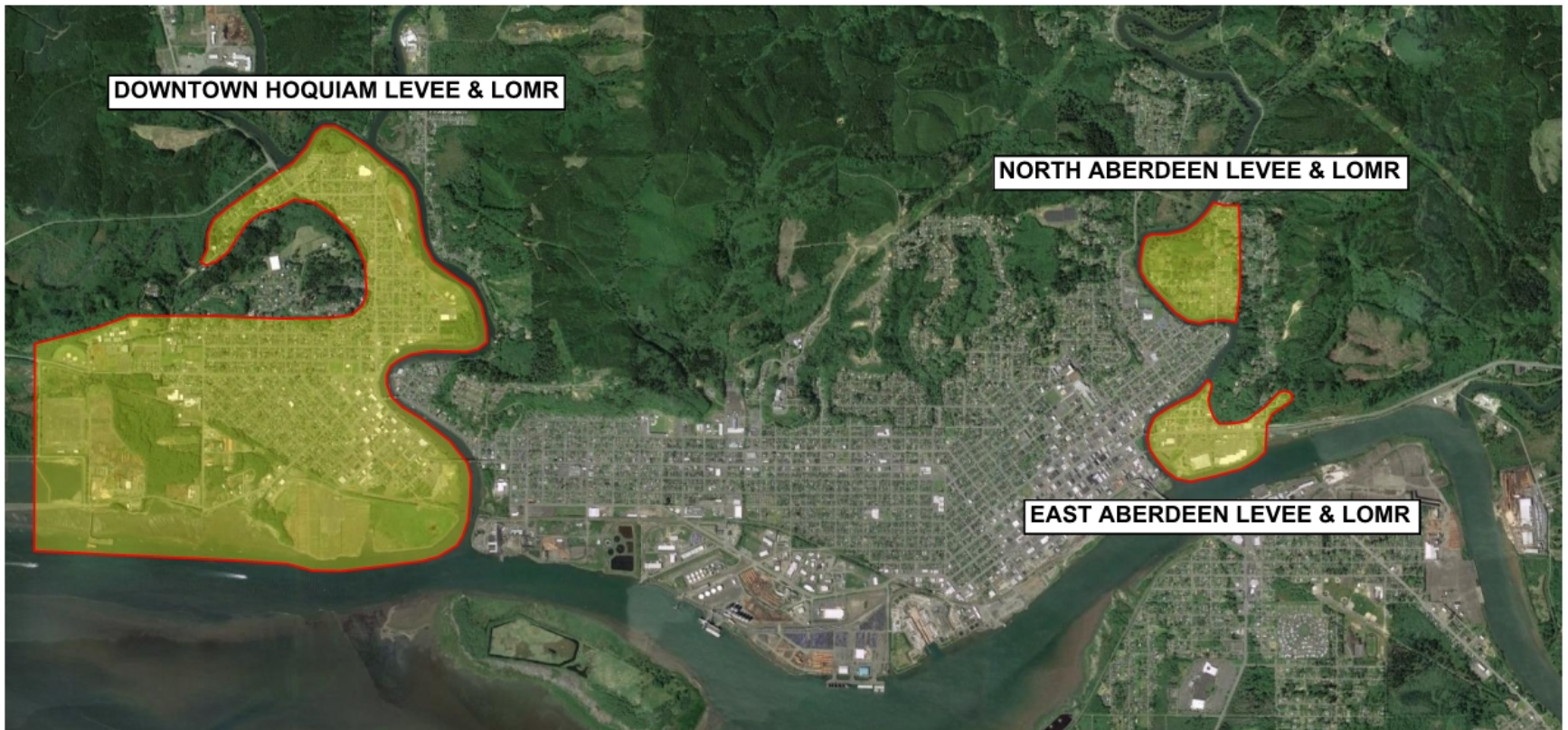
- Northside Levee preliminary design, analysis, and CLOMR (for downtown Aberdeen area) to use as starting point and build upon
- Multi-agency site walk of expanded alignment
  - Cities of Aberdeen and Hoquiam
  - Design Team
  - WDFW
  - WSDOE
- Funding and contract approved for expanded levee



# What's Next?



# Future Expansions?



# Contacts

- City of Aberdeen
  - Rick Sangder, Public Works Director
  - Kris Koski, incoming City Engineer
- KPFF Consulting Engineers
  - Mark Steepy, Principal

## Q&A, Discussion

- We appreciate your comments, questions, and input!