



# Newport Yacht Club Outfall Design DRAFT

Lower Coal Creek Flood Hazard Reduction Project  
Group 3

September 12, 2017

## NYC Outfall Presentation Overview

- Introductions
- Why This Project at This Time?
- Current Overall Project Status
- Community Engagement
- NYC Outfall Status
- Comments/ Questions Received
- Next Steps
- Questions?



Skagit Key - January 1999



## NYC Outfall Presentation Overview

- Available Handouts
  - This Presentation
  - Project Frequently Asked Questions (FAQ)
  - Newport Shores existing drainage outfalls (9 total)
  - Proposed NYC outfall design
  - Easement area requested
  - Comments and questions we've heard



## Introductions

- HOA Board Members/ Commodore/ NYC Staff
- City Staff
  - Debbie Harris, Paul Bucich, Scott Taylor, Brian James, Max Mozer
- Consultant Staff
  - Theo Prince, Harry Gibbons



# Why This Project at This Time?



- Grant money is available from the King County Flood Control District (KCFCD)
- Flooding has been an ongoing concern
- Sediment transport has been reduced.
- Analysis shows flooding could still occur.



## Current Overall Project Status

- Aerial photo of project work areas.





## Current Overall Project Status

- Group 1 – Upper Skagit Key Culvert Replacement
  - Under construction



## Current Overall Project Status

- Group 2 – Cascade and Newport Keys Culvert Replacements and Grand Canal Outfall (permits and easement required yet)
  - Design started in July 2017
  - A JARPA was submitted August 2017 to the Corps of Engineers with preliminary design work for both outfalls
  - Construction will be in 2018 if easements and permits are received by early spring 2018

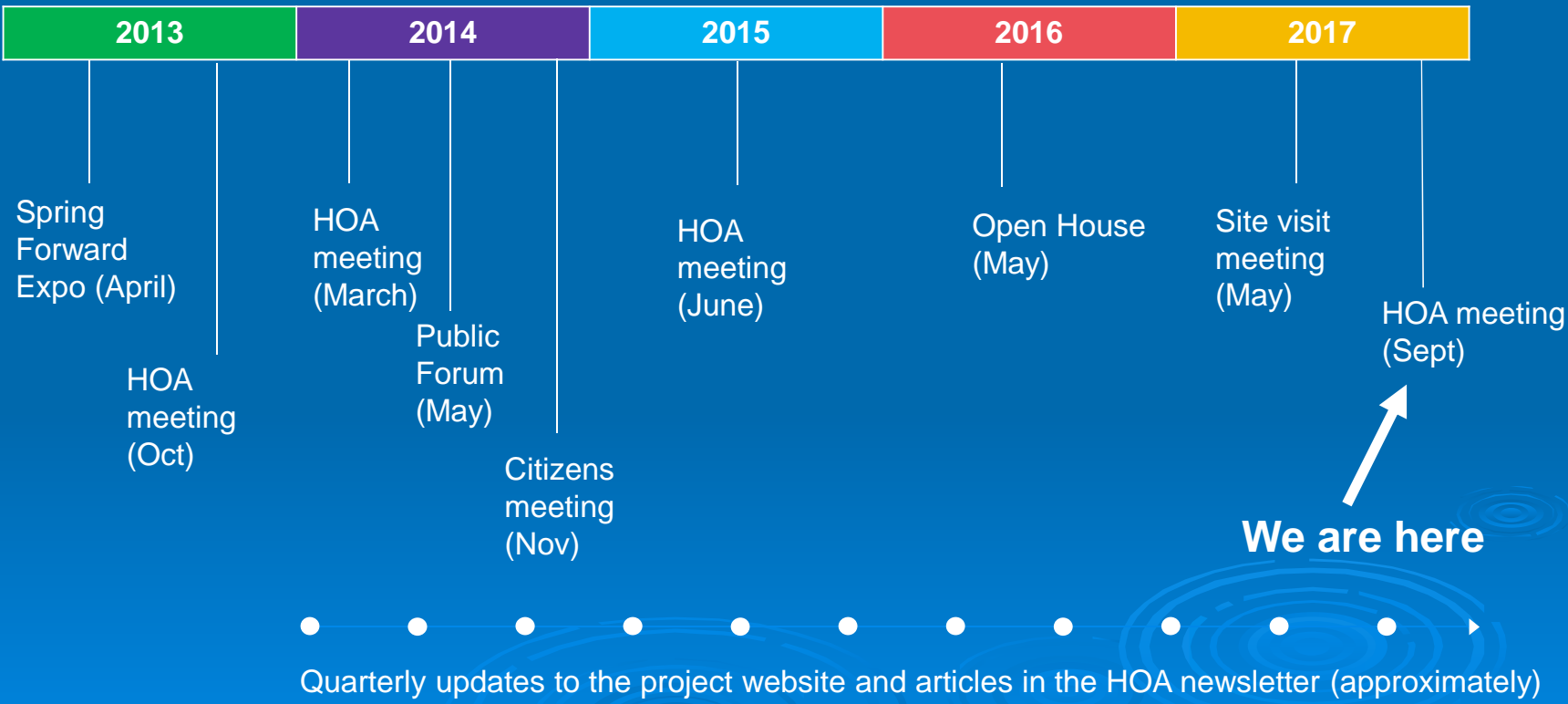


# Current Overall Project Status

- Group 3 – Glacier Key and lower Skagit Key Culvert Replacements and Newport Yacht Club Outfall
  - 30% design of the culverts and preliminary design for the NYC outfall has been completed.
  - Currently the design work is paused.
  - Design will begin in the 2<sup>nd</sup> Quarter of 2018.
  - Construction is anticipated for 2019 if easements and permits are received.



## Community Engagement to Date



# Role of Community Members in the Decision-Making Process

← *Depends on what phase of the project we are in.* →

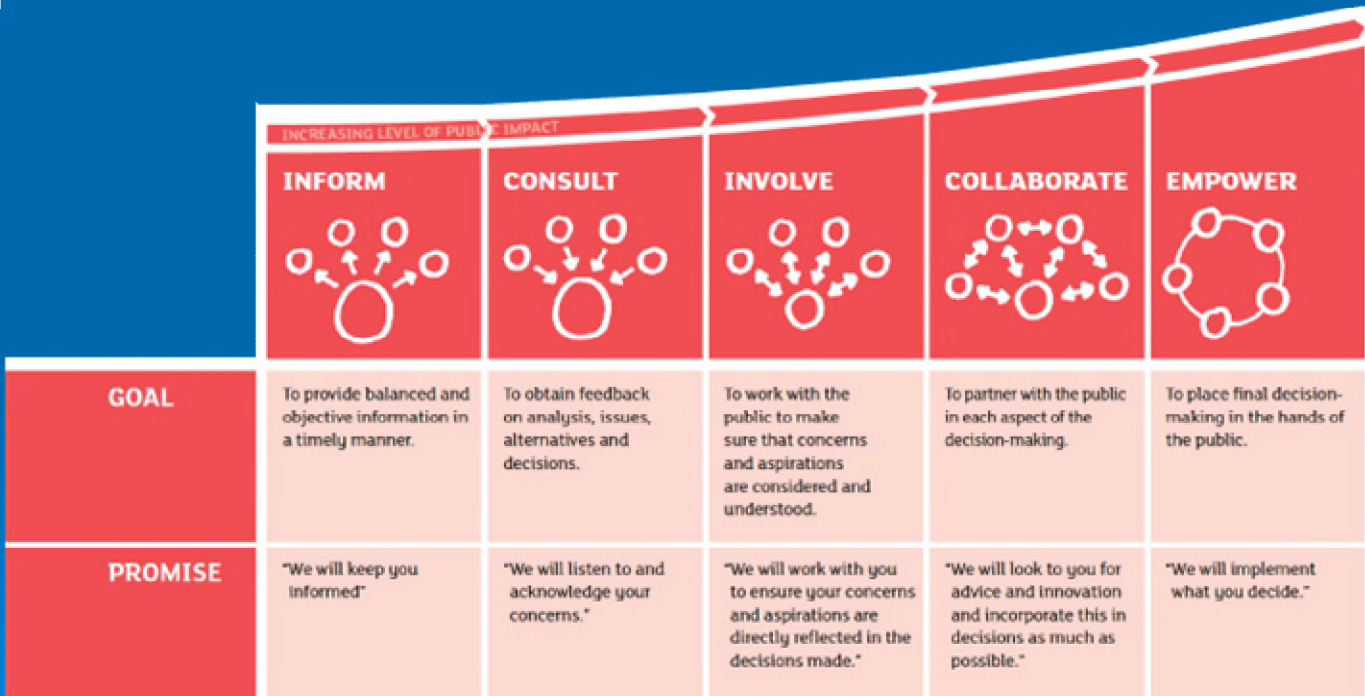


Image source: International Association of Public Participation

## NYC Outfall – What we are asking for from the Newport Yacht Club

- What concerns do you have about the current design?
- A formal easement offer will be forthcoming in 2-4 weeks.



# Public Comment Opportunities for the Newport Yacht Club Outfall



## NYC Outfall: Overview of past work

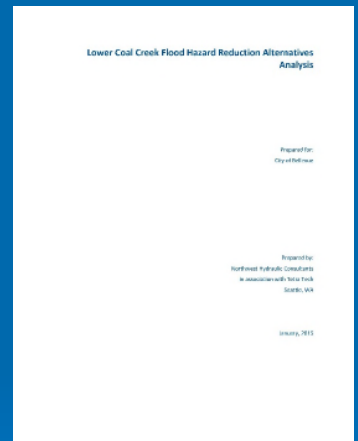
- Grant monies made available in 2013
- Alternatives were identified to address the roadway flooding in 2014
  - Provide underground storage in the roadways (Glacier and Lummi Keys)
  - Re-engineer existing Coal Creek outfalls to manage sediment deposition
  - Replace pipeline at Lummi Key, Skagit Key and SE 40<sup>th</sup> St by-pass
  - Infiltration vaults or ponds
  - Detention pond or vault with pumped discharge or discharge by gravity
  - Disconnect the drainage outfalls that connect to the creek and connect them directly to Lake Washington.





## NYC Outfall: Overview of past work

- The alternatives were screened based on 14 criterion
- Underground and above ground storage was reviewed however due to the flat grades, high groundwater and high water levels in Coal Creek during flooding it was deemed ineffective.
- The top two were further developed



## NYC Outfall: Overview of past work

### Top Two Alternatives:

1. Conveyance Improvements Alternative +/- 1,100 lf of pipe, \$1,015,000
  - Replace existing pipes with larger diameter pipes and provide high-level overflow pipes at lower Skagit Key and Newport Key.
  - Pipes would be replaced in the following roadways; lower Skagit Key east and west of Coal Creek, Newport Key, and Glacier Key.
  - Analysis showed that extensive storm drain back-ups would still occur and associated roadway flooding should be expected with this alternative (it doesn't fix the problem)





## NYC Outfall: Overview of past work

### Top Two Alternatives:

1. Three Outfall/ Two Inverted Siphons Alternative +/- 1,800 lf of pipe, \$1,765,000 - \$2,015,000
  - Propose disconnecting storm drainage from the creek and connecting it to the lake. Two connection locations along the Grand Canal and one connection location on Skagit Key along Lake Washington.
  - Analysis shows that during the worst case storm and high lake levels only one location may have roadway flooding.



## NYC Outfall: Overview of past work

- Option 2 was recommended as the preferred alternative
- KCFCD grant money was made available to the City for the design and construction of the 5 culvert replacements and up to 3 outfalls to the lake in 2015.



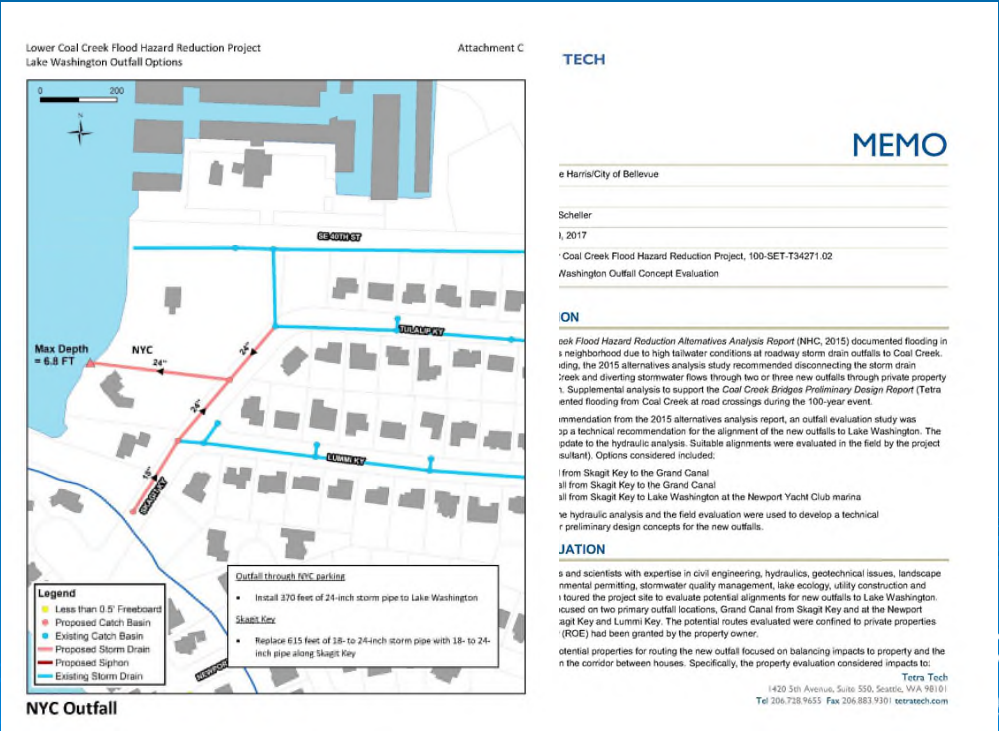
# NYC Outfall: Overview of past work

- Option 2 was then further analyzed and refined:
  - Grand Canal Outfall - It was determined that a single outfall to the Grand Canal could provide the same benefit and would require only one property easement.
  - NYC Outfall – The NYC property was chosen due to wetlands south of the marina and unwilling property owners.
    - A new pipe along the south property line was reviewed
    - Replacement of the existing bypass pipe on the Newport Yacht Club Property was reviewed.
      - Replacement of the existing pipe would not solve all the flooding locations



# NYC Outfall: Overview of past work

Alternatives Analysis  
Recommendation  
May 2017



## NYC Outfall - Concerns We've Heard

- Concern about sediments accumulating in the marina from the outfall
- Concern about pollution (roadway and fertilizer) accumulating in the marina
- Concern about milfoil growth from the fertilizer that would be directed to the marina
- Concern about impacts to the structural integrity of the dock pilings from sustained high flows from the outfall
- Concern about cutting a hatch into Dock D
- Concern about construction impacts to the Dock D use & summertime use of the Yacht Club.
- Does the outfall have to be on the Newport Yacht Club Property?
- Why is the City spending money on this project/ this project is not needed
- Can't we use the existing drainage pipe on the east side of the property or take the outfall to SE 40<sup>th</sup> St?
- We have gotten ahead of ourselves in the design

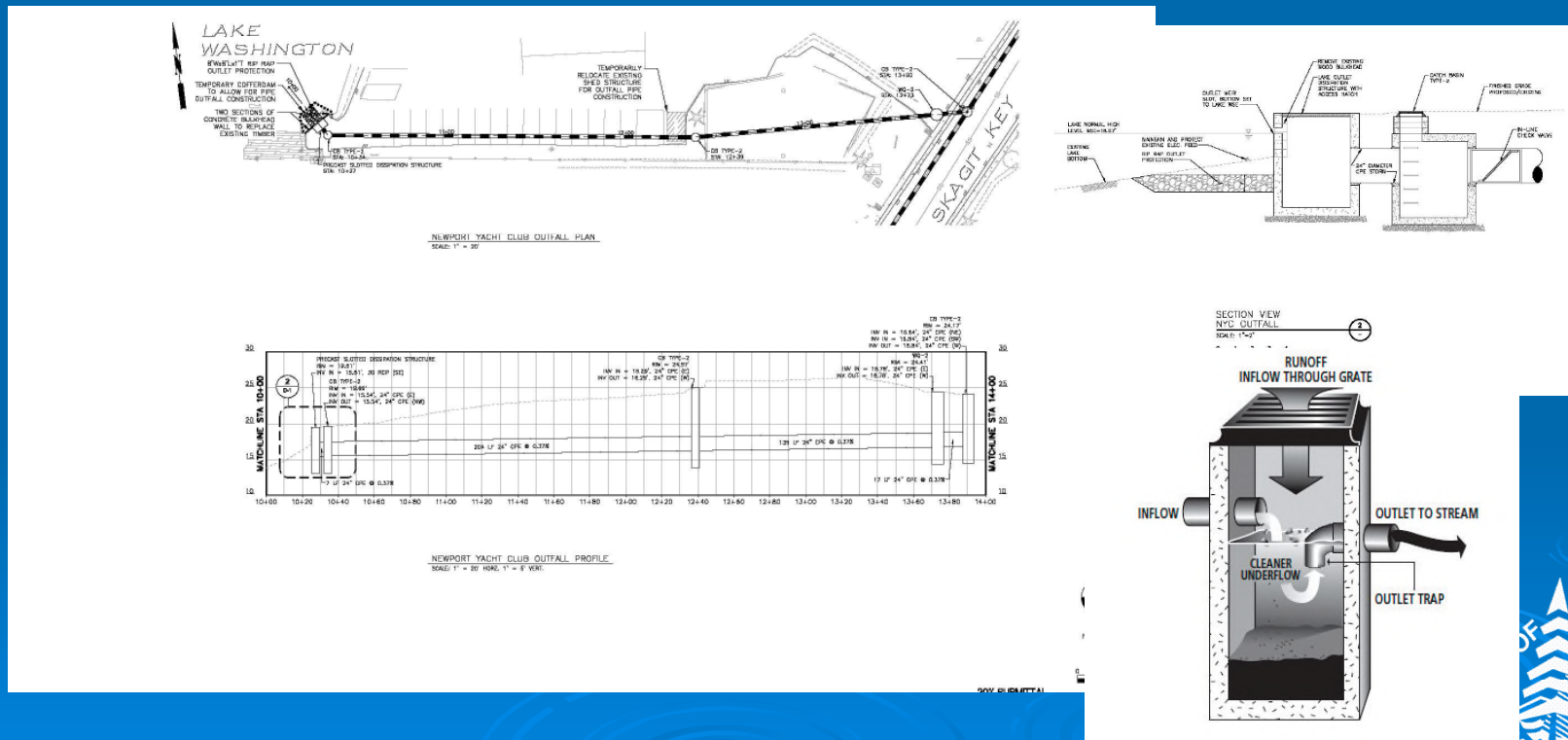


## Design changes based on comments received

- In an effort to reduce impacts to Dock D, we relocated the outfall outlet to be in the asphalt pavement adjacent to Dock D and not under Dock D
- In an effort to improve aesthetics, maintain navigability and reduce impacts to the dock structures, we moved the energy dissipation catch basin to be on land as part of the relocation effort. We have also directed the flow in between the two docks.
- To address scour at the outfall outlet, we've added a rock scour pad at the outlet of the energy dispersion catch basin.
- There are 9 existing stormwater outfalls that outlet to the Grand Canal
- Both proposed outfalls will provide flow to the lake in locations where the flows are currently very slow or stagnant.



# NYC Outfall – Current design



## NYC Outfall – What happens if the Yacht Club does not agree to the easement?

- If the City can not obtain an easement for the outfall then the outfall would not be constructed with the KCFCD funds.
- The City does not have funds budgeted for the outfall construction.





## Comments and Questions

### ■ High level themes from questions & comments received:

- Impact of the proposed outfall outlet on the dock pilings
  - The City has revised the design to respond to this concern by adding a catch basin energy dissipator.
- Will construction impact the use of Dock D?
  - The City has revised the preliminary design from 2016 to respond to this concern by removing the structure under the dock to reduce flow energy and moving it to under the asphalt on land near the entrance to Dock D.
- The Community does not want a maintenance hatch in the dock.
  - The City has responded to this concern by relocating the structure that was planned to go under the dock.

\*\*A complete list of comments/ questions and responses are provided in the handouts



## Comments and Questions

### ■ High level themes from questions & comments received:

- Pollutants (sediment, fertilizer, toxins) getting to the Marina via the proposed outfall
  - There are no new sources of pollutants that are going to be added to the lake waters.
  - The same roadway storm water currently drains to the Creek.
  - Stagnant water in the marina would be slightly alleviated with the addition of a an outfall that flows and moves water in the marina during wet weather.
  - There are no requirements to provide water quality treatment.
  - The City is adding a catch basin with a sediment trap and either a downturned elbow or an orifice tee with downturned elbows.

\*\*A complete list of comments/ questions and responses are provided in the handouts



## Comments and Questions

- High level themes from questions & comments received:
  - Alternatives to the proposed design
    - Pump alternatives:
      - Requires space on private property for the pump vault.
      - Requires above ground equipment that is visible and has to be accessible.
      - Power often goes out during large storm events when the pumps would be most needed.
    - Place South of Dock D
      - Wetlands and property easements required from two property owners
    - Extend Beyond the Marina
      - Potential risks to Dock D and property easements or rights required from one property owner and one agency.

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## Comments and Questions

- High level themes from questions & comments received:
  - Costs
    - The project alternatives analysis, design, easement acquisition, permitting and construction is being paid for by the King County Flood Control District (King County property taxes)
  - Permitting
    - A SEPA determination of non-significance was received Feb. 2016
    - A JARPA was submitted to the Corps of Engineers August 2017 for the two proposed outfall projects
    - The remaining required permits for the NYC Outfall will be submitted most likely in the late summer early fall of 2018.

\*\*A complete list of comments/ questions and responses are provided in the handouts



# Questions?

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