

COLLABORATION SEATTLE DISTRICT NAVIGATION PROGRAM AND NOAA

Seattle District

18 April 2017

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File Name



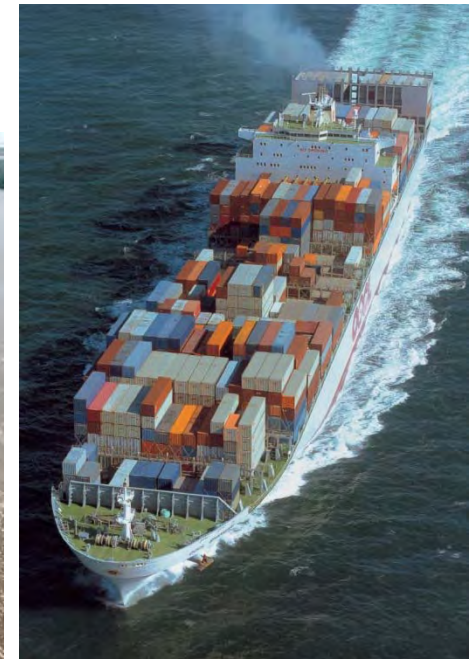
**US Army Corps
of Engineers**



U.S. ARMY

CORPS OF ENGINEERS NAVIGATION MISSION

Provide safe, reliable, efficient, effective and environmentally sustainable waterborne transportation systems for movement of commerce, national security needs, and recreation.



US Army Corps
of Engineers



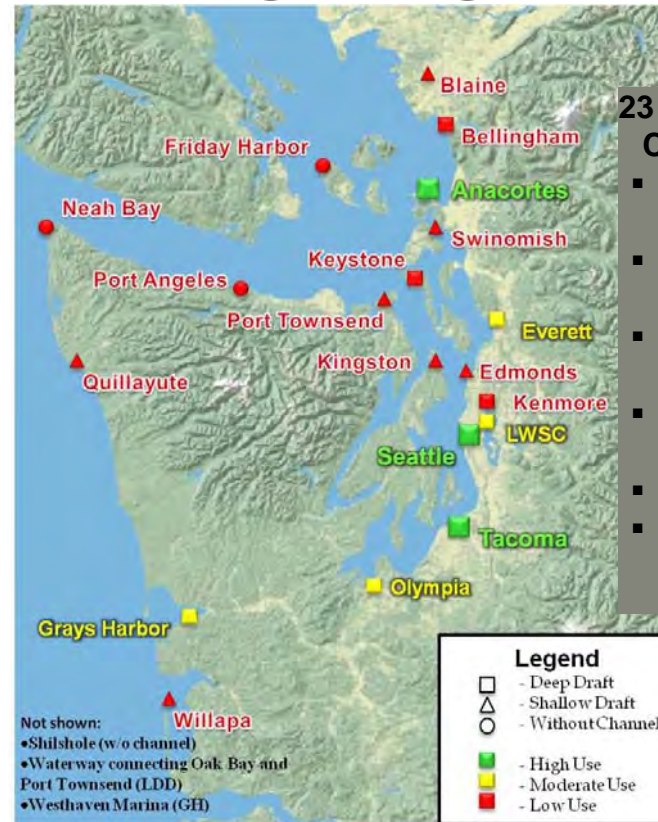
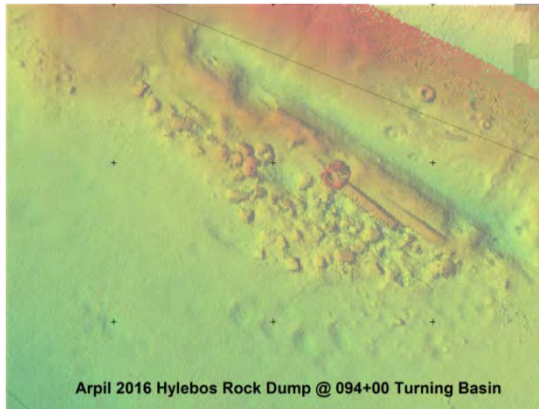
SEATTLE DISTRICT NAVIGATION PROGRAM

USACE Self-Performs

- Hydrographic surveys
- Snagging/Debris Removal
- Backup oil skimmer for USCG

USACE Contracts

- Sediment Characterization
- Clamshell and Hydraulic Dredging
- Revetment and Breakwater Construction
- **FY 16: Executed \$28.6M total program**



CORPS NAVIGATION ISSUES

- Budgets fixed while dredging costs increasing
- Dredged Material Placement Issues
- Environmental 'Windows': Increasing restrictions on when dredging can be performed
- Low Use Navigation Projects funding

- **NEED:** Low Cost agency-wide process to provide valuable, timely, quantitative survey data to the nation
- **SOLUTION:** eHydro



E HYDRO: AN ENTERPRISE SOLUTION

Condition Plots

HQ Channel Indices

NOAA Reports

Metadata



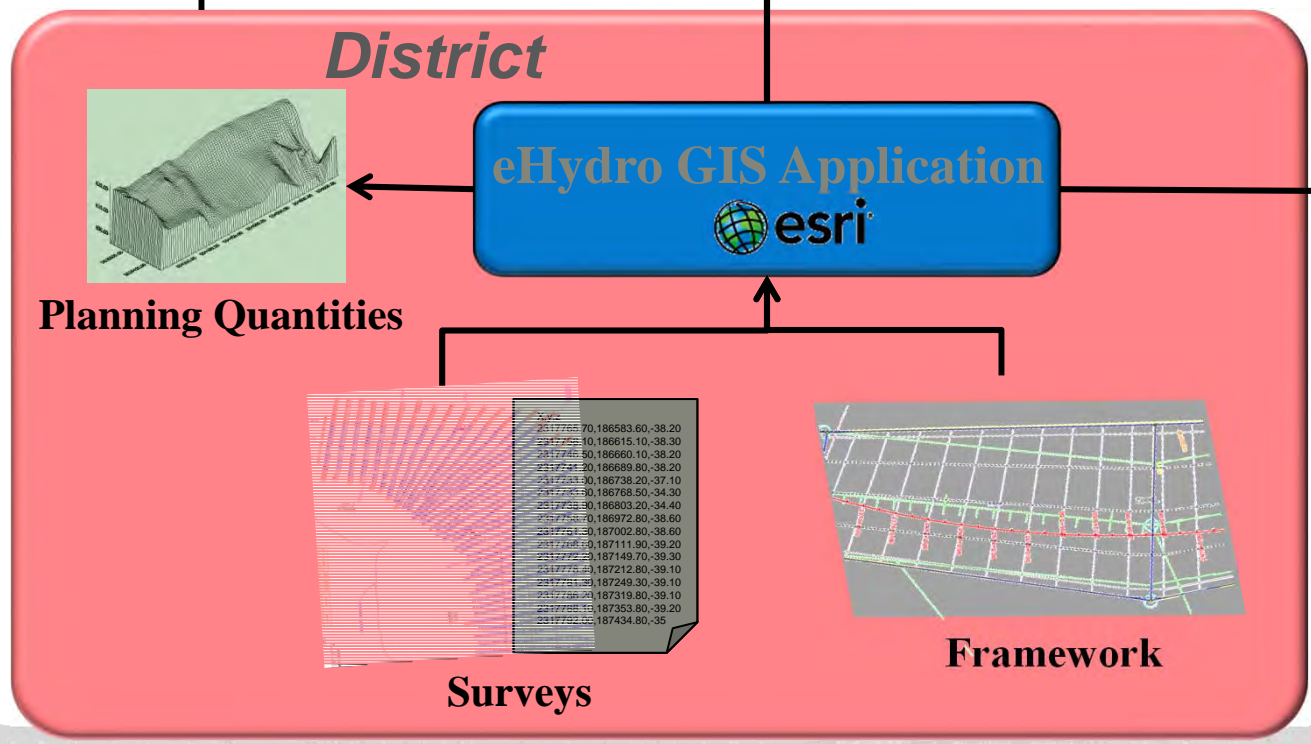
Project / Civil Works Identification System Number	Mobile Channel Availability %/Year	Least Dredging Required	Least Filling Required	Least Jetty Required	Least Bridge Filling Required	Least Total Filling Required
CORPUS CHRISTI (SHP) CHANNEL STATION	80.21	1,588,000				1,588,000
Solo Bay Channel	87.00					
Jetty Channel	87.00					
Inner Basin of Harbor Is.	86.00					
Inner Basin Main Channel	83.87					
Harbor Basin to Junction at La Quinta Channel	87.00					
La Quinta Channel Junction to Bay 82	86.00					
Bay 82 to Main Turning Basin	86.00					
Main Turning Basin	86.00					
Industrial Canal	86.00					
Arroy Point Turning Basin	86.00					
Turn Lake Channel	86.00					
Channel Turning Basin	86.00					
Turn Lake Turning Basin	86.00					
Vista Channel	86.00					
Vista Turning Basin	86.00					
DEPTWOT INDIAN HARBOR (MS) STATION	86.00	8,865,000				8,865,000
BALTIMORE SUPERIOR HARBOR (MINNESOTA) STATION	86.00	7,365,000				7,365,000
EAST RIVER (NY)	86.00	8,000,000				8,000,000
INDIAN HARBOR (MS) STATION	86.00	12,665,000				12,665,000
INDIAN HARBOR (MS) STATION	86.00	1,000,000				1,000,000

NAME OF CHANNEL	LEFT QUARTER QUARTER	MIDDLE HALF OF QUARTER	RIGHT QUARTER	WIDTH (FT.)	DATE OF SURVEY
LT. BUDY 1 (272527N, 815031W) TO LT. BUDY 20 (TRENCH TO END OF JETTY OPPOSITE LIGHT 60)	37.0	38.0	39.0	600	7/16/11-04
TRENCH TO INTERSECTION WITH U. S. I. W. W. TRENCH TO INNER HARBOR NAVIGATION CANAL	28.0	34.0	26.0	500	6/7,8/10-03
	26.0	32.0	22.0	500	6/7,8/10-03
	26.0	38.0	29.0	500	6/9-03

Identification_Information:
 Citation:
 Citation_Information:
 Originator: U.S. Army, Corps of Engineers, New England District (comp.)
 Publication_Date: 20090306
 Title: Boston Harbor, Boston, Massachusetts, After Dredge/Condition Survey
 Geospatial_Data_Presentation_Form: map
 Series_Information:
 Series_Name: N/A
 Issue_Information: N/A

Web Site

Web Services

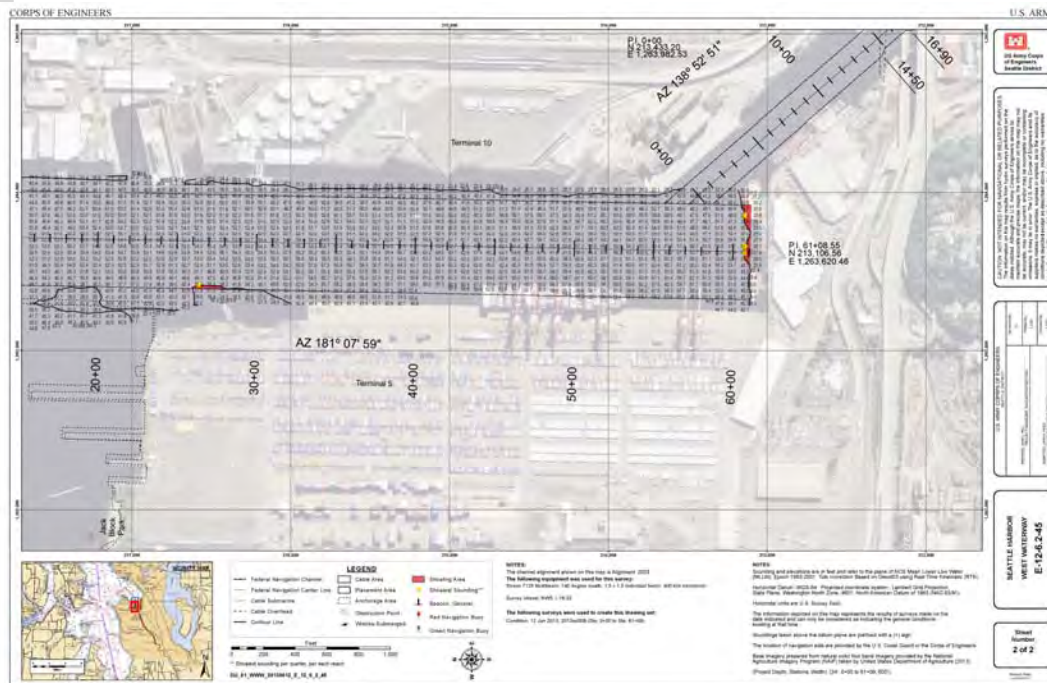


Enterprise Navigation Channel Framework



EHYDRO DATA FEATURES

- NAIP Imagery
- Federal Channel geometry
- Controlling depths
- Official NAVAIDs
- Channel condition reports
- xyz, metadata, and pdfs

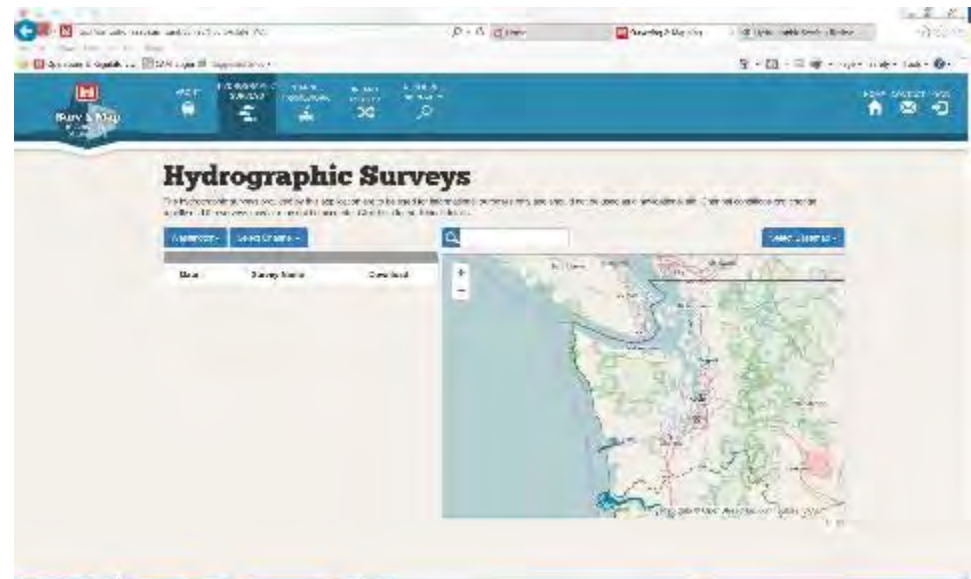


From processed data
to posting in a few
days



EHYDRO STATUS IMPLEMENTATION STATUS

- Last 5 years posted for High and Moderate Use Ports
- Developing channel frameworks for low use Ports in 2017
- Posting of ALL survey data by 2018



- <http://www.nws.usace.army.mil/Missions/Civil-Works/Navigation/>



VITAL NOAA PRODUCTS FOR USACE SEATTLE DISTRICT NAVIGATION



Photo credit: Don Wilson

- Nautical Charts
- Tides and Current data
- Tidal forecasts, river outflows
- Weather data
- National Geodetic Survey products
- Online Positioning User Service (OPUS): project controls
- Vdatum



SEATTLE HARBOR NAVIGATION IMPROVEMENT PROJECT AREA



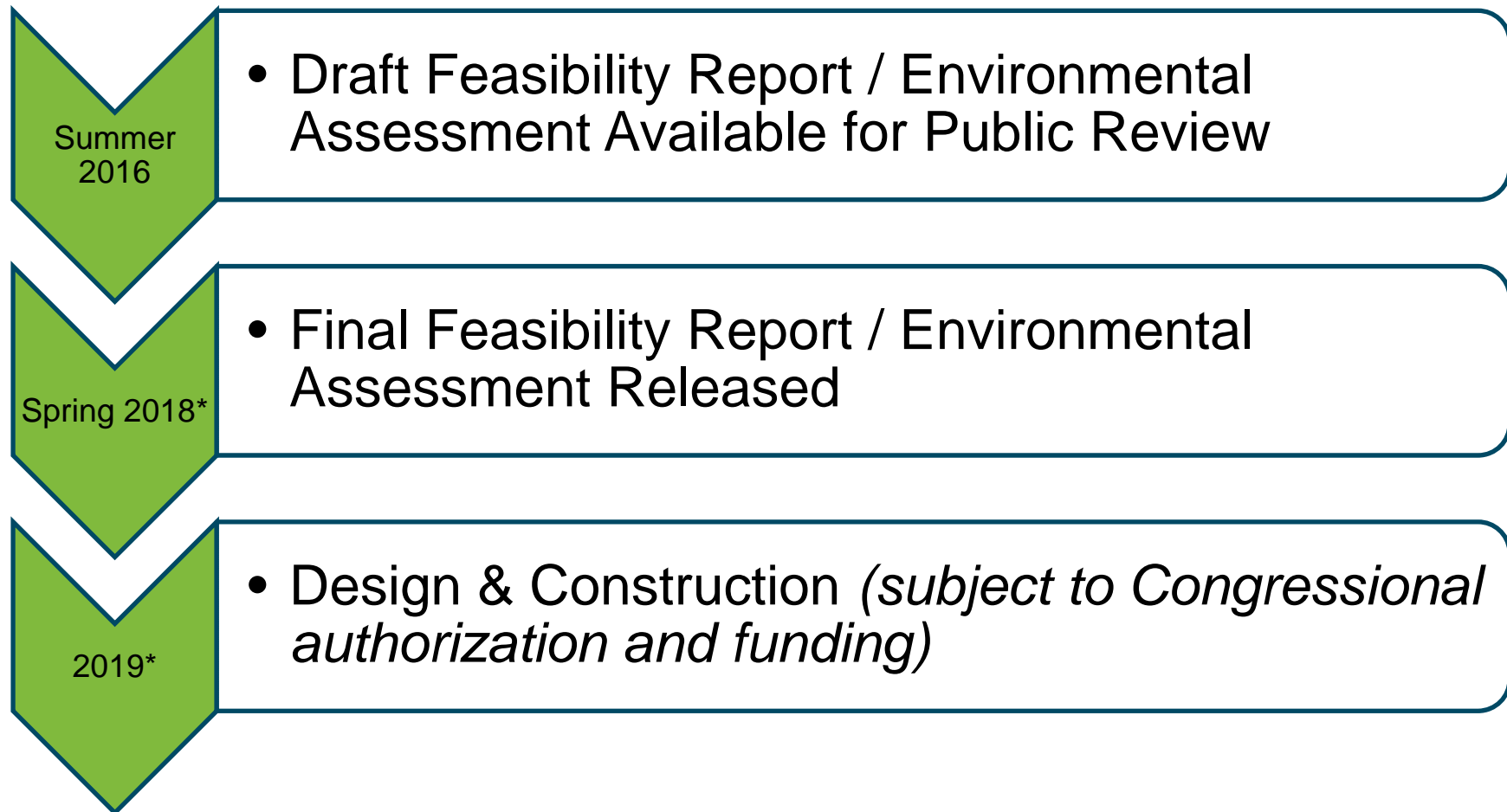
West Waterway

Authorized depth: -34 feet MLLW
Existing depth: -50 to -60 feet MLLW
Limiting depth: -42 feet MLLW
Effective width: 500 feet wide

East Waterway

Authorized depth: -34 to -51 feet MLLW
Existing depth: -34 to -53 feet MLLW
Limiting depth: - 51 feet MLLW
Effective width: 500 feet wide

STUDY TIMELINE & PUBLIC INVOLVEMENT

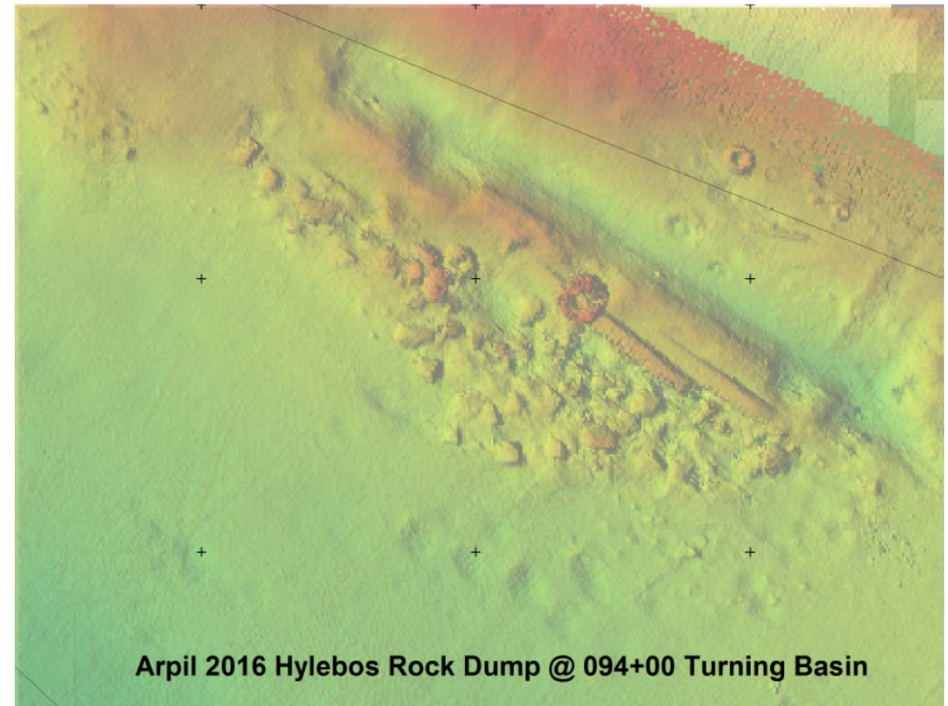


* *Contingent on funding*



HYLEBOS WATERWAY HAZARD TO NAVIGATION

- Rock Barge sank 11/15
- Barge removed 12/15; rock left on bottom
- Pilots implemented draft restriction 3/16
- USACE, USCG, NOAA coordinated VATON, charting and removal request 3/16
- Rock removed 6/16
- Draft restriction lifted July 2016 and VATON removed



SEATTLE DISTRICT NAVIGATION PROGRAM POINT OF CONTACT

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