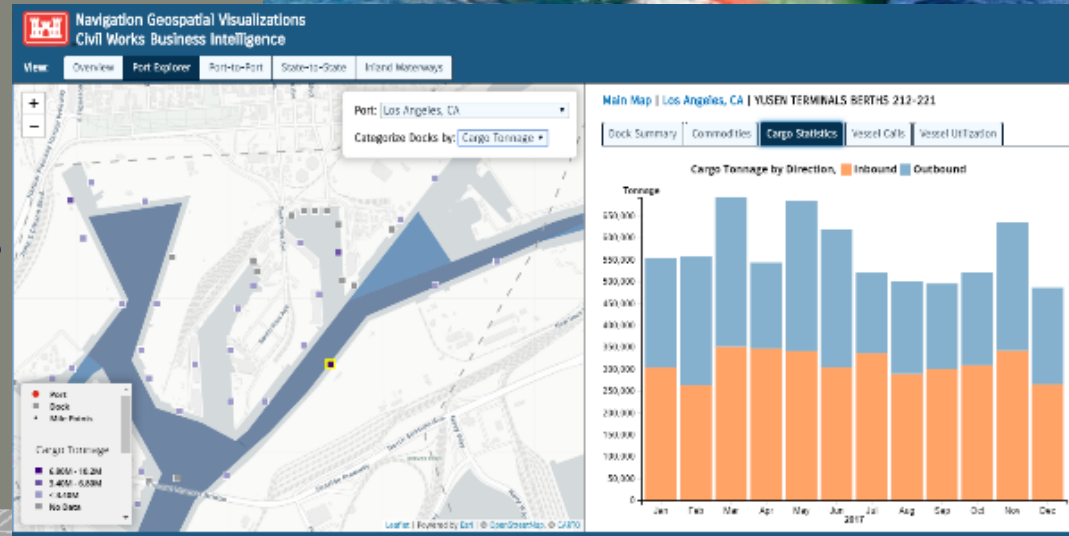


STATISTICAL PORT BOUNDARY PROJECT



AAPA and USACE
Forrest Vanderbilt, D.Env.
For Ports and Ports Authorities
5 December 2019



"The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation."



**US Army Corps
of Engineers**



USACE: STAYING WORLD CLASS NOW AND INTO THE FUTURE



US Army Corps
of Engineers®

ACHIEVE OUR VISION

Anticipate future conditions;
take actions today to always be
ready come what may.

USACE VISION

Engineering Solutions for the
Nation's Toughest Challenges

DELIVER THE PROGRAM

Our credibility is based
on our ability to achieve
desired results on time
and on budget.

USACE MISSION

Deliver vital engineering
solutions, in
collaboration with our
partners, to secure our
Nation, energize our
economy, and reduce
risk from disaster.

STRENGTHEN THE FOUNDATION

Doing routine tasks to a high standard enables everything else.
A strong foundation empowers leaders to think strategically.

MISSION AREAS

- Military Programs
- Civil Works
- Geospatial Support
- Contingency Operations
- Research and Development

We aspire to remain a WORLD-CLASS organization, now and into the future, by setting the professional standard and stepping-up as a reliable Federal option. Perhaps the MOST STRATEGIC thing we can do is to simply DELIVER OUR PROGRAM...with exceptional quality, on time, and on budget.

USACE NAVIGATION MISSION

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



US Army Corps
of Engineers.



AGENDA

Who is doing the work

Why we are doing the work

Internal Stakeholders

External Stakeholders

What is at stake for you

What are we doing

How we are doing it - examples



US Army Corps
of Engineers.



INSTITUTE FOR WATER RESOURCES CENTERS

1

Institute for Water Resources National Capital Region (IWR-NCR)

Alexandria, VA

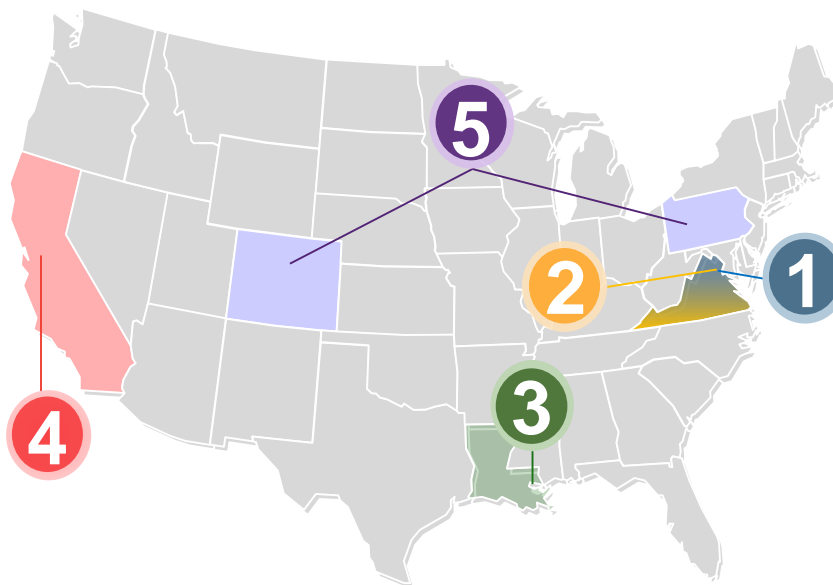
- Forward-looking analysis, methodologies, and tools
- Analyses of emerging water resources trends and issues
- Develops training
- Fosters partnerships
- National data management
- Offices in 5 locations

2

Navigation & Civil Works Decision Center (NDC)

Alexandria, VA

- Direct data support to navigation, hydropower, recreation, homeland security, and emergency and readiness functions
- Manages Civil Works Business Intelligence (CWBI)
- Responsible for Federal water transportation statistical programs
- Manages infrastructure utilization and performance information
- Collects and disseminates data across:
 - Lock Performance Monitoring System
 - Dredging Information System
 - Notices to Navigation Interests
- Oversees the Waterborne Commerce Statistics Center (WCSC)



4

Hydrologic Engineering Center (HEC)

Davis, CA

- Supports water resources management
- Increases technical capability in hydrologic engineering and water resources planning
- Develops software systems and analysis procedures used worldwide
- Trains software users

5

Risk Management Center (RMC)

Golden, CO;
Pittsburgh, PA

- Independent advisor to leadership
- Assesses USACE dam and levee systems' risk
- Develops dam and levee safety policies, methods, and tools
- Supports consistent risk assessment processes

3

Waterborne Commerce Statistics Center (WCSC)

New Orleans, LA

- Collects, processes, compiles, and publishes waterborne commerce statistical data
- Documents and publishes:
 - Commercial port infrastructure served by federal channels
 - U.S. vessels available for operation in waterborne commerce as well as their principal trades and zones of operations.



US Army Corps
of Engineers®



NDC OVERVIEW - AUTHORITY

- Rivers and Harbors Act (42 Stat. 1043), as amended, and codified in 33 U.S.C. 555 and 33 CFR 207.800.
 - Tasked with collection of navigation statistics and implementation of the waterborne commerce statistics provisions.
- Databases within NDC provide information that supports decision making for the budget, planning and operations, and investigations.
- Based in Alexandria, VA.



US Army Corps
of Engineers



WHY ARE WE DOING THIS?

Two large USACE initiatives

1. Revolutionize Civil Works
2. Data Modernization (per the Open Data Act)

Specific Regulations

1. Engineering Pamphlet 1130-2-520
2. Compliance 33 CFR 207.800 and associated Civil Penalties amount increase



PRINCIPAL PORTS LIST AND PORT FACTS

There are approximately 550 identified port or port areas based on legislative or a municipal boundary recognized by the Waterborne Commerce Statistics Center

Approximately 325 report tonnage for FY18

The Waterborne Commerce Statistics Center maintains online records of the Principal Ports list and associated tonnage from 1996 to today

The United Nations recognizes 1757 Port locations within the United States

The US Customs and Border Protection recognizes approximately 230 Port Districts within 39 Districts



US Army Corps
of Engineers



WATERBORNE COMMERCE STATISTICS CENTER (WCSC) OVERVIEW

- WCSC collects, processes, checks, distributes, and archives domestic and foreign vessel trip and cargo data.
- Data provides essential information for analyses of navigation projects (i.e., performance measures) and annual funding prioritization for operations and maintenance of existing projects.
- Under Federal law, companies must report domestic waterborne commercial vessel movements.
- Foreign data:
 - U.S. Customs and Border Protection
 - U.S. Census Bureau
 - Port Import Export Reporting Service



US Army Corps
of Engineers



HOW WE COLLECT NAVIGATION COMMUNITY PROVIDES

Vessel Operating Report

- Vessel ID & Operator
- Origin Port & Dock
- Destination Port & Dock
- Date Depart & Arrive
- Route Taken
- Draft
- Commodity
- Tonnage

VESSEL OPERATION REPORT						REPORT FOR MONTH OF August					
ENG FORM 3925B						DATE 10/4/18					
		Load Port or Locality	Load Dock Name	Load Date	Load Draft	Unload Port or Locality	Unload Dock Name	Unload Date	Unload Draft	Commodity	Tons
Trips	Vessel										

VORs Vote for Waterways, Locks, and Ports



US Army Corps
of Engineers



REPORTING LOCATION QUALITY ISSUES



Operators identify origins and destinations inconsistently

Example: KINDER MORGAN ENERGY PARTNERS on the Houston Ship Channel

Reported by 42 operators, 200 different ways



US Army Corps
of Engineers.



WHAT'S AT STAKE?

- **Federal Budget**
 - Performance-based budgeting
 - Federal Funding for New and Existing Federal navigation projects
 - Investment to improve delays
 - High/Medium/Low Use Coastal Channels and Waterways
- **Grants**
 - Agency assessments of Port and Waterway Performance
 - Regional Economic Indicators
- **Private Investment Decisions**

NOTE: A Statistical Port \neq Corps Project



STATISTICAL PORT POLYGON PROJECT DESCRIPTION

Scope:

To utilize a Geographic Information System (GIS) to prepare a USACE enterprise-wide statistical port boundary polygon feature class per Engineering Pamphlet 1130-2-520 and organized in Spatial Data Standards for Facilities, Infrastructure and Environment (SDSFIE) 4.0.2 format.

Field	Description
portIdpk	Existing TOWS port code (ex. 3105)
featureName	Port Name based on legislation
metadataId	Geometry type of port L = Legislation M = Municipal Limit O = Other
mediaId	Lookup code to reference legislation document.
featureDescription	Narrative description /comments related to the statistical port boundary GIS work
sdsId	Generic GIS ID (Leave empty)
installationId	If port has a military code, then enter SDSFIE DA code.

EP 1130-2-520 defines a port area as:

- 1) Port limits defined by legislative enactments of state, county, or city governments.
- 2) The corporate limits of a municipality.

Points of Contact:

Justin Pummell
Project Manager
Justin.D.Pummell@usace.army.mil

Dr. Forrest Vanderbilt
Public Outreach
Forrest.B.Vanderbilt@usace.army.mil

Start:



01 October 2019

Program:



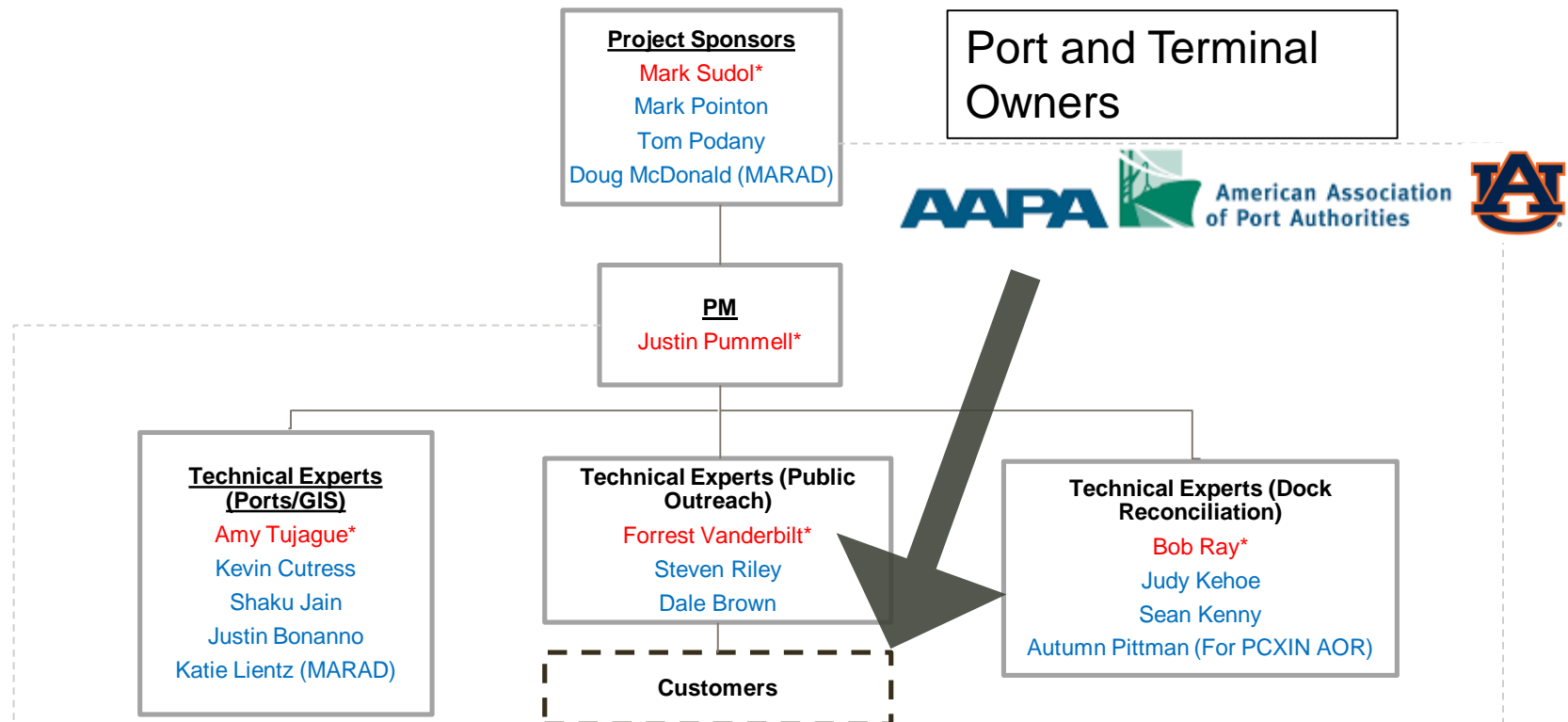
Navigation



US Army Corps
of Engineers.



PROJECT TEAM



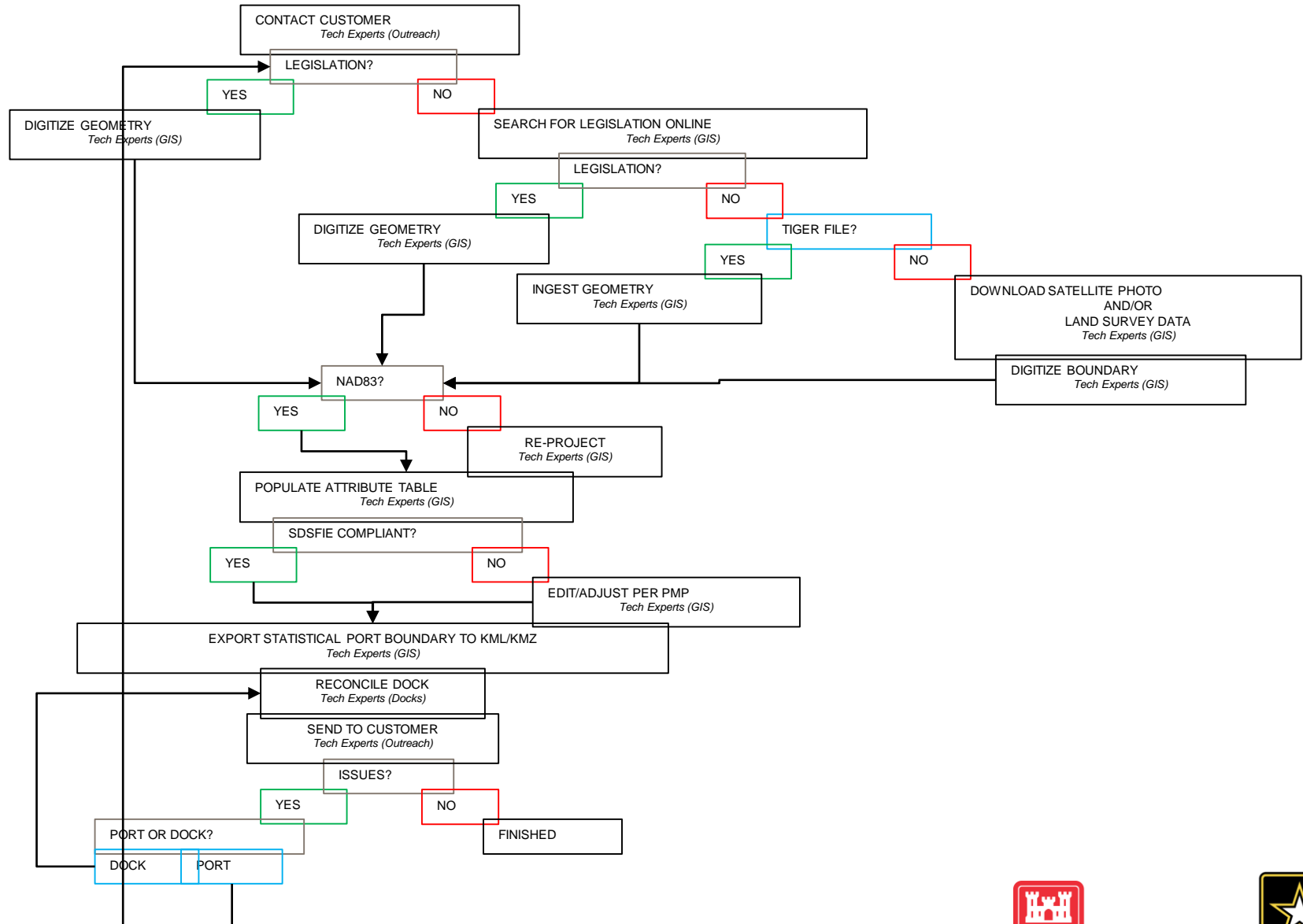
*Lead



US Army Corps
of Engineers



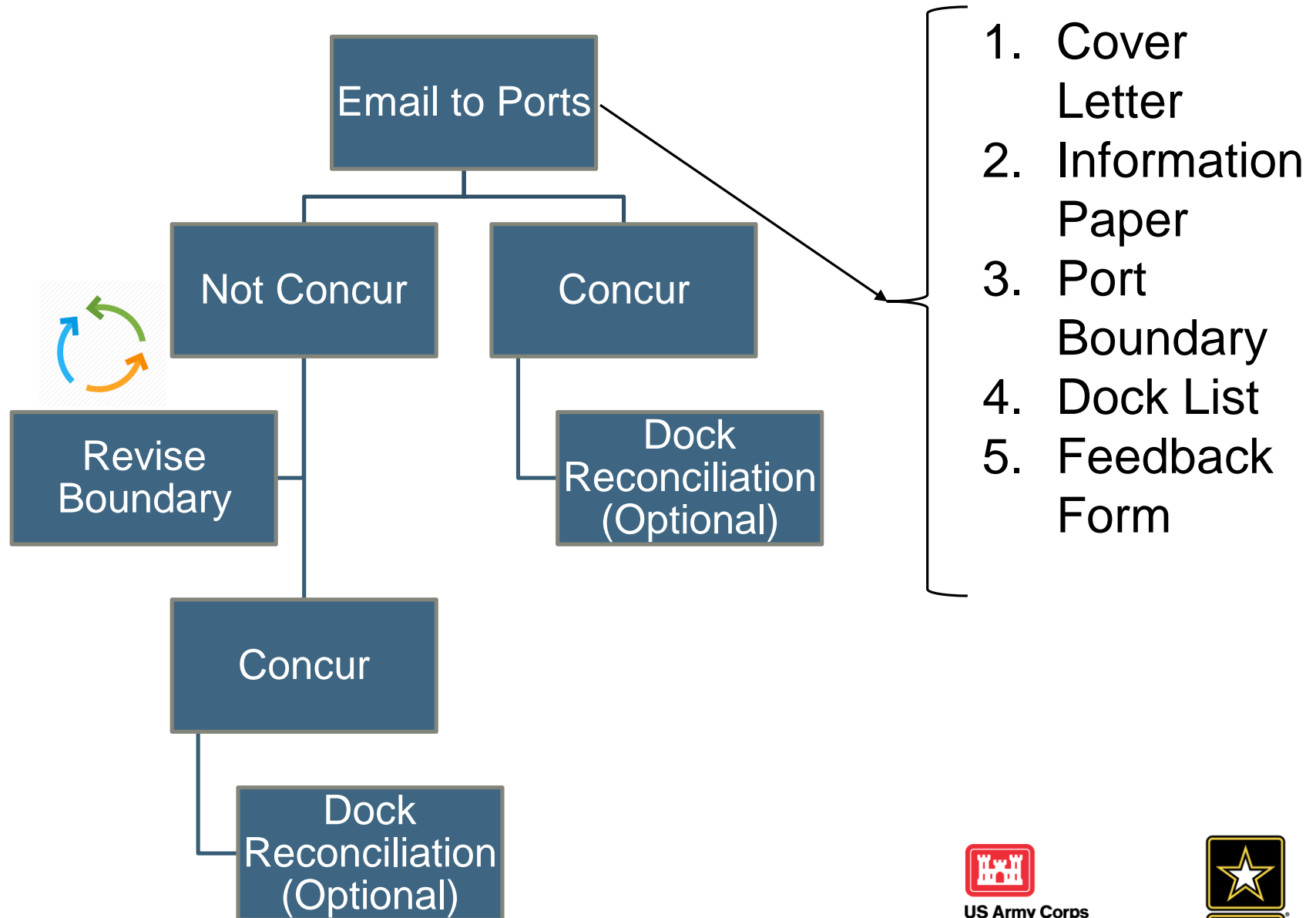
WORK FLOW – INTERNAL



US Army Corps
of Engineers.



WORK FLOW WITH PORTS



2018 FACT CARD RANKINGS

Rank	Type ³	Port	Domestic		Foreign		Total ²	
			Tons	%	Tons	%	Tons	%
1	C	South Louisiana, LA, Port of	134.0	-4.4	141.6	5.0	275.6	0.2
2	C	Houston, TX	77.8	-10.3	191.2	10.4	269.0	3.5
3	C	New York, NY and NJ	46.7	-0.7	93.6	5.3	140.3	3.2
4	C	Beaumont, TX	38.4	7.4	62.1	15.6	100.5	12.3
5	C	Corpus Christi, TX	24.2	-10.5	69.5	15.4	93.8	7.4
6	C	New Orleans, LA	49.5	-2.3	43.8	-4.0	93.3	-3.1
7	C	Long Beach, CA	10.3	-12.5	76.2	2.7	86.5	0.6
8	C	Baton Rouge, LA	47.2	3.2	35.1	11.9	82.2	6.8
9	C	Virginia, VA Port of	4.6	-18.3	67.2	9.0	71.8	6.7
10	C	Los Angeles, CA	8.0	15.5	59.8	1.5	67.8	3.0
11	C	Mobile, AL	22.1	-2.1	36.6	2.9	58.7	1.0
12	C	Lake Charles, LA	27.8	-0.0	29.2	10.4	57.1	5.1
13	C	Plaquemines, LA, Port of	31.1	-0.8	25.7	11.4	56.9	4.4
14	C	Baltimore, MD	7.3	11.2	37.5	-3.7	44.8	-1.5
15	C	Texas City, TX	17.2	10.4	25.5	6.0	42.7	7.7
16	C	Savannah, GA	1.1	-25.3	40.1	4.7	41.3	3.5
17	C	Port Arthur, TX	10.9	10.3	29.0	-1.3	39.9	1.7
18	I	Cincinnati-Northern KY, Ports of	38.5	-9.7	**	0.0	38.5	-9.7
19	I	St. Louis, MO and IL	37.4	13.2	**	0.0	37.4	13.2
20	L	Duluth-Superior, MN and WI	26.8	1.8	8.3	-1.9	35.1	0.9
21	I	Huntington - Tristate	34.2	0.3	**	0.0	34.2	0.3
22	C	Tampa, FL	18.8	-11.0	12.2	1.8	31.0	-6.4
23	C	Pascagoula, MS	9.8	13.8	17.5	3.0	27.4	6.7
24	C	Richmond, CA	8.9	-2.1	18.4	-1.7	27.3	-1.9
25	C	Philadelphia, PA	10.5	-14.4	16.2	-0.6	26.7	-6.5
26	C	Seattle, WA	5.6	-2.8	20.4	5.2	26.0	3.3
27	C	Valdez, AK	25.6	-7.8	0.2	-5.8	25.8	-7.7
28	C	Freeport, TX	4.5	-11.3	20.9	8.0	25.4	3.9
29	C	Port Everglades, FL	13.4	-4.0	11.6	6.1	25.0	0.5
30	C	Charleston, SC	2.0	-6.5	22.8	-8.1	24.8	-8.0
31	C	Portland, OR	7.6	1.5	15.7	-0.0	23.3	0.4
32	C	Tacoma, WA	3.2	-20.8	19.7	0.9	22.9	-2.9
33	I	Pittsburgh, PA	21.6	-17.1	**	0.0	21.6	-17.1
34	C	Oakland, CA	2.0	-5.6	17.4	0.6	19.4	-0.1
35	C	Jacksonville, FL	8.3	13.9	9.7	-13.6	18.0	-2.8
36	L	Two Harbors, MN	13.4	-8.7	3.8	66.1	17.2	1.4
37	L	Chicago, IL	15.2	-3.6	1.7	2.1	16.9	-3.1
38	C	Boston, MA	5.2	22.2	11.0	-11.3	16.2	-2.7
39	C	Paulsboro, NJ	4.7	-28.5	11.5	-3.2	16.1	-12.2
40	C	Kalama, WA	1.0	0.5	14.8	6.0	15.8	5.6
41	C	Honolulu, HI	13.7	2.2	1.4	7.0	15.2	2.7
42	L	Detroit, MI	11.5	4.1	3.3	14.9	14.8	6.3
43	C	Longview, WA	1.2	-7.3	12.5	2.0	13.7	1.1
44	C	Marcus Hook, PA	7.0	34.7	5.2	-41.9	12.2	-13.6
45	L	Indiana Harbor, IN	11.7	-1.4	0.2	-18.8	11.9	-1.7
46	L	Cleveland, OH	10.1	-12.0	1.7	-8.8	11.8	-11.5
47	C	San Juan, PR	4.9	19.5	6.8	10.3	11.7	14.0
48	C	Anacortes, WA	7.9	13.4	3.1	40.7	11.1	20.0
49	I	Memphis, TN	11.1	-4.2	**	0.0	11.1	-4.2
50	C	Vancouver, WA	1.3	17.0	9.3	26.2	10.5	25.0

Rank	Type ³	Port	Domestic		Foreign		Total ²	
			Tons	%	Tons	%	Tons	%
51	I	Mount Vernon, IN	10.3	13.3	**	0.0	10.3	13.3
52	C	Barbers Point, Oahu, HI	2.5	4.6	7.4	-3.3	9.9	-1.4
53	C	Galveston, TX	4.4	9.0	4.7	23.9	9.1	16.3
54	L	Toledo, OH	4.6	-6.9	4.3	-4.4	8.9	-5.8
55	C	New Haven, CT	6.0	-6.8	2.8	17.1	8.8	-0.3
56	L	Gary, IN	8.5	5.4	0.1	203.1	8.6	6.1
57	L	Burns Waterway Harbor, IN	7.5	-2.8	1.0	4.2	8.5	-2.0
58	C	Miami, FL	0.1	70.0	8.3	6.7	8.4	7.0
59	C	Brownsville, TX	3.4	-2.4	5.0	15.5	8.3	7.5
60	C	Providence, RI	3.9	5.9	4.5	-7.6	8.3	-1.8
61	C	Port Fourchon, LA	7.7	21.8	0.1	-24.7	7.8	20.7
62	L	Calcutte, MI	7.6	3.0	0.2	194.7	7.8	4.8
63	L	Presque Isle, MI	6.2	-6.1	1.2	-7.8	7.5	-6.4
64	C	Wilmington, DE	1.1	-9.0	5.5	-2.7	6.6	-3.8
65	C	New Castle, DE	3.8	7.0	2.8	-23.9	6.5	-8.6
66	L	Silver Bay, MN	6.2	0.3	**	-100.0	6.2	-1.5
67	I	Louisville, KY	6.2	-11.8	**	0.0	6.2	-11.8
68	L	St. Clair, MI	6.2	-0.8	**	0.0	6.2	-0.8
69	I	Nashville, TN	6.2	22.8	**	0.0	6.2	22.8
70	C	Wilmington, NC	0.4	19.1	5.7	8.9	6.0	9.5
71	I	St. Paul, MN	5.8	-14.3	**	0.0	5.8	-14.3
72	I	Kaskaskia, IL, Port of	5.8	-2.4	**	0.0	5.8	-2.4
73	C	Albany, NY	4.8	-10.3	0.9	35.8	5.7	-4.9
74	C	Camden-Gloucester, NJ	1.6	-26.1	3.9	-14.8	5.5	-18.3
75	C	Port Canaveral, FL	1.4	-30.2	4.0	30.8	5.4	6.9
76	C	Matagorda Port Lv Pt Com, TX	3.4	31.8	2.0	16.7	5.4	25.7
77	C	Stockton, CA	**	-99.3	5.2	4.3	5.2	3.7
78	C	Portland, ME	1.3	50.7	3.5	-12.9	4.8	-1.3
79	C	Port Manatee, FL	1.3	95.8	3.5	11.0	4.8	25.6
80	L	Port Inland, MI	4.2	4.7	0.1	-37.1	4.3	2.5
81	L	Ashtabula, OH	3.8	-0.5	0.4	-15.0	4.3	-2.2
82	C	Nikishka, AK	3.8	-3.2	0.3	-51.6	4.2	-10.6
83	L	Stoneport, MI	3.9	14.4	0.3	-31.8	4.1	9.4
84	C	Victoria, TX	3.9	-11.0	**	0.0	3.9	-11.0
85	C	Kahului, Maui, HI	3.6	-1.5	**	-3.0	3.6	-1.5
86	L	Conneaut, OH	3.5	-5.7	**	-56.5	3.5	-6.6
87	C	Anchorage, AK	2.1	-10.4	1.1	21.1	3.3	-1.4
88	I	Central Louisiana Regional Port	3.2	5.7	**	0.0	3.2	5.7
89	I	Vicksburg, MS	3.0	3.4	**	0.0	3.0	3.4
90	C	Redwood City, CA	0.2	42.4	2.7	36.7	3.0	37.1
91	I	Greenville, MS	2.9	0.8	**	0.0	2.9	0.8
92	I	Owensboro, KY	2.9	-9.5	**	0.0	2.9	-9.5
93	C	Portsmouth, NH	0.7	78.5	2.2	-2.7	2.9	9.2
94	C	Penn Manor, PA	0.1	-23.5	2.8	27.2	2.8	25.3
95	C	Chester, PA	0.2	339.3	2.6	20.2	2.8	27.5
96	L	Port Dolomite, MI	2.6	-11.2	0.2	-52.9	2.8	-16.4
97	C	Grays Harbor, WA	0.1	34.9	2.6	19.1	2.8	19.7
98	C	Morehead City, NC	1.1	0.2	1.6	15.9	2.7	8.8
99	C	Brunswick, GA	0.1	23.6	2.4	0.0	2.5	0.7
100	C	Coos Bay, OR	0.1	-5.1	2.3	11.7	2.3	11.2



U.S. Army Corps
of Engineers.



Examples



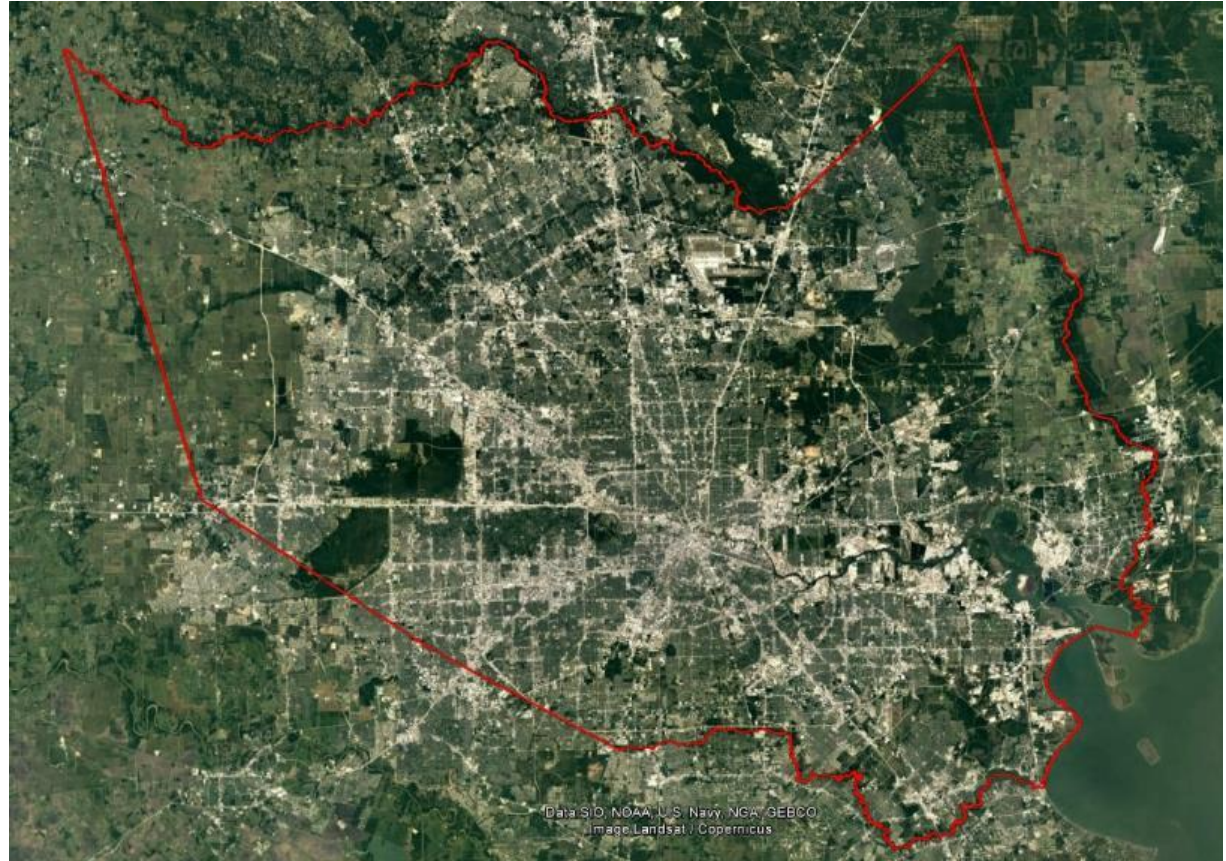
PORT OF HOUSTON AUTHORITY OF HARRIS COUNTY, TEXAS



- Legislation defines port boundary as Harris County, TX



- Statistical port boundary drawn to match Harris County



US Army Corps
of Engineers





SANTA CRUZ MUNICIPAL EXAMPLE



- No available local legislative documentation which defines boundary
- Boundary defined using U.S. Census Bureau TIGER file municipal limit



US Army Corps
of Engineers.





PORT ARTHUR, TX DOCK RECONCILIATION EXAMPLE



- Statistical port boundary (red) defined by State legislation
- Docks in blue fall within legislative boundary
- Docks in orange need reconciled to determine future association

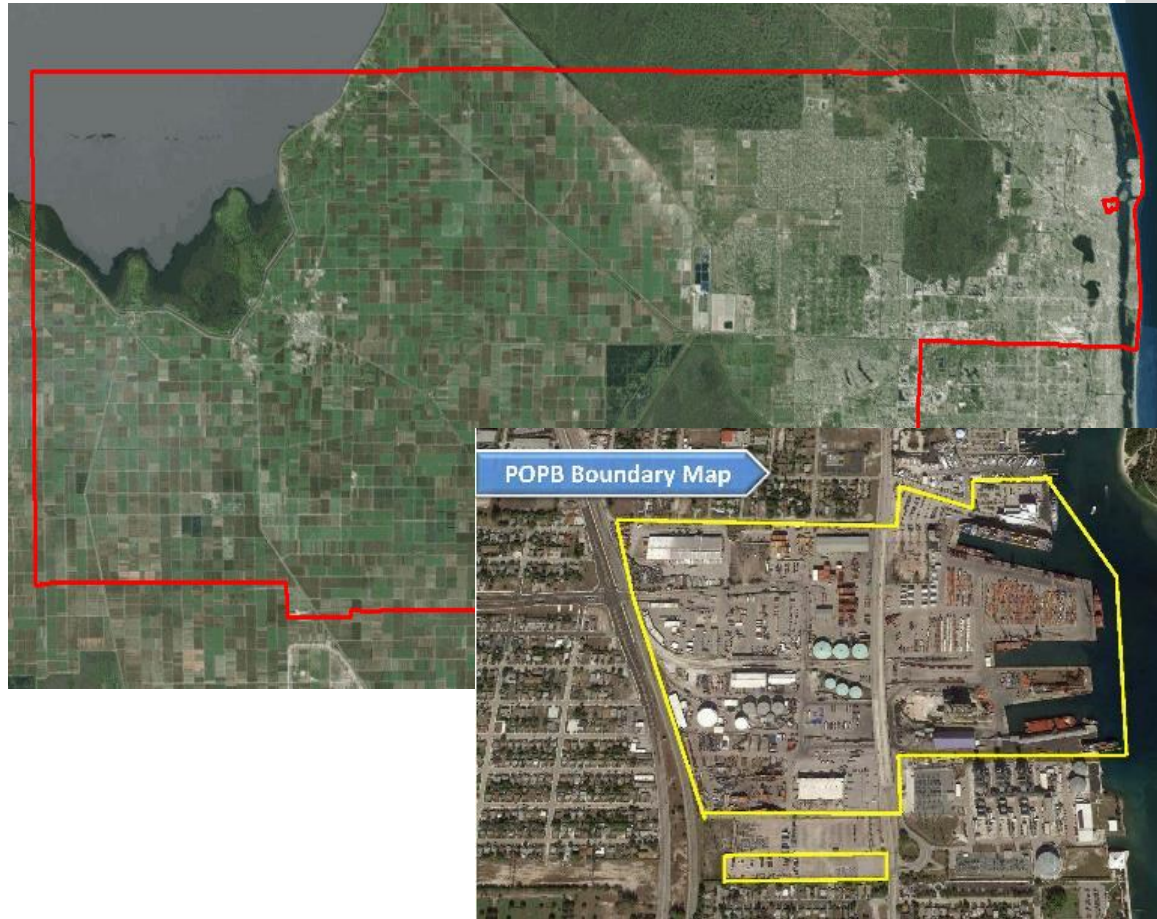


US Army Corps
of Engineers.



EVOLUTION OF A PORT AREA

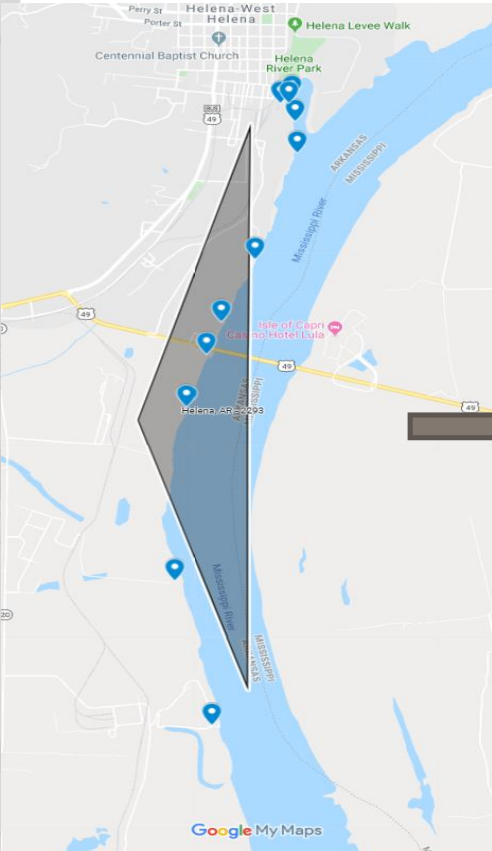
The Port of Palm Beach District is an independent special taxing district, a subdivision of the state of Florida. Established under the provisions of the Laws of Florida, Acts of 1915, Chapter 7081, as amended and supplemented, the Port District is located in Palm Beach County, Florida. It covers a land area of 971 square miles or approximately 50% of the county.



US Army Corps
of Engineers.



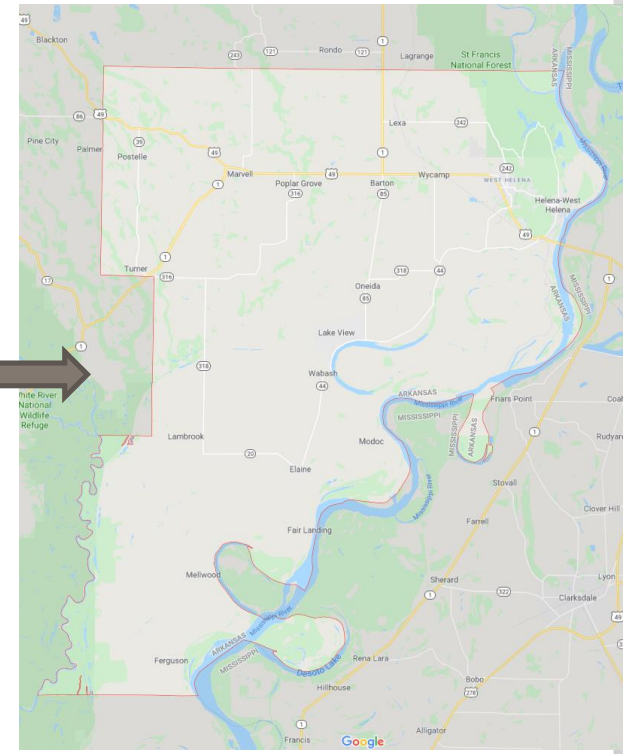
EVOLUTION OF A PORT AREA



Helena Harbor



Helena, AR



Helena Harbor & Phillips County



**US Army Corps
of Engineers.**



WE NEED YOUR HELP

- Increase accuracy of commodity origin and destination
- Assure congruence between Port Authority and Corps tonnages
- Provide transparency on our public statistical port boundaries
- Enhance compliance efforts to report all tonnage and commodities moving on our waterway system
- Ensure Corps and other federal agencies are good stewards of taxpayer dollars.



US Army Corps
of Engineers



QUESTIONS?

Forrest Vanderbilt
Interagency Program Manager
Forrest.b.Vanderbilt@usace.army.mil



US Army Corps
of Engineers.

