GULFPORT HARBOR, MS FEASIBILITY STUDY ALTERNATIVES MILESTONE

Jeremy LaDart
Chief of Planning and Environmental Division
South Atlantic Division
Mobile District
Planning Division

Date: 19 July 2023

US Army Corps of Engineers®

ATTENDANCE

SAD Chief of Planning and Policy
- Eric Summa

SAD RIT (HQ)
- Susan Lucas
- Sue Wilcox

SAM Leadership & Support
- COL Jeremy Chapman
- Peter Taylor
- Jeremy LaDart
- Justin McDonald
- Bailey Crane
- David Newell
- Tom Jester
- Jenny Jacobson
- Lekesha Reynolds
- Mike Malsom
- Jason Krick
- Randall Harvey
- Russell Blount
- Steven McDavid
- Patrick O'Connor
- John Bass
- Nelson Sanchez

Study Team
- Mary Beth Sullivan – Project Manager
- Valerie Morrow – Engineering Tech Lead
- Eva Salā – Planning Lead
- Jennifer Purcell – Economics
- Kat McConnell – Environmental Lead
- Wendy Weaver – Cultural Resources
- Valerie Powe – EJ Coordinator / Planning Support
- Micah Wiggins – H&H Engineering
- Mike Alexander – H&H Engineering
- Lauren Walker – Cost Engineering
- Allan Annaert – Sr. Cost Engineering
- James McConnell – Geotech. Engineer
- Travis Dyess – Operations
- John Tetreau – Real Estate
- Brandy Alexander – Programs

Policy Review Team
- David Bauman (SAD)– Review Manager
- Jeff Strahan (OWPR)– Economics
- Andrew LoSchiavo (SAD)- Environmental
- Samantha Borer (SAD) – Plan Formulation
- Mike Wolz (SAD) – Engineering
- Herman Jarboe – CPR CoP
- Vivian Davis (SAD)- Real Estate
- Barbara Altera (SAD) - Council

SAD Support
- Chris Smith
- Trent Ferguson
- Matt Lesser
- Amanda Sutter
- Shannon Geoly
- Dylan Davis
- Cindy Upah
- Dan Haubner
- Johanna Anderson
- Mary Creese
- Matthew Parrish
- Lee Danley
- Matthew Green
- James Medlock
- Kimberly Isenhour
- Keli Broadstock

Office of Council
- Joseph Givhan
- Jesse Hufstedler

ERDC
- Keith Martin

Deep Draft Navigation PCX
- Todd Nettles
- Kim Otto

Resource Agencies
- Type in participants' names

Representative for Mississippi State Port Authority at Gulfport (Sponsor)
- Jon Nass
- Shawn Meyer
- Errol LaRue
- James Buras
- Cindy Ford

Representative for Gulfport Pilots
- Bob Wren
- Matthew Hilton
- Russ Hilton

ALTERNATIVES MILESTONE MEETING PURPOSE

GULFPORT HARBOR, MS FEASIBILITY STUDY

Obtain Vertical Team concurrence on:

- Focused array of alternatives to carry forward for evaluation and comparison to reach a Tentatively Selected Plan (TSP)
- Plan Formulation Strategy for evaluation and comparison to reach the TSP
- Scope, schedule, and budget for the study

Present the following:

- Existing Conditions
- Unique Considerations and Key Uncertainties

STUDY AUTHORITY

GULFPORT HARBOR, MS FEASIBILITY STUDY

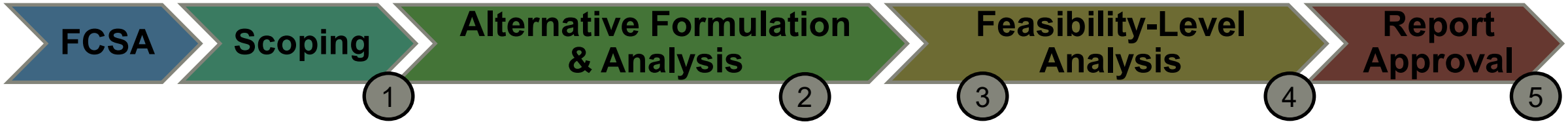
USACE Navigation Mission: To provide safe, reliable, and efficient waterborne transportation systems, stemming from the commerce clause of the United States Constitution.

Non-Federal Sponsor: Mississippi State Port Authority (MSPA) at Gulfport, MS

Study Authority: Section 216 of the Flood Control Act of 1970 (33 U.S.C. 549a)

Study Funding: $200,000 has been provided through FY 23 Community Project Funding (earmarks) to initiate study.

Study Milestones:



Alternatives Milestone Meeting (AMM)
Vertical Team concurrence on Array of Alternatives
(19 Jul 2023)

Tentatively Selected Plan (TSP) Milestone
Vertical Team concurrence on TSP
(Oct 2024)

Agency Decision Milestone
Agency Endorses Recommended Plan
(Apr 2025)

Division Engineer Transmittal Letter
Release for State & Agency Review
(Dec 2025)

Chief's Report
(Apr 2026)

STUDY AREA

GULFPORT HARBOR, MS FEASIBILITY STUDY

LOCATION

- Southern shore of the City of Gulfport
- Within Harrison County
- Federal Navigation Channel (FNC): approx. 21 miles

POPULATION

- 2020 Census: 72,926
- 2010 Census: 67,793
- Population Growth over 10 years 7.5%

PORT OF GULFPORT

- Encompasses approx. 300 acres at Gulfport waterfront
- Supports 3,600 jobs (MSPA, 2022)
- Federal Navigation Channel is maintained to the following:
  - Turning/Anchorage Basin: -32 to -36 ft MLLW depth by varying widths
  - Sound Channel: -36 ft MLLW depth by 300 ft width
  - Bar Channel: -38 ft MLLW depth by 400 ft width

PROBLEMS, OPPORTUNITIES, OBJECTIVES, AND CONSTRAINTS

GULFPORT HARBOR, MS FEASIBILITY STUDY

PROBLEMS:
Existing federal project dimensions lead to

- Transportation Inefficiencies
- Maneuverability Concerns
- Accelerated shoaling in select areas

OPPORTUNITIES:

1. Beneficial Use of Dredged Material (BUDM)
2. Reduce frequency of O&M dredging intervals

OBJECTIVE:

Reduce transportation costs and operational inefficiencies at Gulfport Harbor over the 50- year period of analysis

CONSTRAINTS:

- Avoid or minimize negative impacts to environmental resources
- Avoid or minimize negative impacts to cultural resources
- Physical limitations on placement of dredge material
- Avoid or minimize impacts to existing utilities in the study area

Photos courtesy of MSPA, 2023

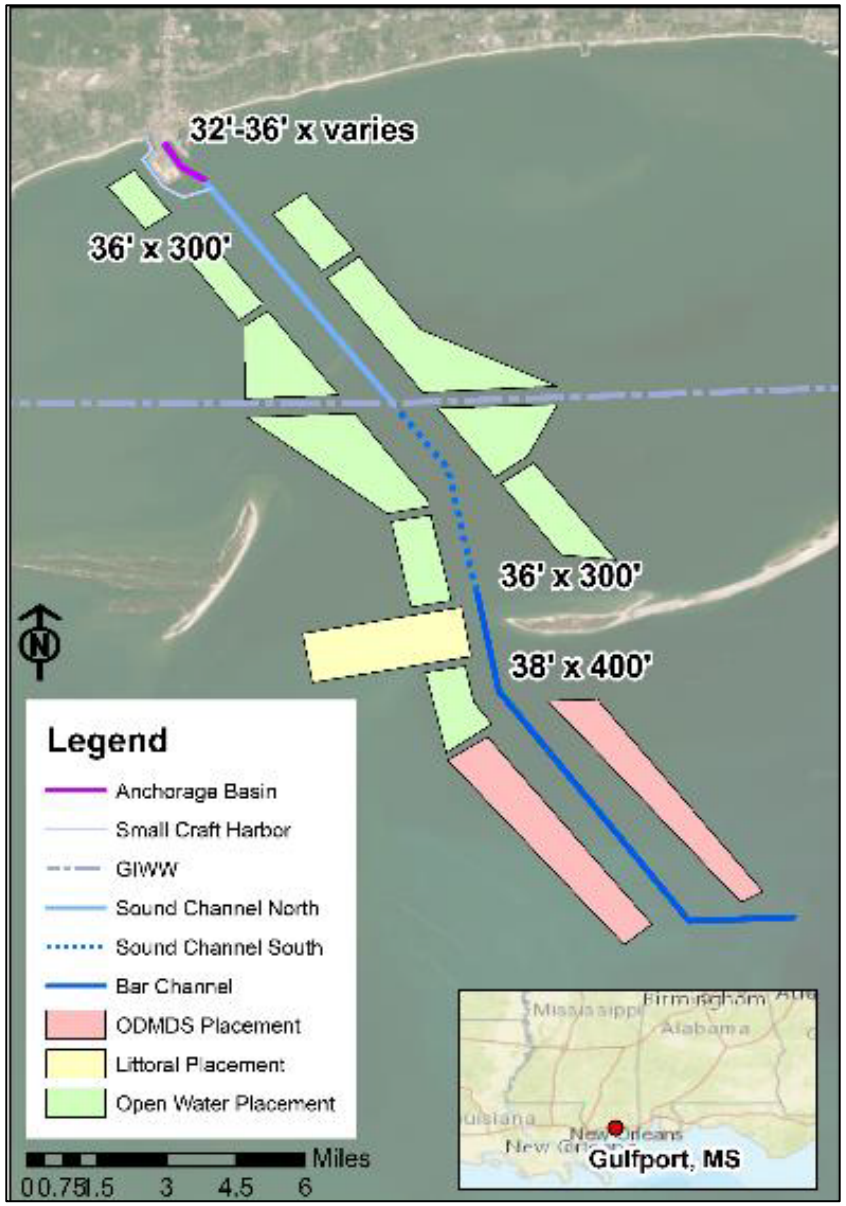
EXISTING CONDITIONS

GULFPORT HARBOR, MS FEASIBILITY STUDY

ENGINEERING – PHYSICAL RESTRICTIONS

- Turning and Anchorage Basin
  - Depth = 32 to 36 ft MLLW
  - Width = varies
- Sound Channel North
  - Anchorage Basin to GIWW
  - 5.9 miles
  - Depth = 36 ft MLLW
  - Width = 300 ft
  - 3(h):1(v) side slopes
- Sound Channel South
  - GIWW to Bar
  - 4.5 miles
  - Depth = 36 ft MLLW
  - Width = 300 ft
  - 5(h):1(v) side slopes
- Bar Channel
  - 10.2 miles
  - Depth = 38 ft MLLW
  - Width = 400 ft
  - 5(h):1(v) side slopes

Advanced maintenance: -2ft
Over-depth dredge: -2ft



ECONOMICS – KEY VESSELS

- Container
- Bulk Carrier

ENVIRONMENTAL

- Completed barrier island restoration
- Gulf sturgeon and piping plover critical habitat
- 1 Threatened or Endangered Species

EXISTING CONDITIONS

GULFPORT HARBOR, MS FEASIBILITY STUDY

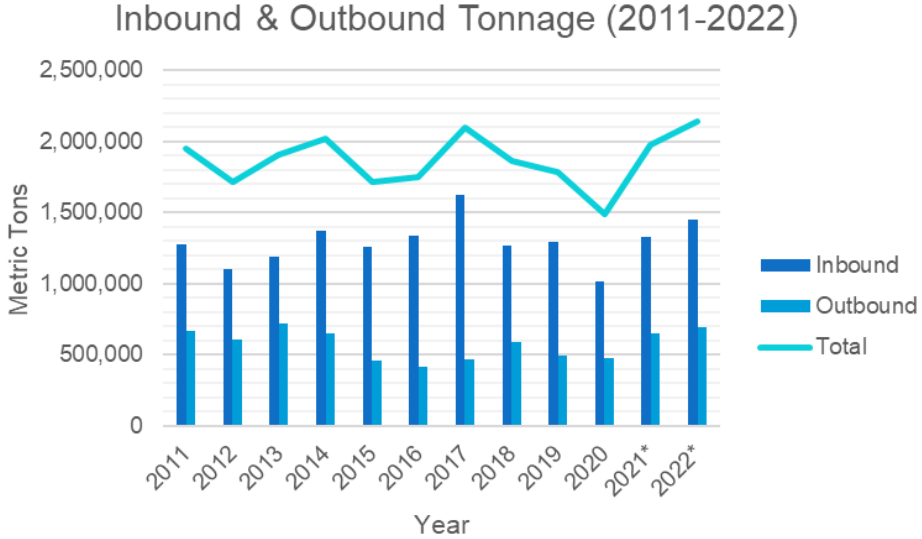
MAIN COMMODITIES

Dry Bulk

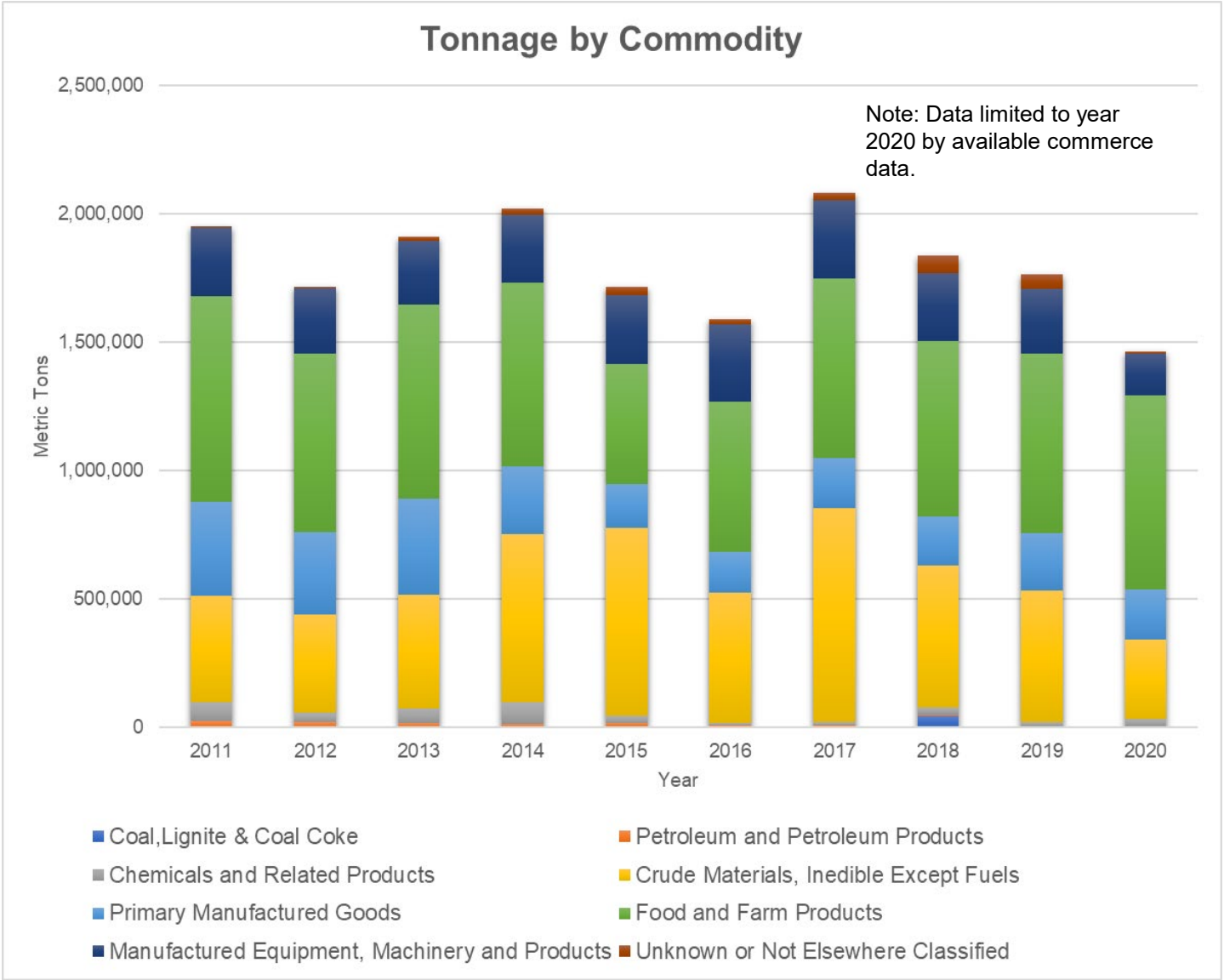
- Ores **(Crude Materials)**

Container Cargo

- Fruit **(Food and Farm Products)**
- Average of 186,000 TEUs annually between 2020 and 2022



Source: Waterborne Commerce Data (2011-2020); Port of Gulfport (2021-2022)*



EXISTING CONDITIONS

GULFPORT HARBOR, MS FEASIBILITY STUDY

EXISTING FLEET (2016-2020 DATA)

Vessel Types	Min of Vessel DWT (mt)	Max of Vessel DWT (mt)	Min of Vessel LOA (ft)	Max of Vessel LOA (ft)	Min of Vessel Width (ft)	Max of Vessel Width (ft)	Min of Vessel MXSLLD (ft)	Max of Vessel MXSLLD (ft)
Bulk Carrier	30,478	66,721	576	656	91	119	32	44
Bulk Carrier, Self-discharging	46,606	73,609	615	810	106	106	37	45
Chemical/Products Tanker	22,430	22,430	492	492	81	81	33	33
Container Ship	10,831	35,465	441	695	73	100	24	38
Crane Vessel	21,550	21,550	497	497	153	153	31	31
Crew/Supply Vessel	311	1,753	194	202	32	34	7	18
General Cargo Ship	7,428	32,752	393	594	66	94	25	34
Heavy Load Carrier	7,572	45,028	329	791	69	138	24	28
Offshore Support Vessel	4,243	21,011	298	591	65	106	20	35
Open Hatch Cargo Ship	33,143	33,398	581	591	93	94	33	33
Passenger/Cruise	6,953	13,294	880	952	117	118	26	27
Platform Supply Ship	2,738	6,163	265	320	54	64	14	21
Research Survey Vessel	50	4,047	177	281	34	65	18	20
Ro-Ro Cargo Ship	25,957	25,957	738	738	106	106	31	31
Tug	327	669	86	126	30	35	13	16
Vehicles Carrier	19,670	21,233	653	656	106	106	32	33
Well Stimulation Vessel	3,117	3,117	260	260	60	60	17	17

Largest vessels calling Gulfport (Existing Condition)

- Containership:
  - Chiquita Trader:
    - 98 feet Beam (width)
    - 37.4 feet Design Draft
    - 695 feet LOA
    - 35,500 DWT
    - 2,490 Nominal TEU capacity
- Bulk Vessel:
  - HA Skelnar:
    - 106 feet Beam (width)
    - 44.3 feet Design Draft
    - 810 feet LOA
    - 73,600 DWT

FUTURE WITHOUT PROJECT CONDITIONS

GULFPORT HARBOR, MS FEASIBILITY STUDY

ECONOMICS

- Commodity gateway to the Midwest
- Existing vessels will continue to be restricted and new fleet will likely not be able to call
- Recently completed projects for Gulf ports will service ~11k TEU vessels (Houston & Mobile, Tampa pending)

ENGINEERING

Physical Restrictions:

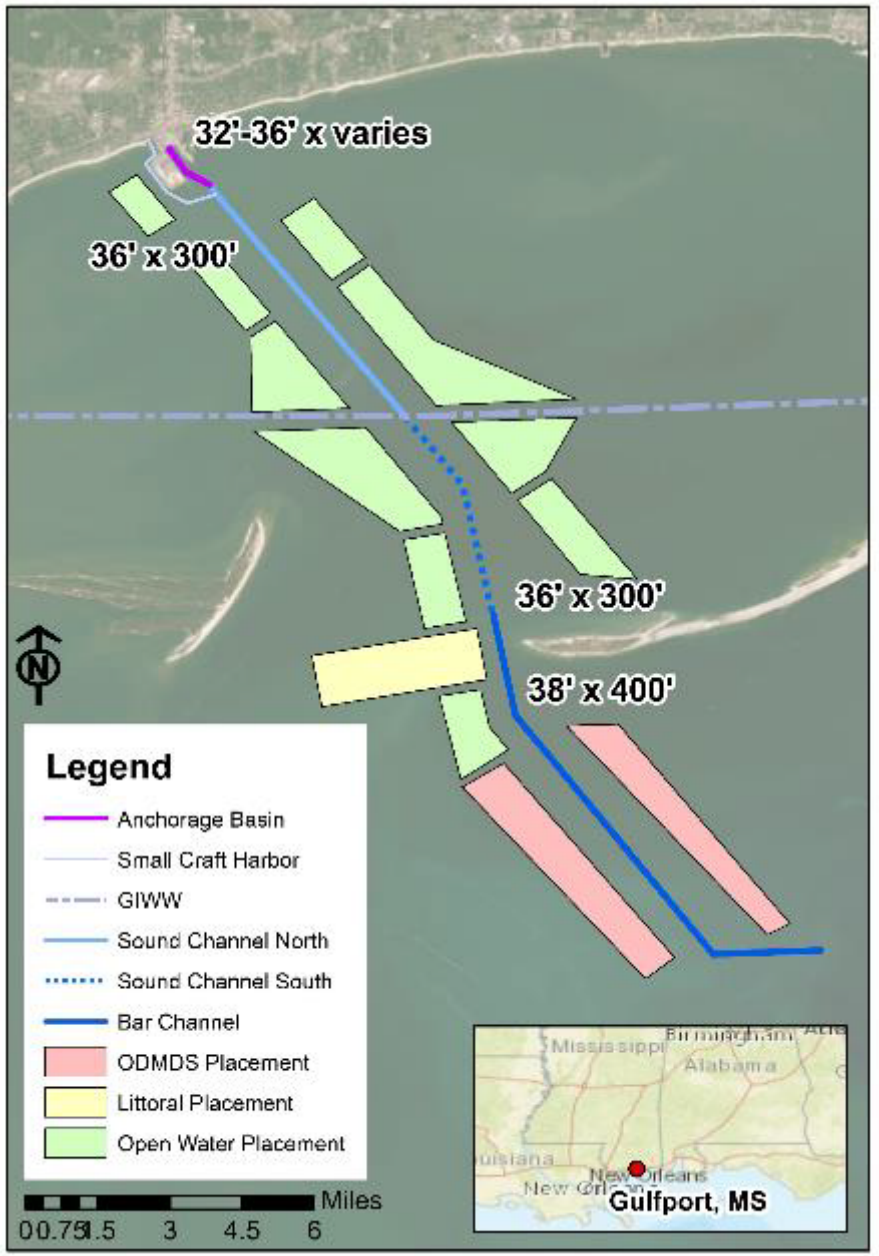
- Sound Channel
  - Depth = 36 ft
  - Width = 300 ft
- Bar Channel
  - Depth = 38 ft
  - Width = 400 ft

Effects:

- Light loading
- Vessel beam restrictions

ENVIRONMENTAL

- Continued active efforts to protect resources during maintenance operations



PLAN FORMULATION

GULFPORT HARBOR, MS FEASIBILITY STUDY

April-July 2023

- POOCs
- Formulation of Measures
- Rapid Iteration to screen measures and combine into array of alternative plans

Qualitative Screening Criteria for Measures

- *Effectiveness:* The extent measure contributes to achieving planning objectives
- *Efficiency:* The extent a measure is a cost-effective means of solving the problem and achieving the objectives
- *Acceptable Environmental Concerns:* Potential environmental impacts resulting from the measure/alt plan

NON-STRUCTURAL MEASURES	STRUCTURAL MEASURES
Light Loading*	Deepen channel
Lightering*	Realign section at channel entrance
Use of Tugs*	Widen channel
	Increase advanced maintenance allowance at Sound Channel
	Implement sediment trap east of Bar Channel adjacent to Ship Island

* Measure already implemented to fullest extent by NFS

SCREENING OF MEASURES (Structural)

MEASURE	EFFECTIVE The extent measures/alt plans achieve planning objectives	EFFICIENT The extent measure is cost-effective to solve problem & meet objectives	ACCEPTABLE ENVIRONMENTAL CONCERNS Potential environmental impacts resulting from the measure	CARRY FORWARD?
Deepen Federal Channel	Yes	Yes	Short-term impacts during construction	Yes
Realign section at the channel entrance	Yes	Yes	Short-term impacts during construction	Yes
Widen channel	Yes	Yes	Short-term impacts during construction	Yes
Modify turning/anchorage basin	Yes	Yes	Short-term impacts during construction	Yes
Increase advanced maintenance allowance on Sound Channel	Yes	Yes	Short-term impacts during construction	Yes
Implement sediment trap east of Bar channel adjacent to Ship Island	Yes	Yes	Short-term impacts during construction	Yes

PLAN FORMULATION

GULFPORT HARBOR, MS FEASIBILITY STUDY

Initial Array of Alternatives

- No Action – 36 ft (MLLW)
- Alt 1-7: Deepen channel incrementally by 1-ft – 40 ft (MLLW) to – 46 ft (MLLW) only
- Alt 8-14: Deepen channel incrementally by 1-ft – 40 ft (MLLW) to – 46 ft (MLLW), realign channel entrance, widen channel with modifications to turning/anchorage basin

Focused Array of Alternatives

- No Action – 36 ft (MLLW)
- Alt 8-14: Deepen channel incrementally by 1-ft – 40 ft (MLLW) to – 46 ft (MLLW), realign channel entrance, widen channel with modifications to turning/anchorage basin

- Modeling will be conducted for 2 ft depths with interpolation of benefits and costs conducted for 1-ft increments
- Each of the alternatives carried forward will be evaluated with the dredged material placement options identified for the project including beneficial use.
- Advanced maintenance and sediment trap measures will be analyzed once channel depth and widths are optimized
- 38 ft depth not considered however if benefits show it could possibly be the NED plan it will warrant further consideration.

PLAN FORMULATION

GULFPORT HARBOR, MS FEASIBILITY STUDY

STRATEGY FOR EVALUATION & COMPARISON OF ALTERNATIVES

- Four P&G Accounts
- Four P&G Criteria (Complete, Efficient, Effective, Acceptable)
- Meet Objectives and Avoid Constraints
- NEPA Considerations

NATIONAL ECONOMIC DEVELOPMENT

ENVIRONMENTAL QUALITY

OTHER SOCIAL EFFECTS

REGIONAL ECONOMIC DEVELOPMENT

PLAN FORMULATION

GULFPORT HARBOR, MS FEASIBILITY STUDY

STRATEGY FOR EVALUATION & COMPARISON OF ALTERNATIVES – 4 P&G ACCOUNTS

ENVIRONMENTAL QUALITY

1. Avoidance of Impacts
2. Minimization of Impacts
3. Assessment of Impacts
   - Habitat Change
   - T&E Species Risks
4. Cultural Res Sites

OTHER SOCIAL EFFECTS

1. Social Connectedness
2. Social Vulnerability & Resilience
3. Economic Vitality
4. Health & Safety Associated with Air Quality
5. Land-side Traffic impacts
   - Emphasis on disadvantaged communities

Semi-Quantitative

Qualitative

Comprehensive Benefits Framework (Work in Progress)

Quantitative

Quantitative

NATIONAL ECONOMIC DEVELOPMENT

1. Changes in Transportation Costs
2. Changes in O&M Costs and Frequency

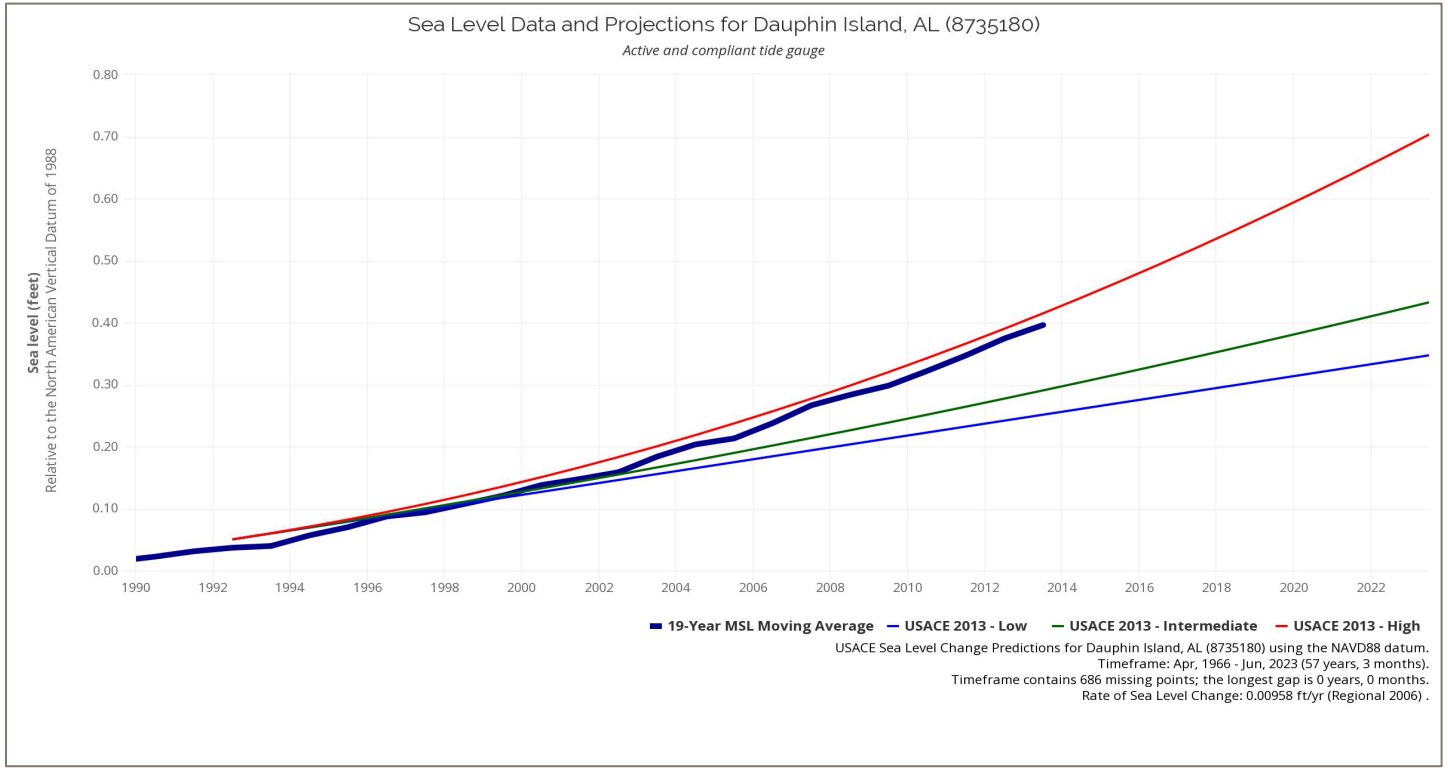
REGIONAL ECONOMIC DEVELOPMENT

1. Employment in the Region

SEA LEVEL RISE (SLR) CONSIDERATIONS

GULFPORT HARBOR, MS FEASIBILITY STUDY

- Dauphin Island, AL tide gauge 8735180 used to identify SLR trends in the area.
- Similar to most other Gulf of Mexico tide gauges, Dauphin Island, AL is closely tracking the High SLR curve.



- **Formulation to Climate Change**
  - Minimal effects on alternative formulation. Considered for BU sites if applicable
- **Environmental Impacts**
  - Environmental Impacts assessed based on “critical SLR scenario” over 50-year POA
- **Design Considerations**
  - Design of BU sites will consider high SLR
- **Adaptation**
  - Risk Exposure and Resiliency over the 100-year adaptation horizon will be assessed for BU sites in TSP and for port facilities

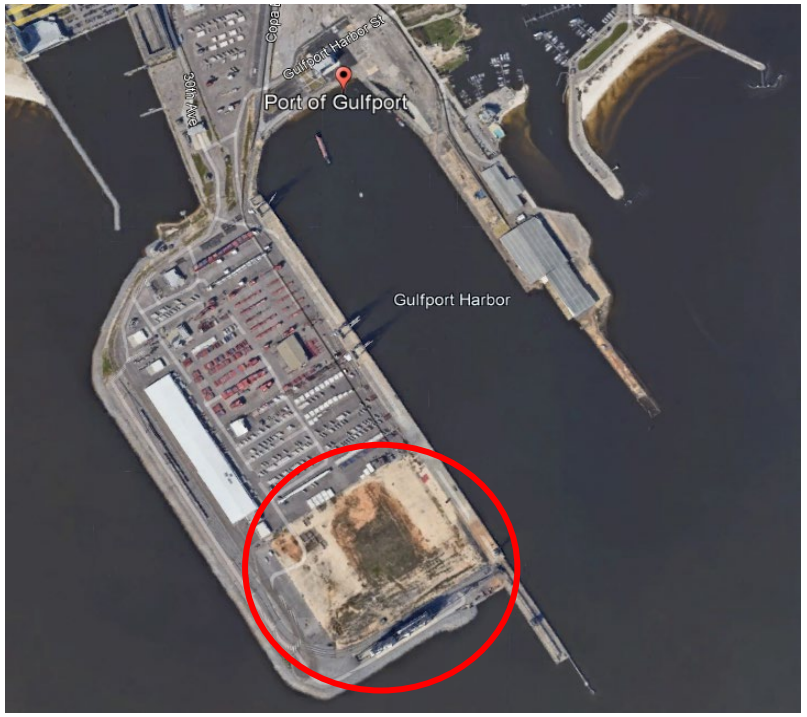
	USACE SLR Curves at Dauphin Island, AL Gage - ft		
	Low	Medium	High
50-Year (2082)	0.912	1.632	3.915
100-Year (2132)	1.391	3.134	8.657

ECONOMIC CONSIDERATIONS

GULFPORT HARBOR, MS FEASIBILITY STUDY

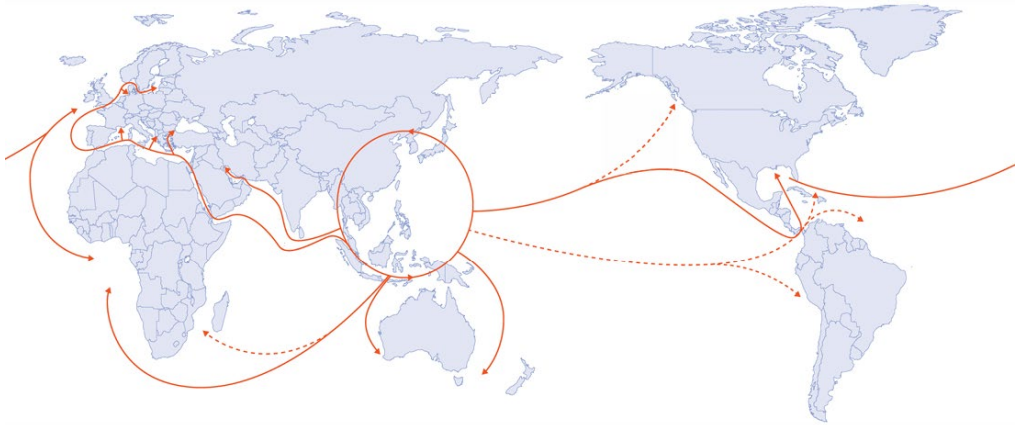
Future Without Project Conditions (FWOP)

- NFS recently entered partnership to expand ~40-acre cargo-handling terminal, **Terminal 4**
  - $43 million investment
  - Expansion to be completed in 5 years
  - Baseline commodity and fleet forecast will result from expansion plans that are currently in progress
  - Design vessel will be determined post-AMM based on yet to be determined trade lanes and are anticipated to be similar to vessels calling at other ports along the Gulf Coast



Recent Gulf Coast Feasibility Studies

Design Vessel	DWT	TEU	LOA	Beam	Design Draft
Houston					
Containership	115k-125k	10k-11k	1,100	158	49
Containership	115k-125k	10k-11k	1,200	140	49
Mobile Harbor					
Containership	119,000	10,100	1,100	158	50.8



KEY RISKS/UNCERTAINTY AND RISK MANAGAMENT:

- Key Risk/Uncertainty: Uncertainty with commodity forecast and design vessel
  Risk Management: Continue to coordinate with NFS and partner

ENGINEERING CONSIDERATIONS

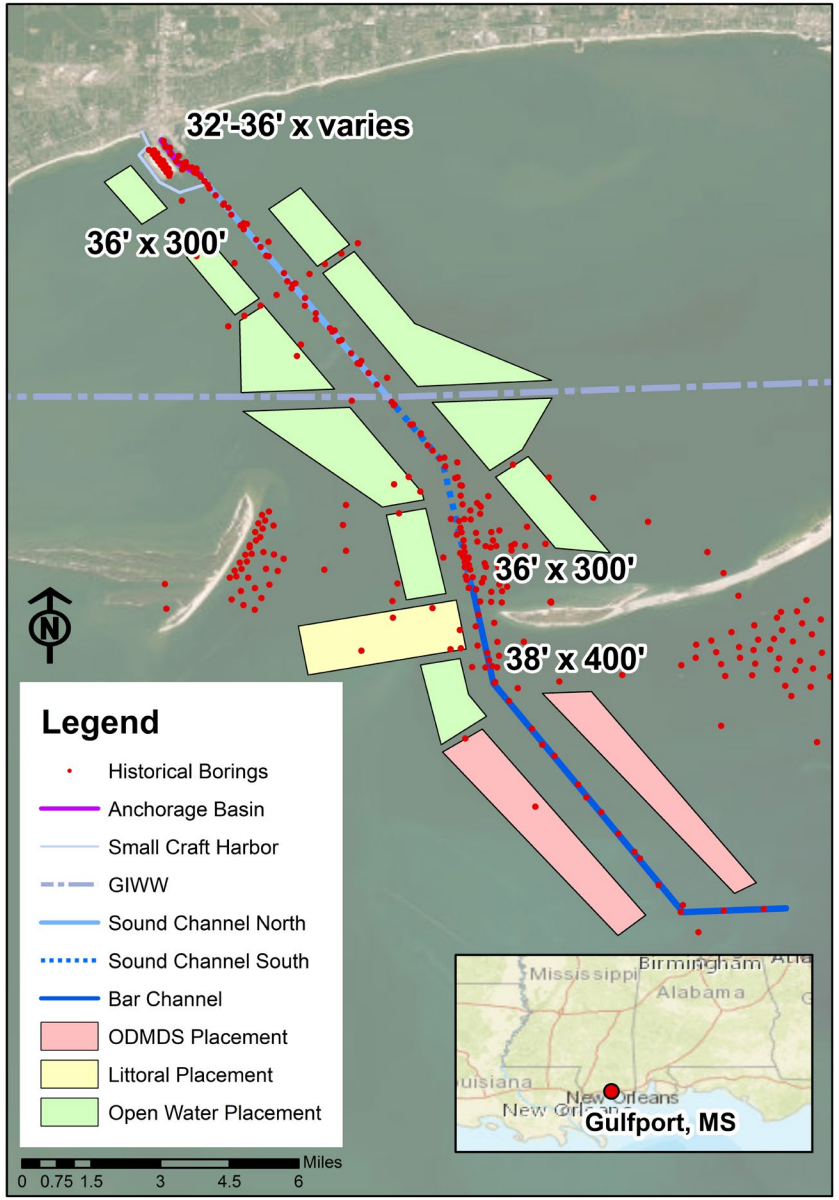
GULFPORT HARBOR, MS FEASIBILITY STUDY

Geotechnical Analysis
Characterization of dredged material

Dredged Material Placement Options
ODMDS and identifying beneficial use of dredged material/RSM opportunities

H&H
Channel design, hydrodynamic modeling, and sea level change analysis

Ship Simulation
For design and optimization of the with-project footprint



KEY RISKS/UNCERTAINTY AND RISK MANAGEMENT:

- Key Risk/Uncertainty: Results of hydrodynamic modeling indicate changes which need further modeling to support evaluation of environmental impacts.

  Risk Management: Chosen models can be adapted to support evaluation of environmental impacts
- Key Risk/Uncertainty: Type/density of material increases dredge cost

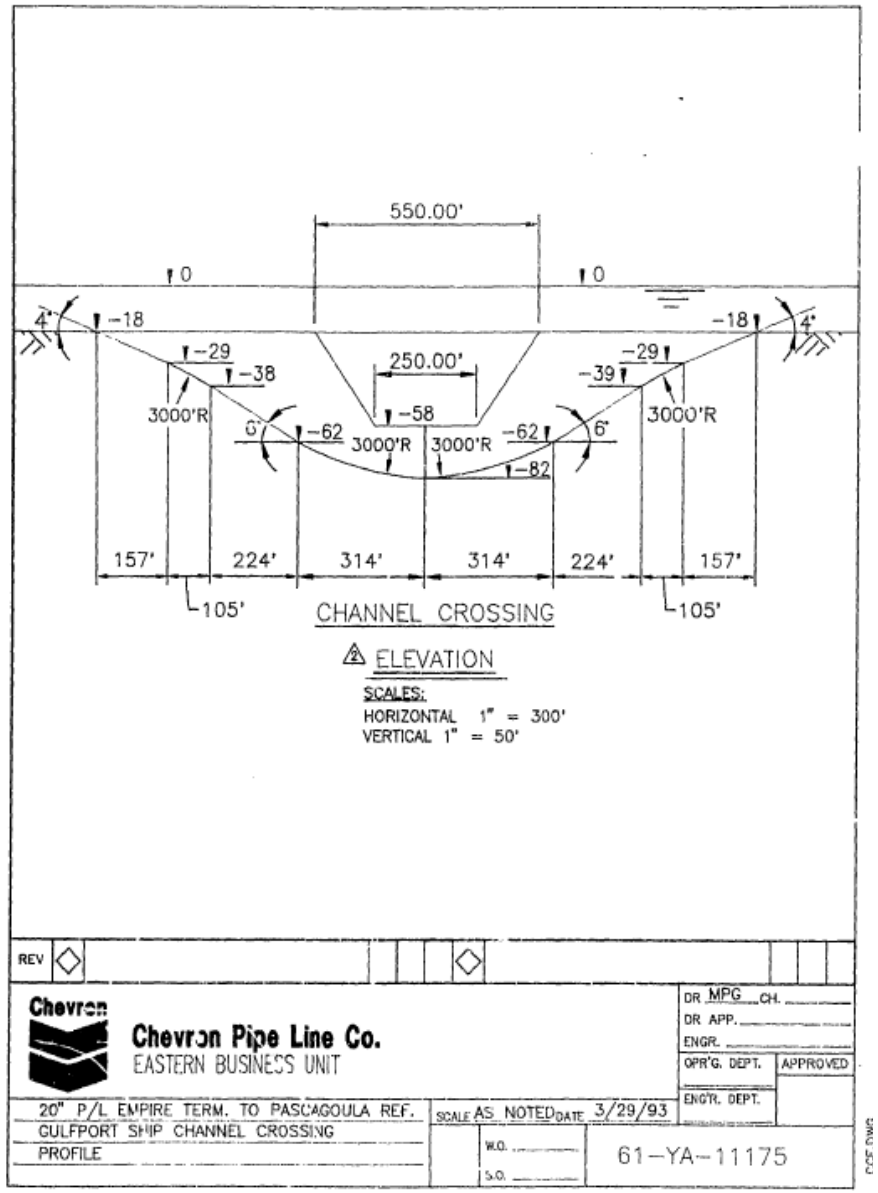
  Risk Management: Will assess material characterization from available historical data

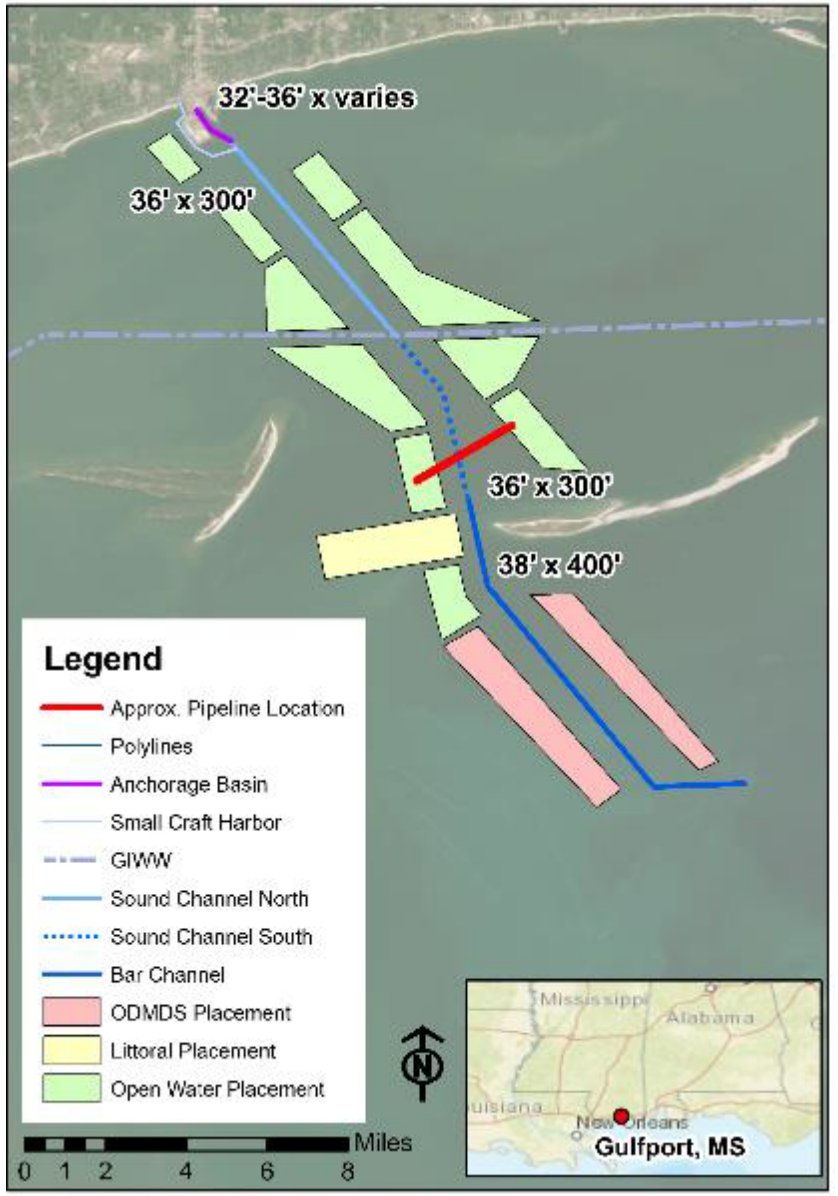
REAL ESTATE CONSIDERATIONS

GULFPORT HARBOR, MS FEASIBILITY STUDY

Utilities

- A 20 inch Chevron Hydrocarbon pipeline traverses east to west across the channel as documented in Regulatory permit # MS62-00072-U (see as-builts to the right). The location of this pipeline is captured as a constraint in the study to avoid adverse environmental impacts.
- A Hy Stor Hydrogen pipeline is being proposed to traverse west to east across the channel. An EIS is expected to be completed for the Hy Stor pipeline.

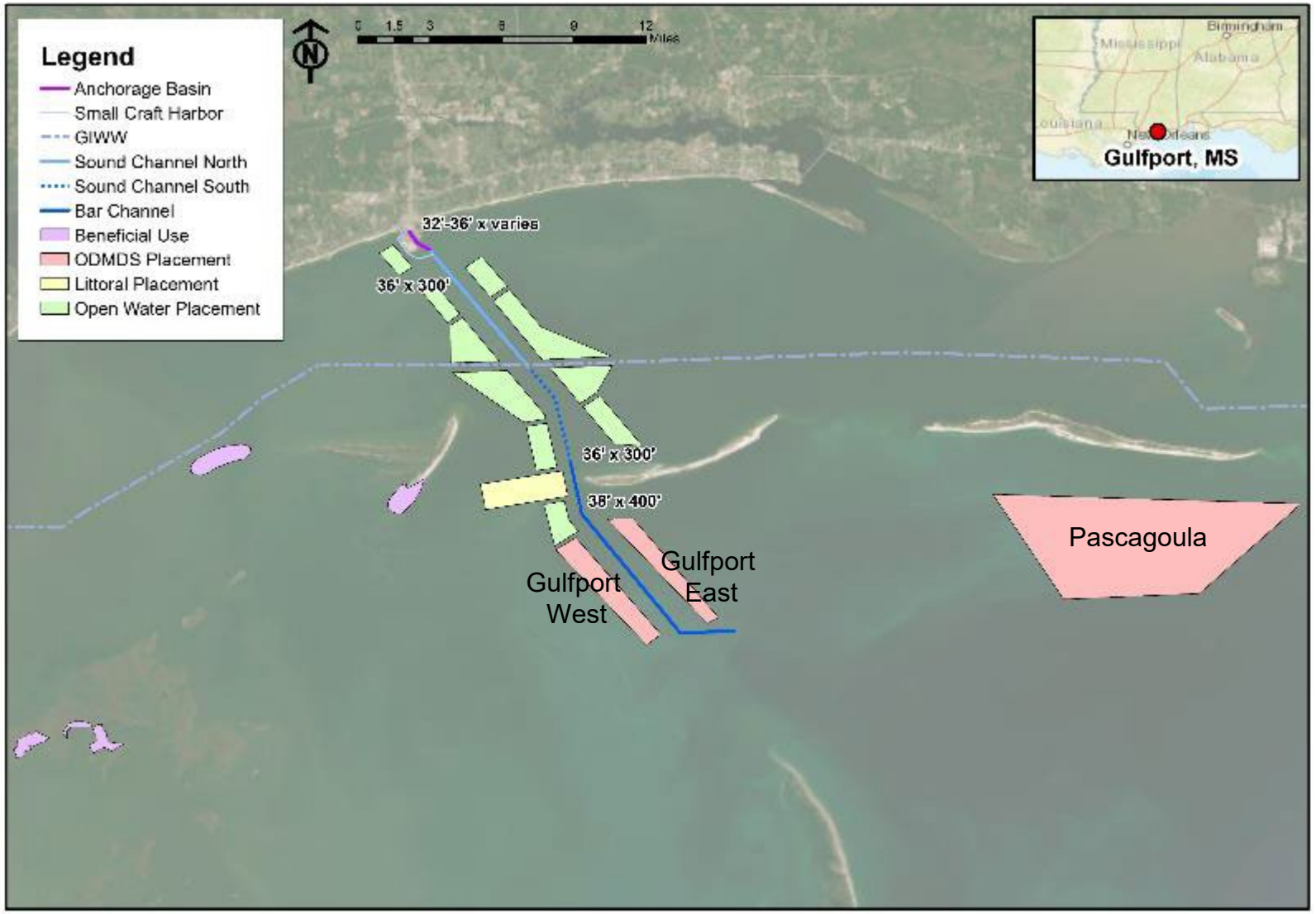




DREDGED MATERIAL PLACEMENT

GULFPORT HARBOR, MS FEASIBILITY STUDY

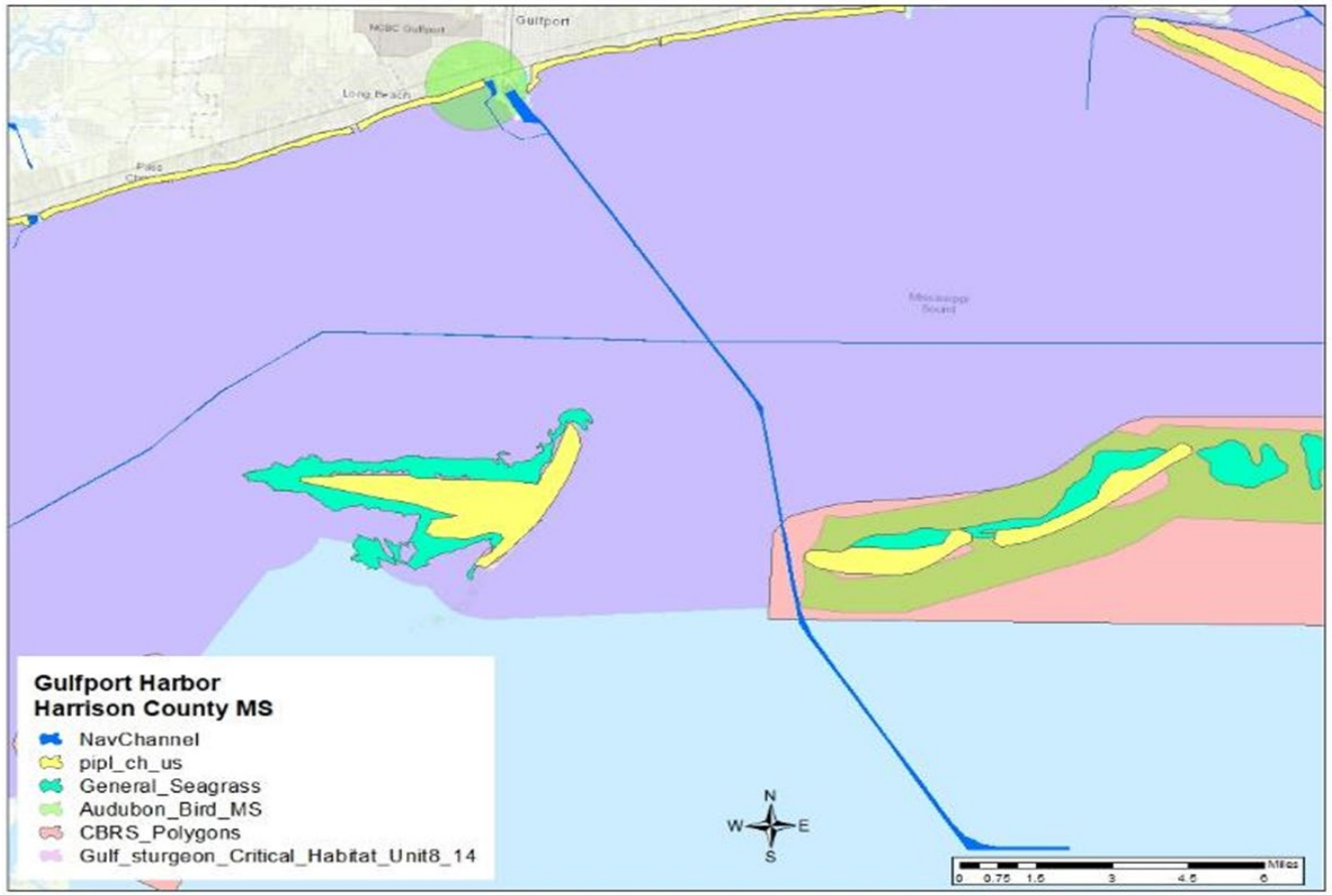
- Insufficient capacity in Gulfport East and West ODMDSs for new work material
- Sufficient capacity in Pascagoula ODMDS expected for new work material
- Maintenance material can be placed via thin layer in open water placement sites adjacent to the channel
- Sufficient capacity in Pascagoula ODMDS for future maintenance material if open water placement capacity is limited (Shallower than 4 ft)
- Potential beneficial use sites are being identified:
  - Additional geotechnical borings needed in design phase to map dredged material
  - Dredged material likely consists of clays, silts, and sands
  - Available historical data shows variability in dredged material type



ENVIRONMENTAL CONSIDERATIONS

GULFPORT HARBOR, MS FEASIBILITY STUDY

RESOURCE PROTECTION



KEY RISKS/UNCERTAINTY AND RISK MANAGEMENT:

- Key Risk/Uncertainty: Level of impacts attributed to circulation changes are unknown at this time
- Risk Management: If circulation changes are identified, will assess impacts to those habitats. NEPA compliance scoped to SEIS.

ENDANGERED SPECIES ACT

Protected Species in study area

- **Gulf sturgeon (Critical Habitat)**
- West Indian manatee
- **Sea turtles**
  - Kemp's Ridley Sea Turtle
  - Loggerhead Sea Turtle
  - Green Sea Turtle
  - Leatherback Sea Turtle
  - Hawksbill Sea Turtle
- **Rice's whale**
- Oceanic whitetip shark
- **Giant manta ray**
- Piping Plover (Critical Habitat)
- Red Knot

Bold: NMFS PRD coordination required

HABITAT CONCERNS

- Benthic Organisms in nearshore
- Littoral Zone
- Intertidal flats
- **Seagrass colonies**
- **Oyster/Shellfish Production**
- Essential Fish Habitat (EFH)
- Substrate Erosion (channel slopes)
- Beneficial Use of Material –
  - Barrier Island / Marsh Placement
  - New in-water placement sites

Bold: Key Habitat Concerns

OTHER ENVIRONMENTAL REGULATORY COMPLIANCE

- NEPA COMPLIANCE – Evaluate CEQ guidance to determine EA or EIS
- COASTAL ZONE MANAGEMENT ACT (CZMA) – Consultation, concurrence with USACE determination (MDMR)
- COASTAL BARRIER RESOURCES ACT (CBRA) – UNIT MS-01P (OTHERWISE PROTECTED AREA) – Consultation with USFWS
- FISH & WILDLIFE COORDINATION ACT (FWCA) – Fund USFWS's FWCA input, and Draft & Final FWCAR (USFWS)
- Magnuson-Stevens Fisheries Conservation & Management Act (MSFCMA) - Consultation with NMFS-HCD on EFH
- Marine Protection, Research, & Sanctuaries Act (Section 103)
- Clean Water Act (Sections 401 & 404(b)(1))

ENVIRONMENTAL COMPLIANCE

GULFPORT HARBOR, MS FEASIBILITY STUDY

SCOPING ACTIVITIES

Stakeholders & Agencies

Request to Federal and Mississippi Agencies (May 31, 2023):

- Cooperating Agency for NEPA input
- Sect 1005 of WRRDA of 2014 requirement
- Notice of June 9, 2023, Agency Scoping Meeting
- Request sent to Tribal Nations on June 5, 2023

Interagency Scoping Meeting (June 9, 2023)

- Transition - Sect 203 to USACE Feasibility Study Recap of Interagency Meeting (October 22, 2022)
- Addressed Existing Conditions (FWOP)
- Problems and Concerns Noted During Meeting
  - Potential impacts to resources
  - Capacity of available placement areas & options
  - Beneficial use most discussed topic during meeting
- Provided Environmental Justice overview
- Addressed Cultural Resources considerations

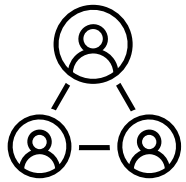
Public

Public Scoping Notice released June 9, 2023

- Published on SAM website by PAO
- Released by NFS to Gulfport citizens
- Public Scoping Meeting announced

Public Scoping Meeting (June 20, 2023)

- Onsite meeting – Engage community in the scoping process
- Provided overview of NEPA process and environmental compliance
- Encouraged input through written comment
- Addressed Environmental Justice concerns with Gulfport residents

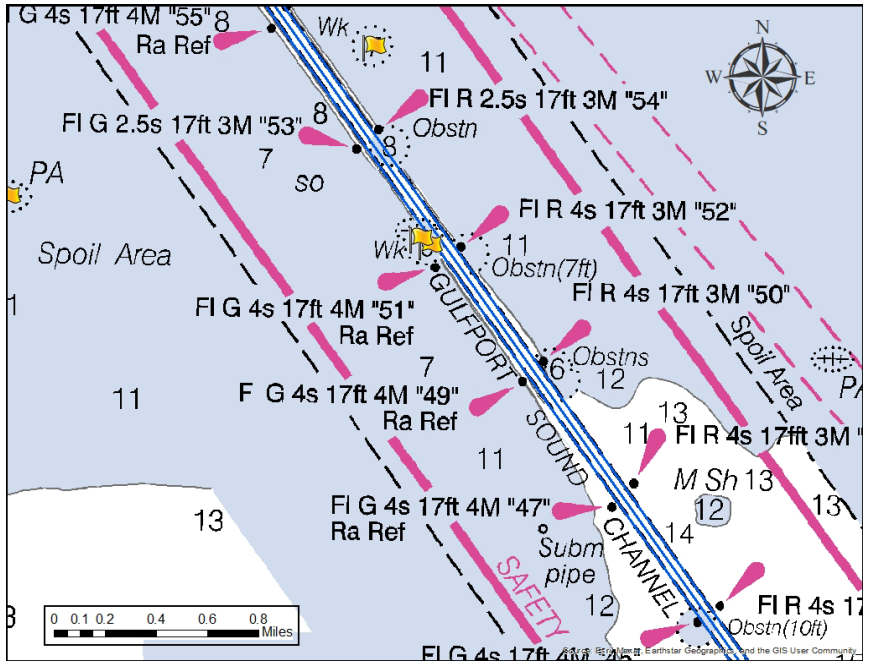


CULTURAL RESOURCES CONSIDERATIONS

GULFPORT HARBOR, MS FEASIBILITY STUDY

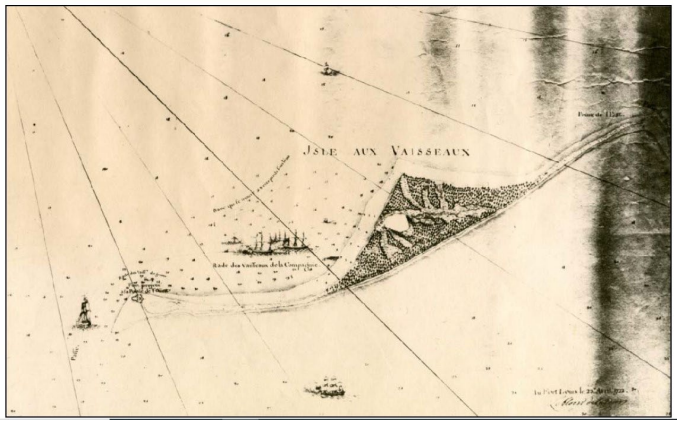
Existing Conditions:

- **No previous comprehensive submerged cultural resources surveys for the channel exists**
- **Potential shipwrecks within the APE** (area of potential effect) per SHPO statement at previous public meeting and observing NOAA chart



Considerations:

- Consultation with MS SHPO, NPS, and tribes for Section 106 of NHPA compliance
- Phase I Submerged Cultural Resources survey relatively straightforward, however, potential shipwrecks in channel footprint may need to be addressed by avoidance or mitigation
- **Ship Island is NPS and will need close consultation if project has potential to affect recorded historic shipwrecks near the island**
- New disposal areas will need to be coordinated and may need submerged cultural resources survey.



KEY RISKS/UNCERTAINTY AND RISK MANAGEMENT:

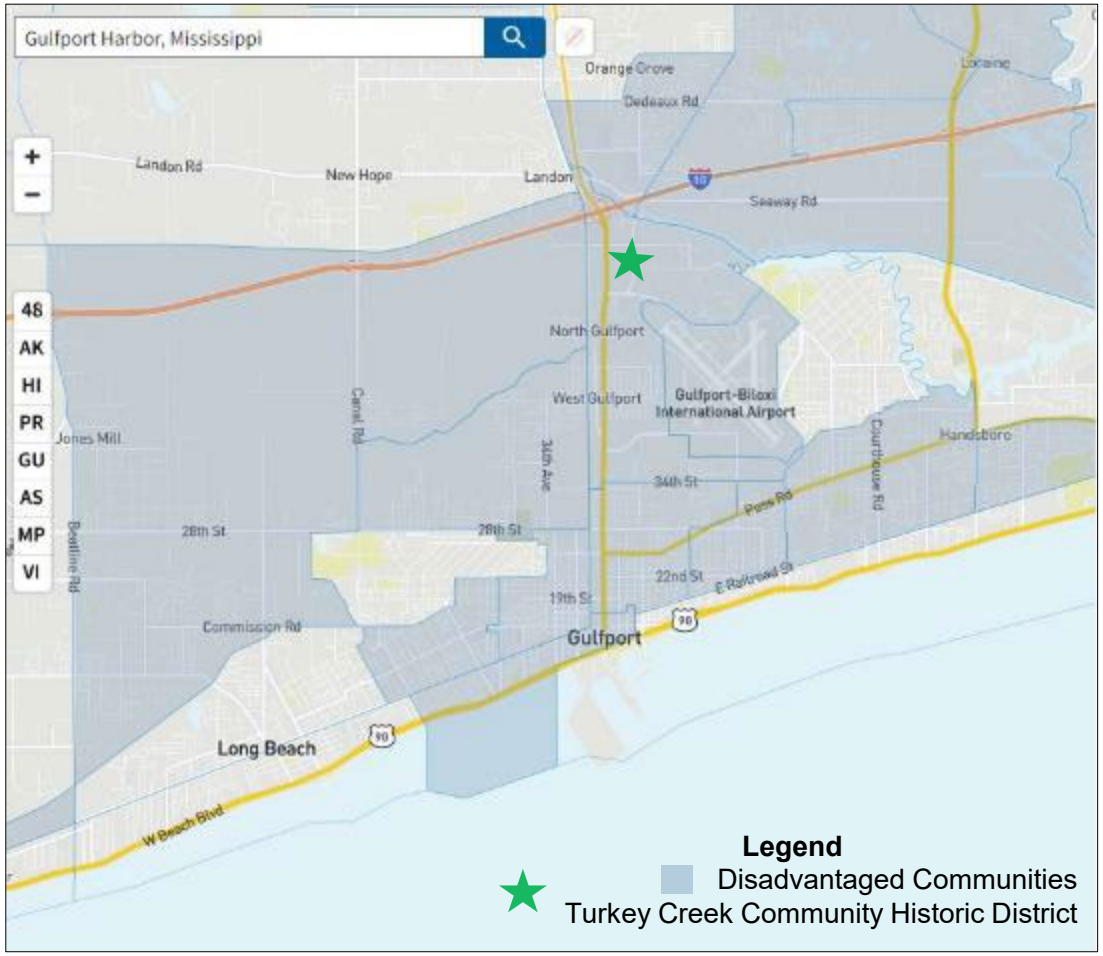
- Key Risk/Uncertainty: Presence of anomalies in Phase 1 survey

  Risk Management: As required, perform Phase 2 surveys performed in PED

ENVIRONMENTAL JUSTICE (EJ) SCOPING

GULFPORT HARBOR, MS FEASIBILITY STUDY

Per EJ Interim Guidance Jan 2023 *p. 5(a):*
" comprehensive identification of communities with EJ concerns"
Map identifies communities with EJ concerns within the Gulfport Study Boundaries



Source: Climate and Economic Justice (CEJ) Screening Tool

Study Boundaries Demographics

Disadvantaged Census Tracts: **9**

Estimated Population: 27,600

Ethnicity: Black or African American – 45%
White – 39%
Asian - 0.01%
Hispanic or Latino – 0.05%
Two or more ethnicities - 0.02%

Threshold Burden (Criteria) Exceedance Overview

Climate Change: Projected Flood Risk/ Expected Building Loss Rate

Energy: Energy Cost

Health: Asthma/Diabetes/ Heart Disease/Low Life Expectancy

Low Income: Income is less than or equal to twice the federal poverty level

Housing: Making less than 80% of the area median family income and spending more than 30% of income on housing

Workforce Development: Low median income, Poverty/ Unemployment

Legacy Pollution: presence of one or more Formerly Used Defense Site within the tract/Superfund Sites

EJ CONSIDERATIONS
GULFPORT HARBOR, MS FEASIBILITY STUDY

Ongoing EJ Study Efforts

- Communication Plan is being developed outlining strategies for outreach and actions for engaging disadvantaged communities in the decision making- process **(EJ Interim Guidance Jan 2023 *p. 5e (i))***
- EJ Considerations that will be incorporated in the focused array of alternatives ***(*EJ Interim Guidance Jan 2023 *p. 5e(ii))***:
  - Air Quality
  - Transportation Impacts
  - Work Force Development
  - Climate Change
- The OSE Account will be developed with an emphasis of the OSE on disadvantaged communities. The following OSE will be considered ***(*EJ Interim Guidance Jan 2023 *p. 5e(iii-iv))***:
  - Health & Safety
  - Economic Vitality
  - Social Connectedness
  - Social Vulnerability & Resilience

Upcoming and Completed Actions

- **EJ Coordinator** working with NFS to scope and identify POCs for disadvantaged communities
- Communications Plan is in progress
- First public meeting held on June 20th

Turkey Creek Area: Among the identified census tracts within the project boundaries is Turkey Creek Historic District; a local community established in 1866 by emancipated African Americans.

- PDT plans to hold targeted public engagement of the identified communities including Turkey Creek.

STUDY SCOPING OUTCOME

GULFPORT HARBOR, MS FEASIBILITY STUDY

SCOPE 1 -"Unconstrained"

1. Incremental deepening and resulting widening 40' – 46' (approx.)
2. Widening to accommodate design vessel
3. Assumes hydrodynamic modeling will indicate no impacts to aquatic resources in FWOP/FWP conditions
4. Includes ship simulation
5. Environmental Impact Statement (EIS)
6. Includes sediment sampling
7. Fills data gaps with additional geotechnical data and Phase II Cultural Resource Survey

5 years, **$8.5M**

SCOPE 2 - "Risk Management"

1. Includes items 1-5 under SCOPE 1- Unconstrained
2. Budget refinements per discipline
3. Leverages existing information/efforts: geotechnical data, MsCIP modeling and data collection, and 2009 & 2017 EIS

3 years, **$4.7M**

SCOPE 3 - "3x3x3 Plan"

1. Non-complaint with USACE Policy for ship simulation
2. Highly likely to not meet NEPA requirements. Strong objections from resource agencies and local communities due to lack of adequate environmental impact analysis
3. No contingency

3 years, **$3M**

Key Cost Drivers for Scope 2 – "Risk Management":

- Environmental Impact Statement requires everything an EA would require while also requiring a much more comprehensive discussion of the reasonable alternatives, and a "hard look" at the cumulative impacts of the proposal along with all existing and reasonably foreseeable future development within the project area.
- Hydrodynamic modeling is necessary to identify impacts on the environment in order to sufficiently address State and Federal resource agencies concerns. Modeling is also used as an input to ship simulations.
- Ship simulations are required by policy and reduce uncertainty in the analysis by use of deterministic approaches that reduce large safety factors for channel design.

STUDY RISK AND CONSIDERATIONS

GULFPORT HARBOR, MS FEASIBILITY STUDY

Risk Management Scope Only

RISK DESCRIPTION	RISK TO STUDY	RISK MANAGEMENT STRATEGY
Sediment Sampling *Assuming approval of use of ODMDS for material placement*	**Low to Medium**	Use historical information and data to identify concerns. Perform additional sampling in PED to obtain approval to use ODMDS.
Geotech *Scope assumes no geotechnical investigations*	**Low**	Leverage existing data from previous studies and complete in PED
Hydrodynamic Modeling Approach *Scoping hydrodynamic modeling with no significant impacts anticipated but may require more modeling based on findings and Env Agency feedback*	**Medium to High**	Chosen models can be adapted to support evaluation of environmental impacts.
Utility Conflicts within the Navigation Channel	**Medium**	Early coordination with owners and regulatory to determine as-built conditions. May require additional data collection, which could impact cost and schedule in PED
Lapse in Study Funding	**Medium to High**	Modifying FCSA to receive accelerated funds from NFS.

PROPOSED STUDY MODELS

Model	Discipline	Status	User
HarborSym 1.5.83	Planning	Certified	Jennifer Purcell
Regional Economic System (RECONS)	Planning	Certified	Jennifer Purcell
Adaptive Hydrologic Modeling (ADH)	Engineering – H&H	Preferred	ERDC
Advance Circulation (ADCIRC)	Engineering – H&H	Preferred	Kelsey Carpenter
Channel Design and Evaluation Tool (CADET)	Engineering – H&H	Allowed	AE Contract
CH3D-WES-Multi-Block Hydrodynamic Model (CH3D-WS-MB)	Engineering – H&H	Allowed	ERDC
ERDC Ship/Tow Simulator (Ship Sim)	Engineering – H&H	Allowed	ERDC
Abbreviated Risk Analysis, Cost Schedule Risk Analysis	Engineering - Cost	Cost PCX Mandatory	Lauren Walker
Corps of Engineers Dredge Estimating Program (CEDEP)	Engineering - Cost	Cost PCX Mandatory	Lauren Walker
Microcomputer Aided Cost Engineering System (MCACES) MII	Engineering - Cost	Cost PCX Mandatory	Lauren Walker
Total Project Cost Summary (TPCS)	Engineering - Cost	Cost PCX Mandatory	Lauren Walker

SCHEDULE AND BUDGET

GULFPORT HARBOR, MS FEASIBILITY STUDY

- August 2023 to May 2024 - HarborSym, Economic Modeling FWOP/FWP transportation costs; Preliminary Design of Alternatives, Hydrodynamic Modeling, Cultural resource surveys, Initiate Ship simulation, Identify NED Plan, Initiate NEPA process, Plan formulation to get to the final array with qualitative 4 P&G accounts

- June 2024 to August 2024 - Quantitative 4 P&G accounts analysis, Environmental Impact Statement and agency coordination, Design of Alternatives, Cost of alternatives

- September to October 2024 - TSP identification, Sponsor coordination, and integrated report/appendix documentation

- October 2024 to December 2024 – TSP Milestone Meeting, Integrated report/appendix documentation development and subsequent DQC/Legal review

- December 2024 - Draft Release of the Report for concurrent Policy/Public/ATR

Estimated Study Cost: $4,700,000; Federal Share, 50%: $2,350,000; Non-federal Share, 50%: $2,350,000

KEY RISKS/UNCERTAINTY AND RISK MANAGEMENT:

- Key Risk/Uncertainty: Lapse is Study funding

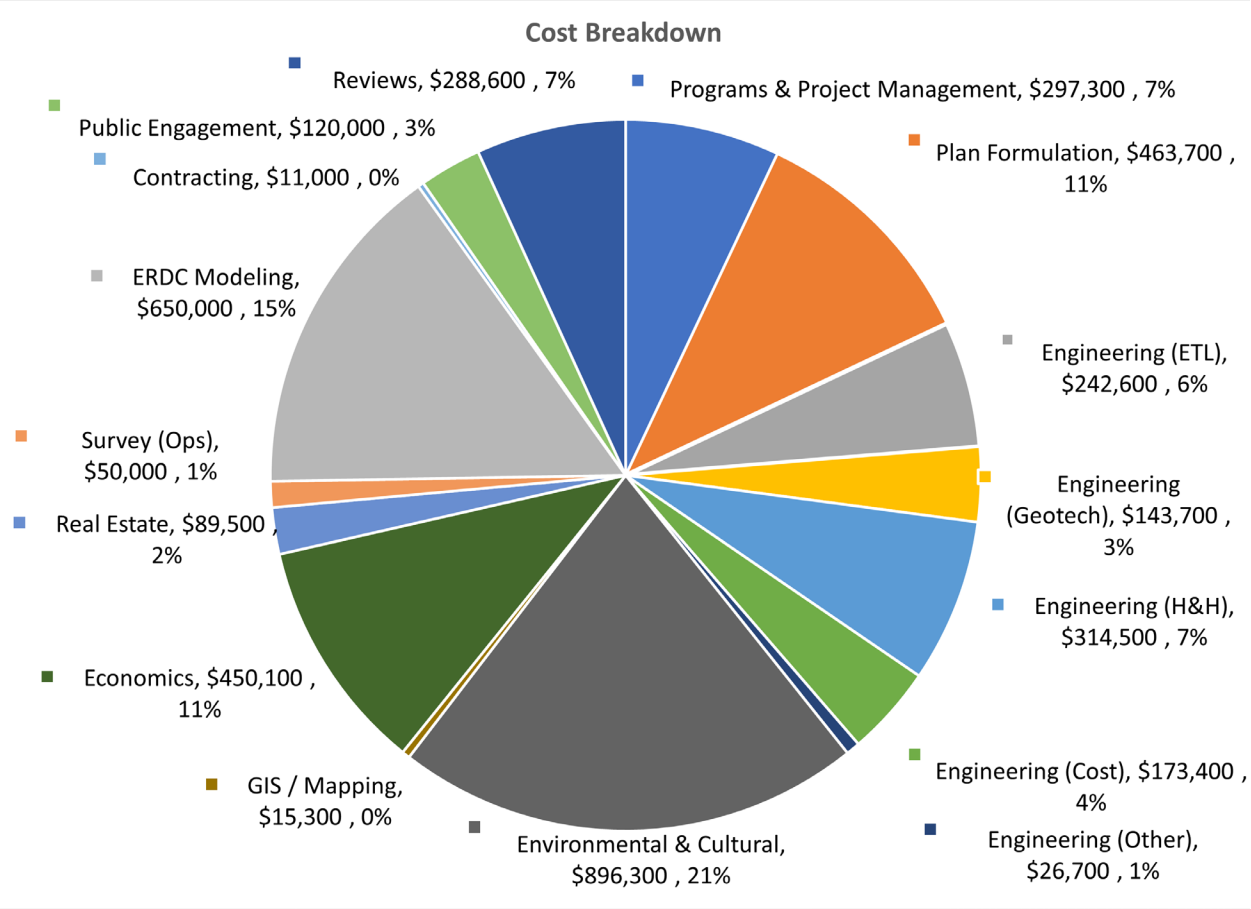
  Risk Management: Modifying FCSA to receive accelerated funds from NFS

Milestone	Date	Incremental Funding	Total Funding
Signed FCSA	19-Apr-2023	---	---
AMM	19-Jul-2023	$ 400,000	$ 400,000
TSP	Oct-2024	$ 2,500,000	$ 2,900,000
ADM	Apr-2025	$ 955,000	$ 3,855,000
Final Report	Dec-2025	$ 595,000	$ 4,450,000
Chief's Report	Apr-2026	$ 250,000	$ 4,700,000

Fiscal Year	Total Funding
FY-2023	$ 400,000
FY-2024	$ 2,400,000
FY-2025	$ 1,400,000
FY-2026	$ 500,000

SCHEDULE AND BUDGET

GULFPORT HARBOR, MS FEASIBILITY STUDY



Discipline / Task	Unconstrained Budget	Risk Management Budget
Programs & Project Management	$297,300	$297,300
Plan Formulation	$513,000	$463,700
Engineering Technical Lead	$244,000	$242,600
Engineering (Geotechnical)	$164,800	$143,700
Geotechnical Investigations	$350,000	--
Engineering (H&H)	$324,500	$314,500
Engineering (Cost)	$173,400	$173,400
Engineering (Project Support)	$25,500	$8,500
GIS / Mapping	$15,300	$15,300
P6 Scheduler	$18,200	$18,200
Environmental	$803,300	$591,200
FWCAR	$35,000	$35,000
Sediment Testing	$3,000,000	--
Cultural Resources	$146,900	$120,100
Phase I Survey	$150,000	$150,000
Phase II Survey	$150,000	--
Economics	$462,000	$450,100
Real Estate	$89,500	$89,500
Operations (Survey)	$50,000	$50,000
ERDC Hydrodynamic & Salinity Modeling	$350,000	$350,000
ERDC Ship Simulation	$300,000	$300,000
Contracting	$20,000	$11,000
Public Engagement	$120,000	$120,000
Reviews	$360,000	$288,600
Subtotal	$8,162,700	$4,232,700
Contingency	$363,800	$480,700
Total	$8,526,500	$4,713,400

* Select Disciplines/Tasks were combined for graphic representation

PATH FORWARD TO TSP AND OPEN DISCUSSION

- Receive vertical team alignment on AMM and path forward
- Submit VTAM to MSC for policy exception to cost
- Refine future without condition and future with condition for alternatives
- Hydrodynamic modeling of existing conditions and alternatives
- Determine suitability of dredge material placement sites and BU sites
- Perform Economic Analysis for alternatives
- Develop Class 4 cost estimates for alternatives
- Evaluate and compare alternative plans
- Select Tentatively Selected Plan
- Prepare draft report with TSP
- Determine remaining tasks to attain Agency Decision Milestone (ADM)
- Conduct TSP meeting and receive VT concurrence on the TSP recommendation and proposed path forward