



Briefing on Harbor Island Seawater Desalination Facility Integration with City of Corpus Christi Water - Phase 1 Evaluation

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Water Resources | Transportation | Land Development | Surveying | Environmental





Coastal Bend Region currently depends primarily on surface water for municipal and industrial uses



PCCA and City of Corpus Christi both seek a sustainable supply of water for the region to support current and future water needs



City of Corpus Christi is the primary water producer, provider and distributor to the region



Reliable water supply is a regional asset

Regional Alternative Water Sources

Harbor Island Seawater Desalination Collaboration with Port of Corpus Christi

- Pape-Dawson Engineers Water Integration Study

Evangeline Groundwater

- HDR, Inc. is estimating the cost analysis for delivery locations

Barney Davis Seawater Desalination

- HDR, Inc. has finalized the desktop study

La Quinta Seawater Desalination (City of Corpus Christi & Port of Corpus Christi)

- Currently under review by Texas Commission on Environmental Quality

Inner Harbor Seawater Desalination

- Most aspects completed - awaiting TCEQ discharge permit and US Army Corps permit



Framework:

Harbor Island Seawater Desalination Collaboration

- **March 21, 2023** - Corpus Christi City Council (The City) approves a Motion “directing the City Manager to work out a framework on how the Port of Corpus Christi can assist the City of Corpus Christi in pursuit of desalination and other water resources for the long-term growth of the City of Corpus Christi and the Coastal Bend.”
- **March 21, 2023** – Port of Corpus Christi (The Port) Commissioners approved a Memorandum of Understanding (MOU) “to provide a framework for collaboration between the City and the Port for the pursuit of drought resistant water supplies for the long-term growth of the Coastal Bend. This MOU affirms the City’s position as the regional water supplier. This MOU will set forth the expectation for equally sharing of all costs associated with the development of drought resistant water supplies.”



Collaboration Update

- **Coordination Activities To Date:**

- Team Members:
 - Port of Corpus Christi
 - City of Corpus Christi (CCW)
 - San Patricio Municipal Water District
 - Pape-Dawson Engineers
- Weekly Meetings (Virtual)
- Monthly Meetings (In-Person)
- Development of Alternatives and Potential Intergration Locations

- **To date, City Manager (CM) and Port Chief Executive Officer (CEO) have met numerous times:**

- One-on-one meetings
- Site visits to the Harbor Island and Inner Harbor locations
- CM & CEO have attended several Coastal Bend Industrial Association (CBIA) meetings
- Meetings with Port customers on future expansions





PCCA contracted with Pape-Dawson Engineers to evaluate integration of water from the proposed Harbor Island seawater desalination facility into the regional water supply



- **STUDY THE PHYSICAL AND INSTITUTIONAL MEANS OF INTEGRATING WATER AND IDENTIFY CONNECTION ALTERNATIVES**

- Project Management and stakeholder coordination
- Baseline data collection
- Water quality considerations
- Environmental considerations and constraints
- Identification of alternative connection points, routes and initial screening and initial report



- **ANALYSIS OF PREFERRED ALTERNATIVE(S)**

- Alternative analysis - integration system
- Develop opinions of probable costs for preferred alternatives from Phase 1
- Recommended alternative
- Implementation considerations
- Reporting of conclusions and recommendations

Port of Corpus Christi Authority

- Kent Britton, Chief Executive Officer
- Jeff Pollack, Chief Strategy Officer
- Fernando Quintanilla, Project Manager
- Natasha Fudge, Director of Engineering Services
- Sarah Garza, Director of Environmental Planning & Compliance



City of Corpus Christi

- Peter Zanoni, City Manager
- Drew Molly, Interim Chief Operating Officer
- Esteban Ramos, Water Resources Manager
- Wes Nebgen, Director of Water System Infrastructure
- Nick Winkelmann, Assistant Director of Planning & Infrastructure
- Maria Corona, Engineer IV



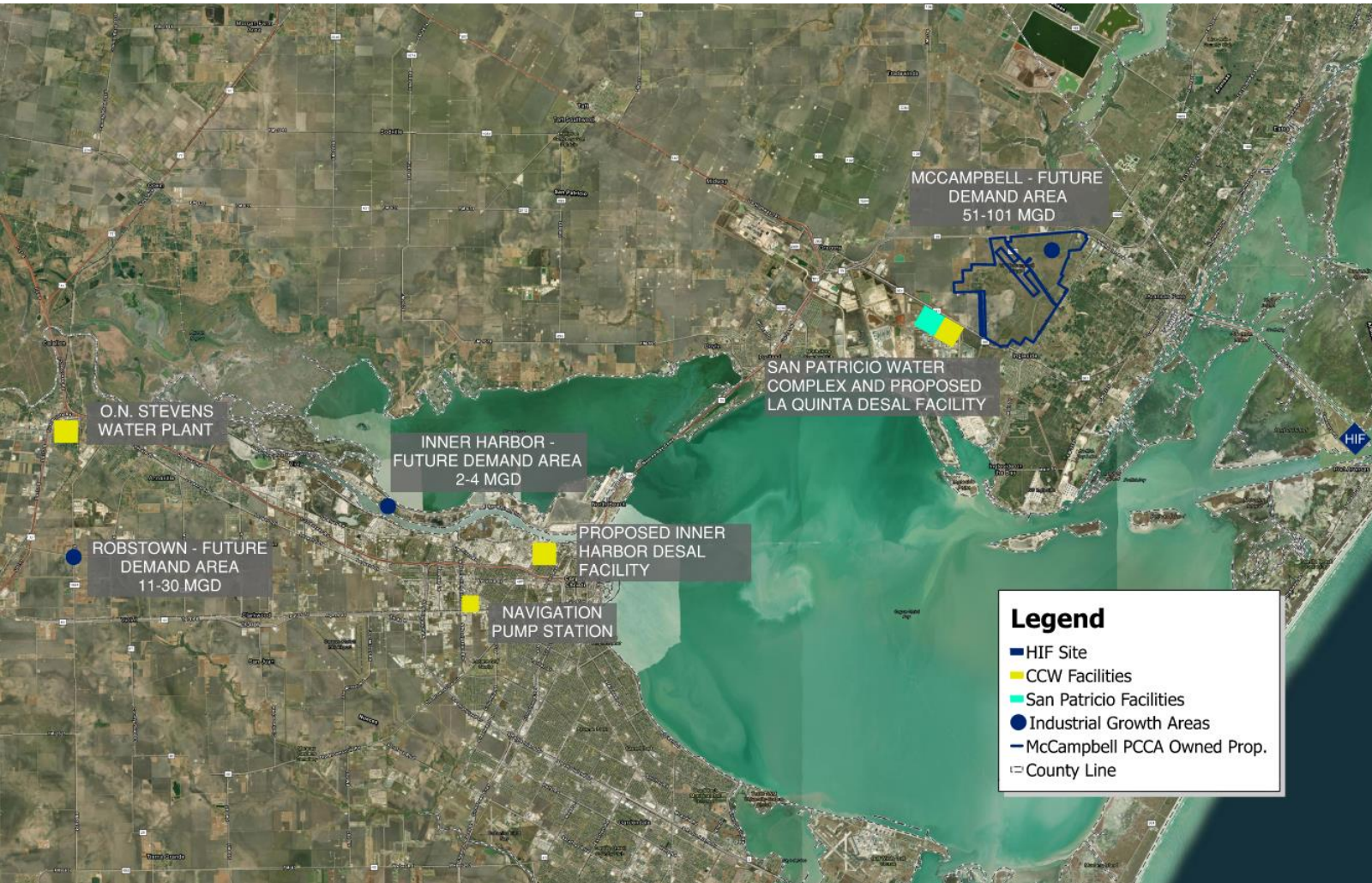
San Patricio Municipal Water District

- Brian Williams, General Manager
- Mallory Gabro Lightsey, Senior Engineer

San Patricio Municipal Water District



2036 PROJECTED DEMAND CENTERS & REGIONAL FACILITIES



PROJECTED DEMAND CENTERS

PCCA Industrial Demand Centers

- McCampbell (51-101 MGD)
- Inner Harbor (2-4 MGD)
- Robstown (11-30 MGD)

CoCC Domestic Demand

- Grows from 95 to 112 MGD (~1.2% City-wide)
- Plus 10 MGD Treated to SPMWD
- Primary projected growth areas are on Island and London

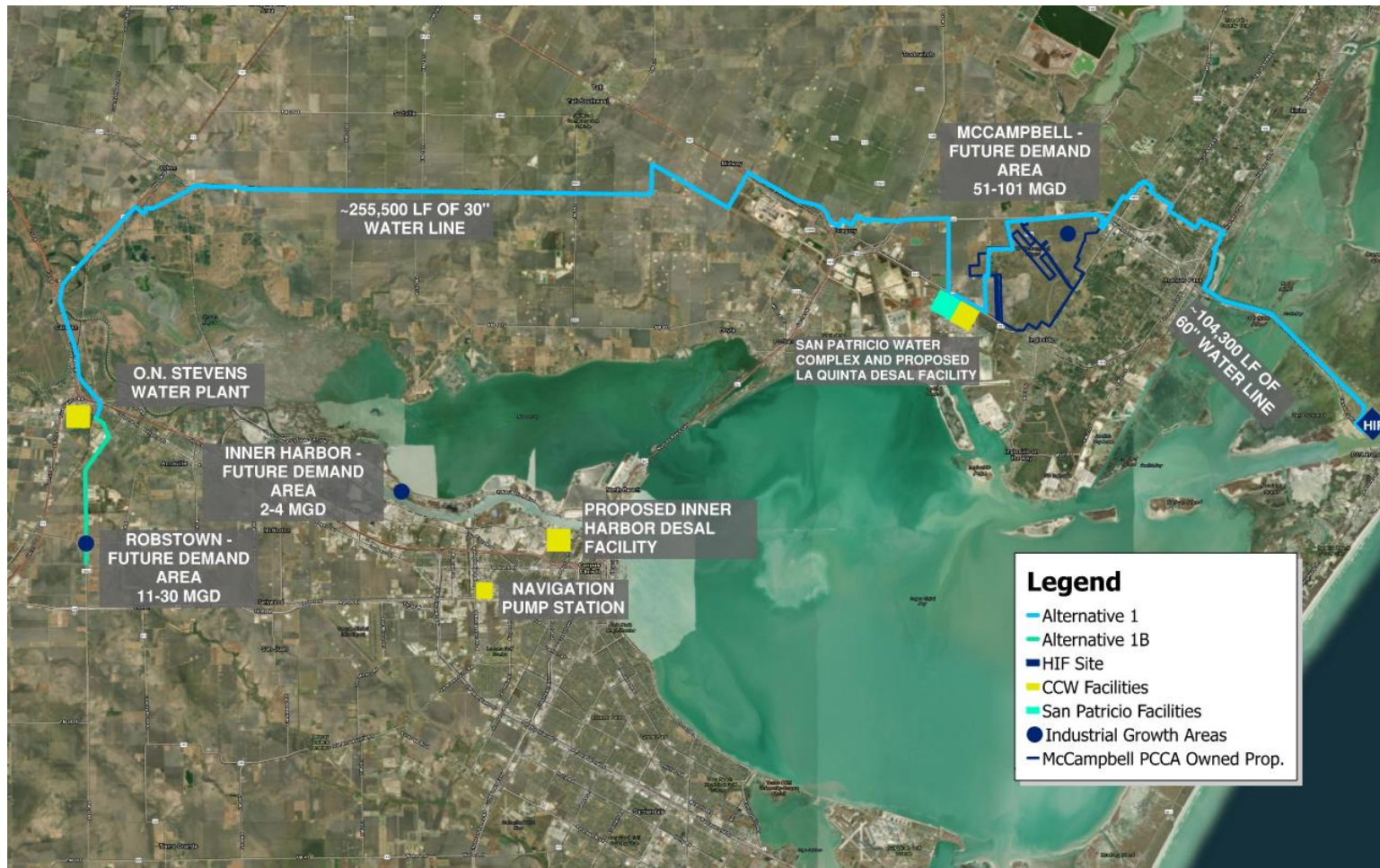
KEY INTEGRATION FACILITIES

Corpus Christi Water

- O.N. Stevens Water Treatment Plant
- Navigation Pump Station
- Sand Dollar
- Proposed La Quinta Facility
- Proposed Inner Harbor Facility

San Patricio Municipal Water District

- Raw and Treated Water Facilities



Initial Delivery to McC Campbell Area

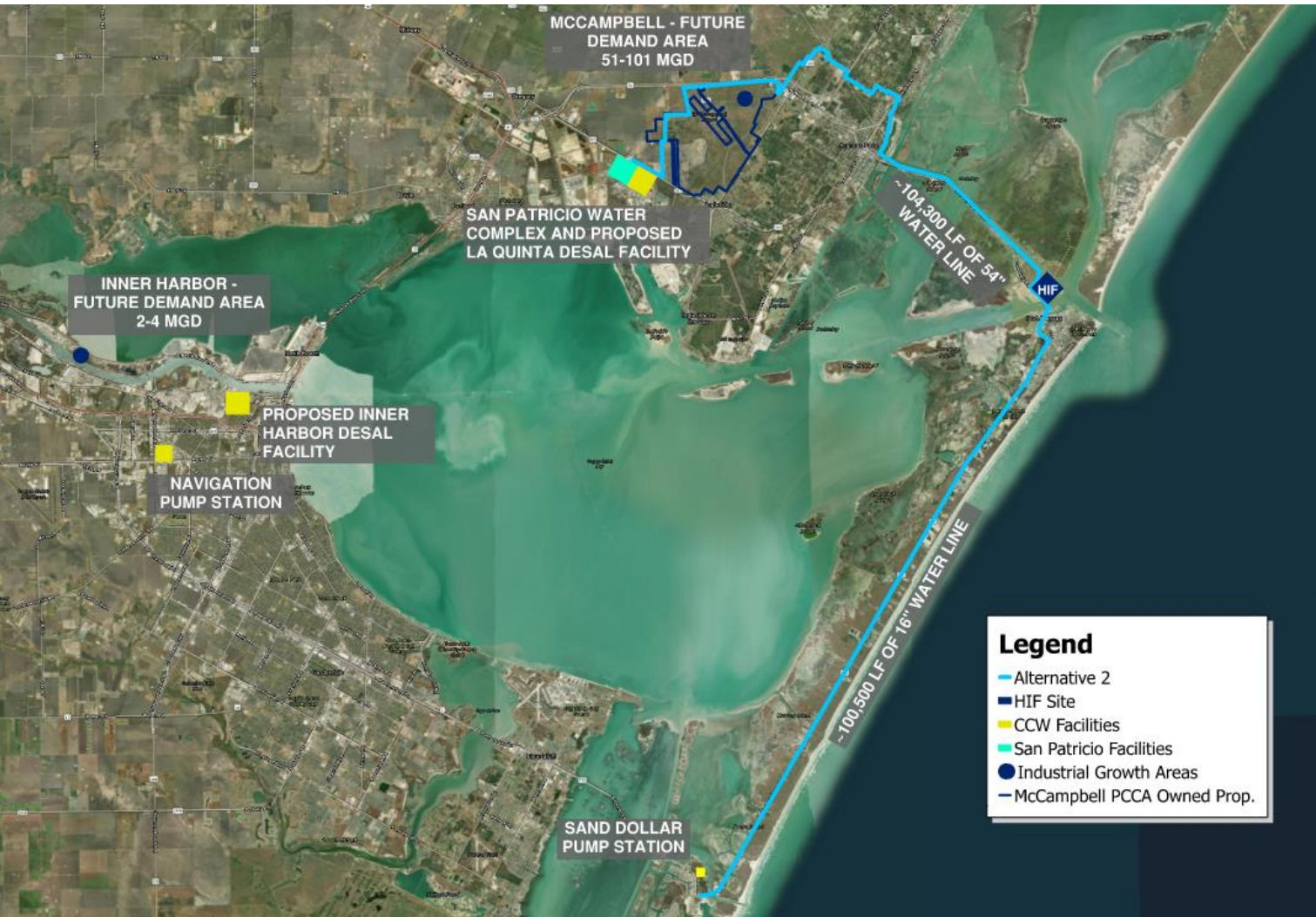
50 MGD from Harbor Island Facility

- Estimated 60-in Main
- Two water crossings
- Conventional pipe installation methods through Aransas Pass area
- Delivery/Integration with San Patricio MWD Facilities or new facility
- 38 MGD for McC Campbell Area use

Extend to ON Stevens Plant (1B - Extension to Robstown Area)

12 MGD from McC Campbell Area

- Estimated 30-in Main
- Conventional pipe installation methods
- Parallel existing easements to extent possible



Initial Delivery to McCampbell Area

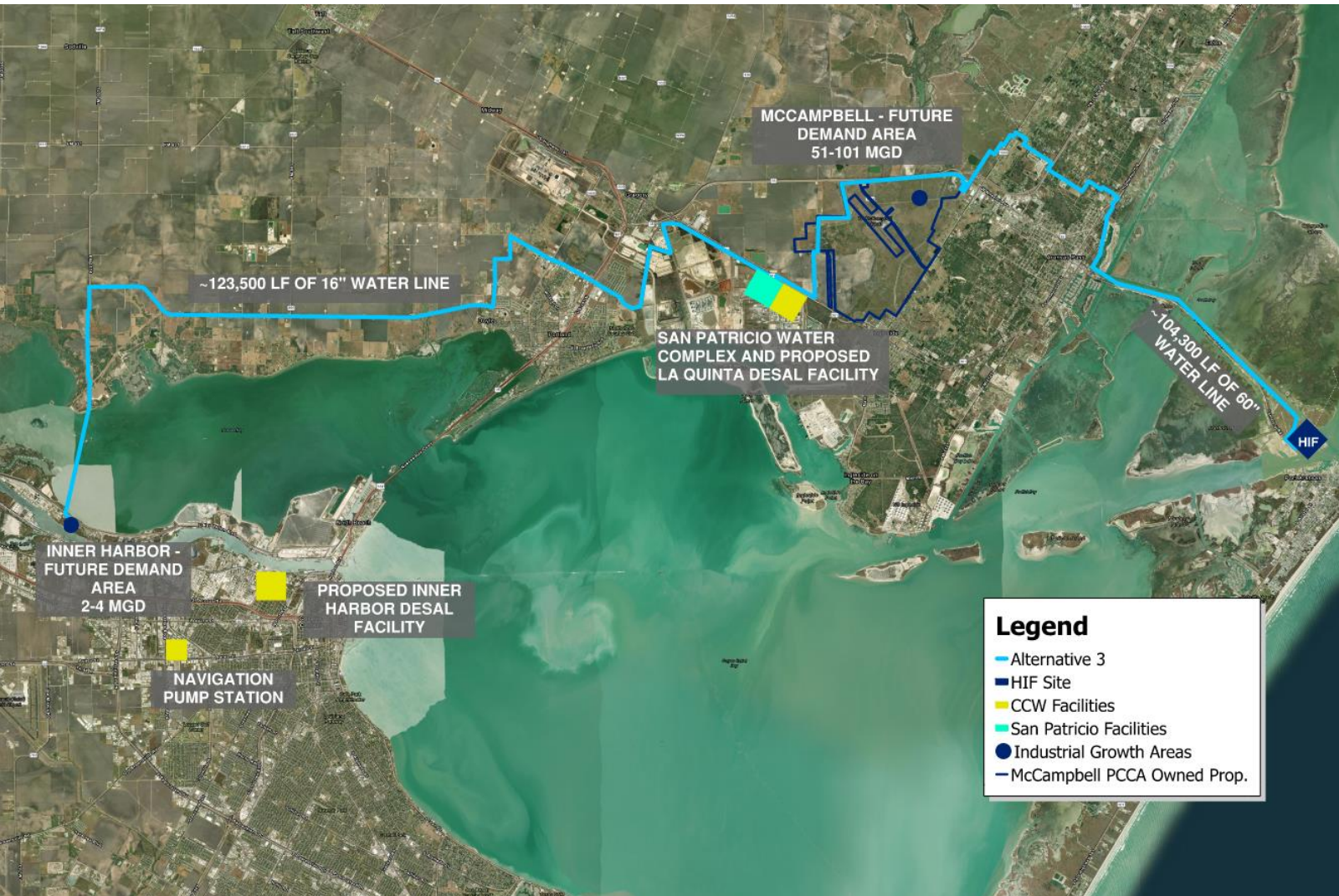
46 MGD from HIF

- Estimated 60-in Main
- Two water crossings
- Conventional pipe installation methods through Aransas Pass area
- Delivery/Integration with San Patricio MWD Facilities or new facility

Extend for Integration at Port Aransas and near CCW Sand Dollar Pump Station

4 MGD from HIF

- Estimated 16-in Main
- Traditional installation methods through Island
- Provides redundant service to the Island serving a high growth area



Initial Delivery to McC Campbell Area

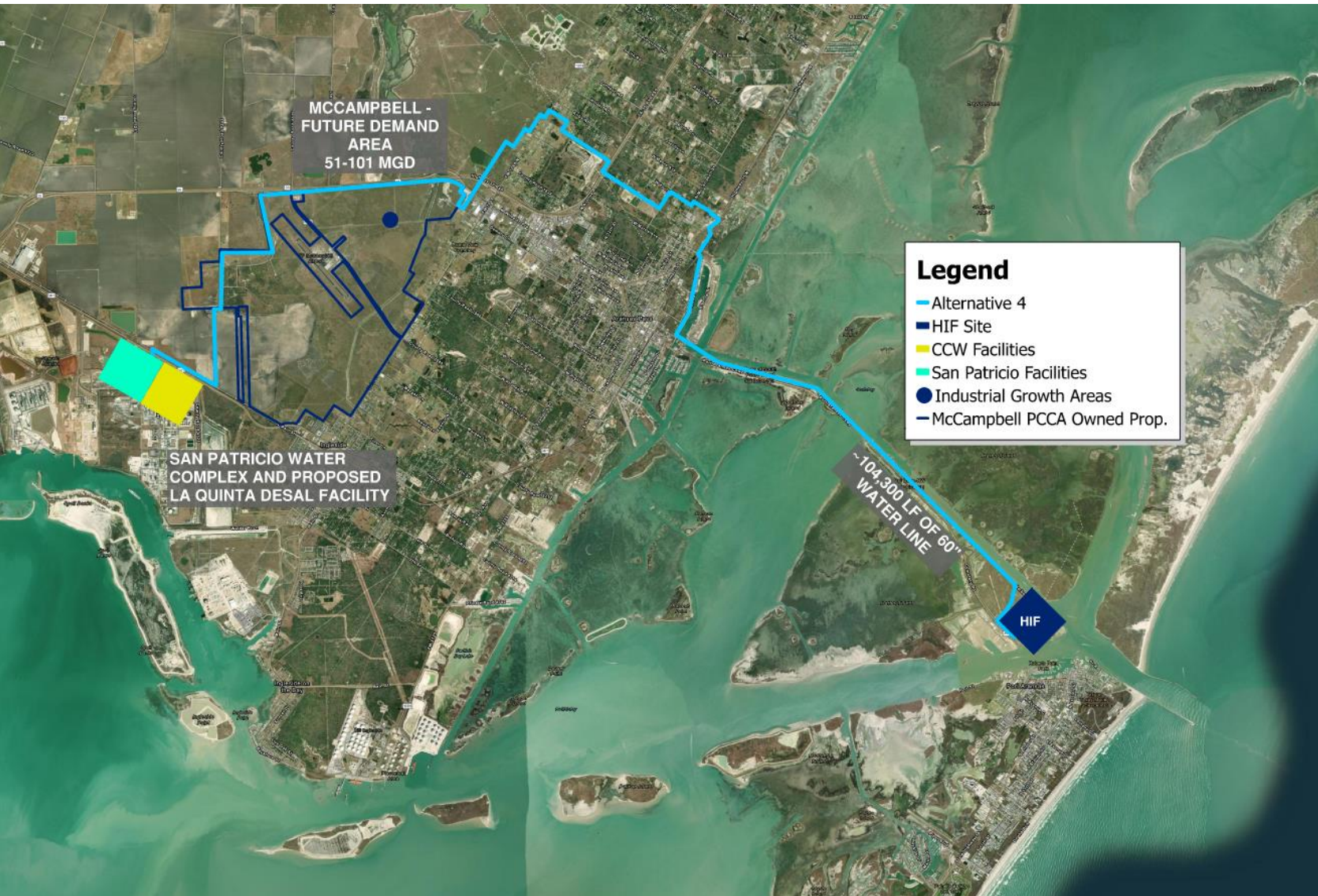
50 MGD from Harbor Island Facility

- Estimated 60-in Main
- Two water crossings
- Conventional pipe installation methods through Aransas Pass area
- Delivery/Integration with San Patricio MWD Facilities or new facility
- 48 MGD for McC Campbell Area use

Extend to Inner Harbor for Delivery

2 MGD from McC Campbell Area

- Estimated 16-in Main
- One water crossing
- Industrial water use only*
 - *not blended with existing CCW system

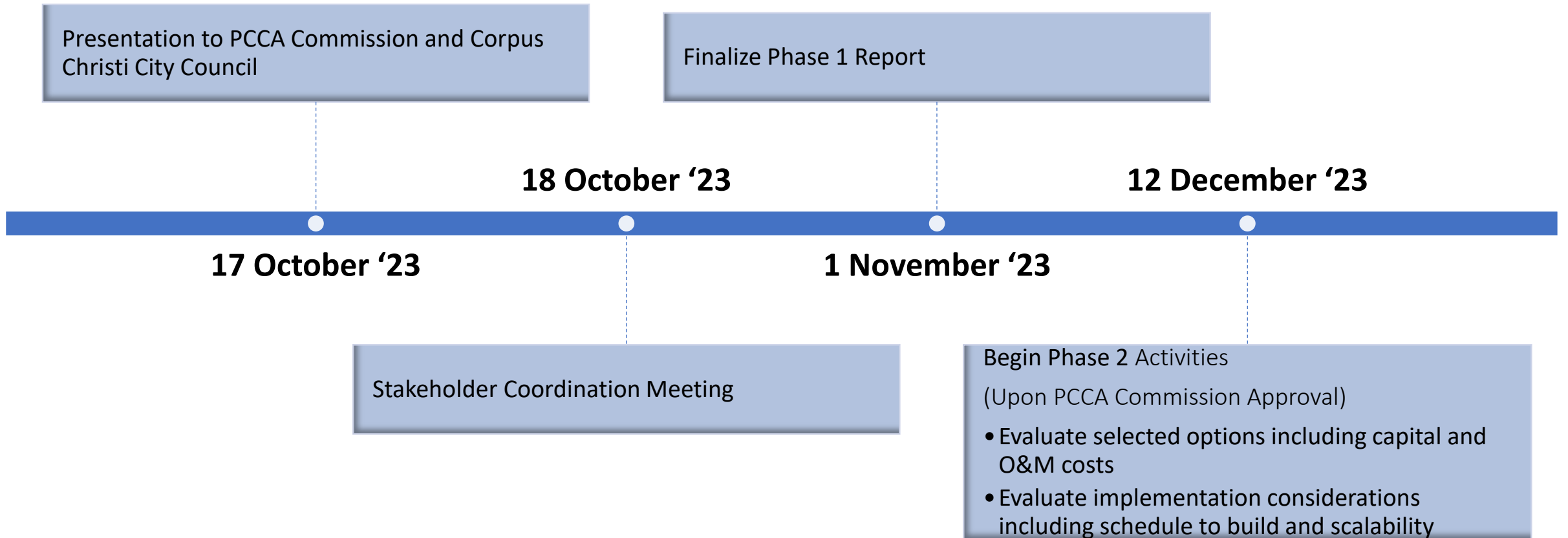


Delivery to McCampbell Area

50 MGD from Harbor Island Facility

- Estimated 60-in Main
- Two water crossings
- Conventional pipe installation methods through Aransas Pass area
- Delivery/Integration with San Patricio MWD Facilities or new facility

NEXT STEPS



QUESTIONS & DISCUSSION