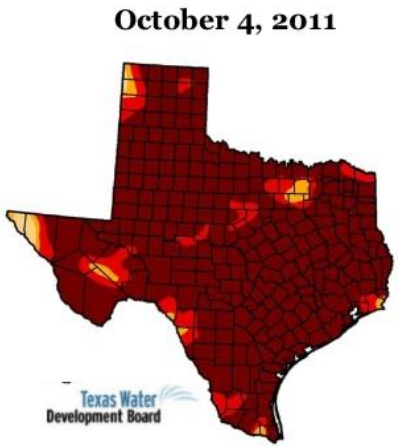
Seawater Desalination

Council Presentation
October 31, 2017

Project Background

- Discussion & Planning for this project prompted by 2011 – 2013 drought
- Discussions involved City of Corpus Christi and key Regional Stakeholders:

Corpus Christi REDC
San Patricio MWD
Lyondell Basell
Flint Hills Resources
Port of Corpus Christi
Voestalpine Texas
AEP Texas
Chemours
OxyChem
Valero
Sherwin Alumina
Citgo
Talen Energy
Cheniere



Project Background (Cont'd.)

Specific Project Drivers:

- Drought exposure coupled with increased economic activity
- Desire to reduce risk of curtailment to industrial operations
- Concern that reliance solely on surface water could impact region's competitiveness
- Interest in diversifying and strengthening the region's water supply by adding a drought-proof source
- Seawater desalination as water supply insurance

Project Background (Cont'd.)

Procurement of an Owner's Representative Team

- City and Stakeholders agreed to solicit and secure a professional services agreement for Owner's Representative Services with the most highly qualified firm or team

Owner's Representative role

- Advise the City in connection with a regional seawater desalination project delivery; and
- Identify risks and assist in the development of technical, organizational, financial, and environmental strategies.

Project Background (Cont'd.)

Selection of Owner's Representative Services

- Review and selection team consisted of City Staff and Stakeholders' Representatives
  - Frank Brogan (CCREDC / Port)
  - Michael Douglas (Sherwin)
  - Robert Kunkel (Lyondell Basell)
  - John Tummons (Oxy)
  - Mark Van Vleck (CoCC)
  - Brian Williams (SPMWD)
- Four responses received and shortlisted for interviews

- Selection: Freese & Nichols' Team
  - Local/Regional/State expertise
  - Supplemented with U.S./global expertise in all areas of seawater desalination project development

Project Background (Cont'd.)

Phase I-A – Evaluation of Feasibility & Cost Modeling

- Phase I-A funded by Stakeholders & City

Stakeholder	Contribution
CCREDC	$150,000
Port Industries Corpus Christi members	$150,000
City of Corpus Christi	$ 47,745
Phase I-A Total	**$347,745**

Phase I-A Outcomes

- Initial Plant Siting: Inner Harbor and La Quinta Channel areas
- Preferred capacity (phased): 2 X 10 MGD plants (expandable)
- Estimated Cost for each 10 MGD **potable** plant approx. $150M
- Industrial water requires separate transmission system ($100+ million)
- Power from the grid feasible/affordable (estimated $0.05 per kw-hr)
- Preferred Project Agency: Local Governmental Corp (LGC) enabling access to public financing which offers significant savings

Next Project Phase

Phase I-B (This item) Proposed Work Products include

- Procurement Methodology
- Site Selection
- Source Water Characterization
- Pre-Design
- Filing Permit Applications

Leading to Future Phase II

- Project Procurement & Implementation

TWDB SWIFT Funding [Phase I-B]

Texas Water Development Board (TWDB)

- State Water Implementation Fund for Texas (SWIFT)
- Council Workshop Presentation on Project – (April 13, 2017)
- Application Supported by Council (April 25, 2017)
- Bond Issuance Approved by Council (August 29, 2017)
- Loan Closing Scheduled (November 21, 2017)

Financing Arrangement

- $2.75M Loan
- Principal Lump Sum Payment After 8 Years

Why is this contract needed?

- Stakeholders determined:
  - Supplemental Project Definition Activities, including:
    - Technical
    - Environmental
    - Permitting
  - Are needed prior to initiating Phase II
- Reduction of project risk for Owner in contracting, construction, and operation
- Amendment of Master Services Agreement and follows the scope and tasks outlined in SWIFT submittal

FNI Team – Owner's Rep


Ron Guzman


Jorge Arroyo


N. Voutchkov


John Wolfhope


Neil Callahan

Scope of Phase I-B Contract

Supplemental Project Definition Activities include:

- Project Procurement Methodology
- Concentrate Management Strategies
- Project Siting, Site Surveys and Field Studies
- Filing of Owner's Permit Applications
- Infrastructure Integration Plan

Scope of Phase I-B Contract

- Conceptual Design of Intake & Outfall Facilities
- Source Water Characterization
- Power Supply Conceptual Design & Agreement
- Project Procurement Plan
- Communication and Public Outreach