



CITY OF CORPUS CHRISTI

Seawater Desalination

Tonight's Discussion

TOPICS TO BE COVERED

- Water Sources
- Supply and Demand
- Seawater Desalination 101
- Environmental Responsibility
- Bay Sustainability
- Cost and Rate Projections



Presenters



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Coastal Bend Water Supply



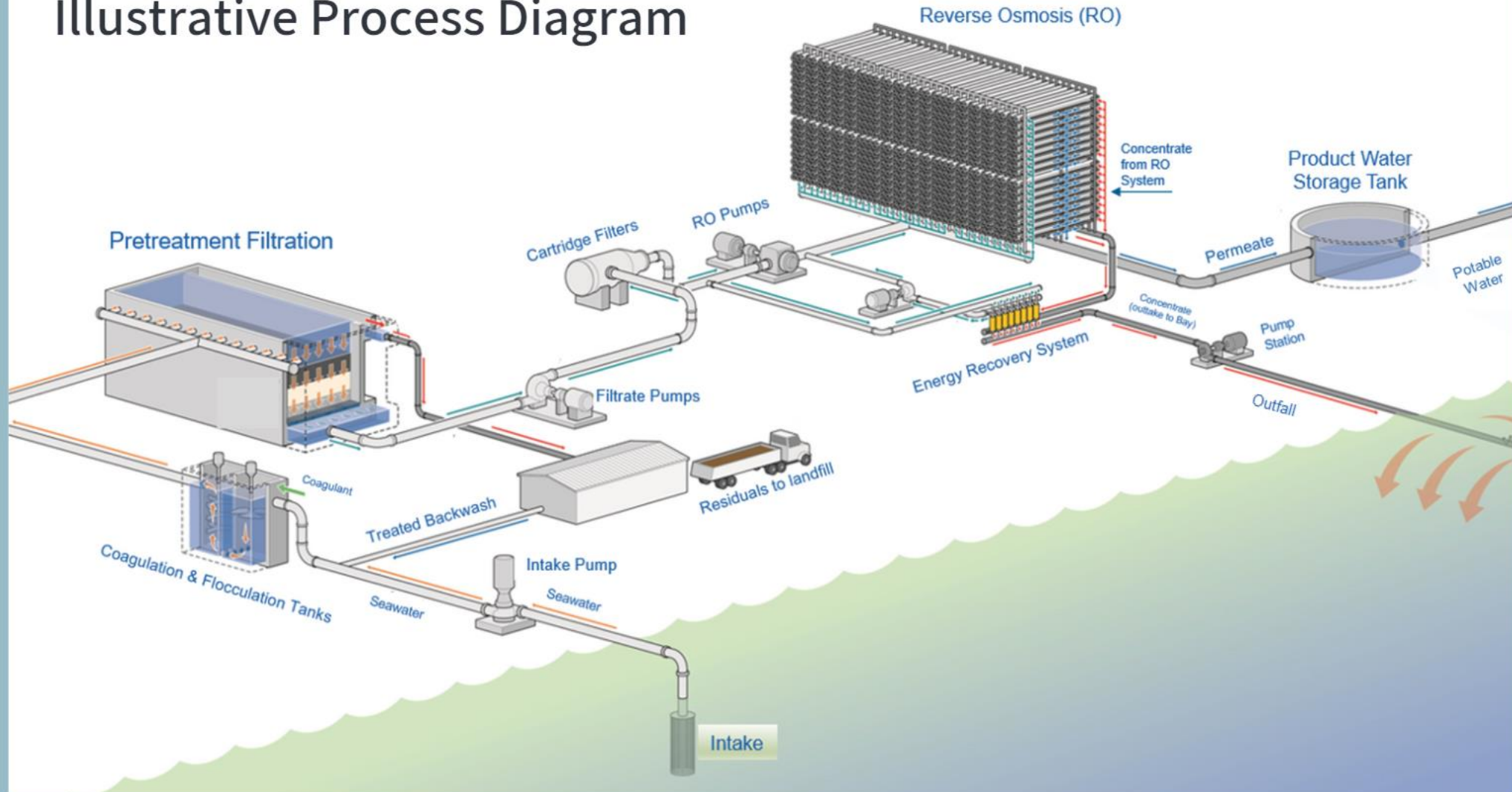
Supply vs. Demand



- City Council established that when water customers use 75% of existing water supply sources, a new water source needs to be added.
- Reaching the 75% threshold is called a "trigger point".
- In 2022, new industrial growth to the Coastal Bend will bring us to the trigger point.
- By adding seawater desalination as a water source, we will have enough supply to be under the 75% trigger point.

Seawater Desalination 101

Illustrative Process Diagram



Environmental Responsibility

- Project site selection
- Ecosystem mapping
- Marine-friendly intake
- Concentrate diffusion



Project Site Selection

Inner Harbor and La Quinta Channels

Screening criteria

- Environmental
- Social
- Tract characteristics
- Water quality
- Intake
- Outfall
- Product water delivery
- Power

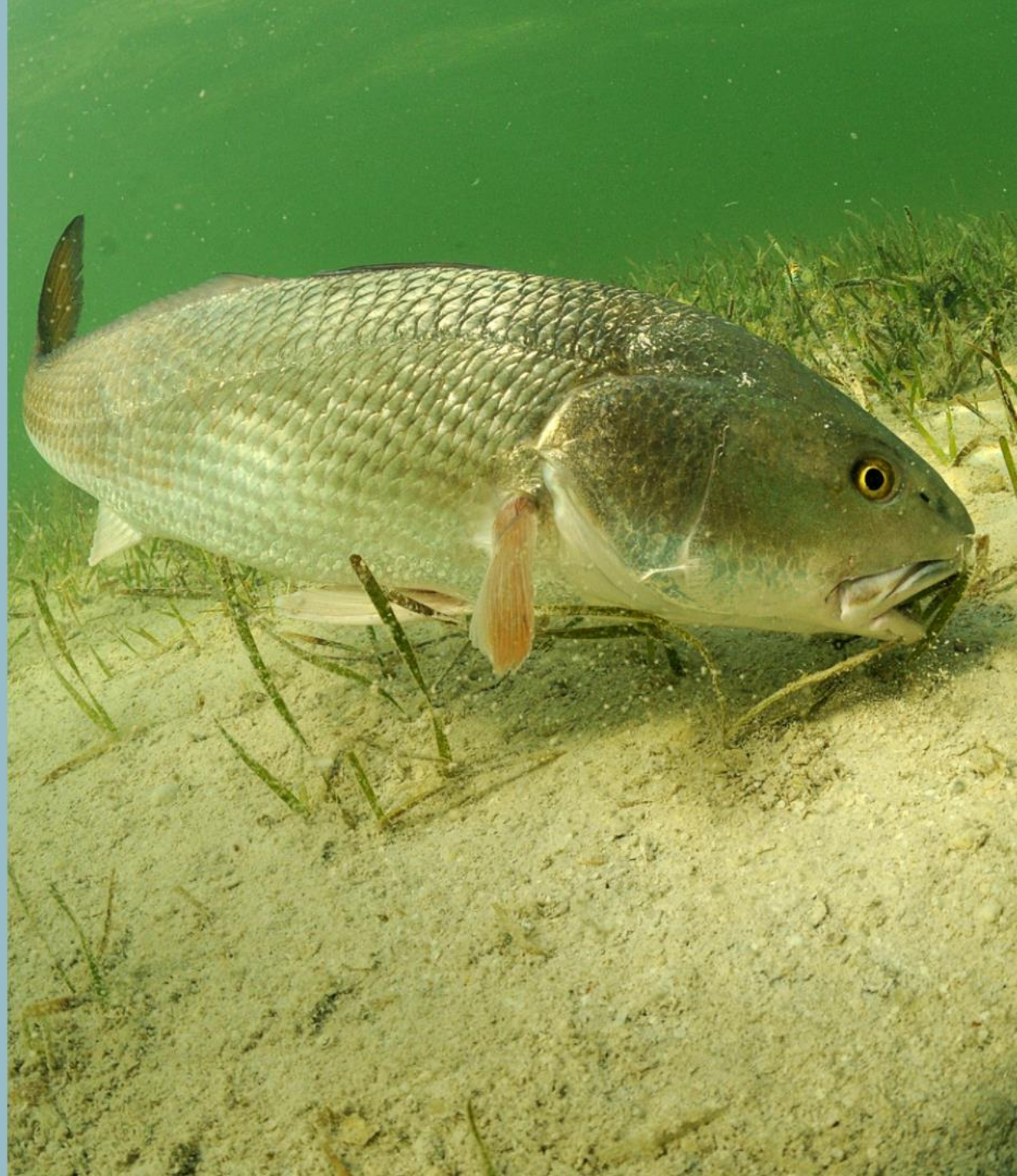
Evaluation criteria

- Environmental
- Cost
- Preliminary diffusion modeling
- Water quality
- Surveys
- Permitting considerations

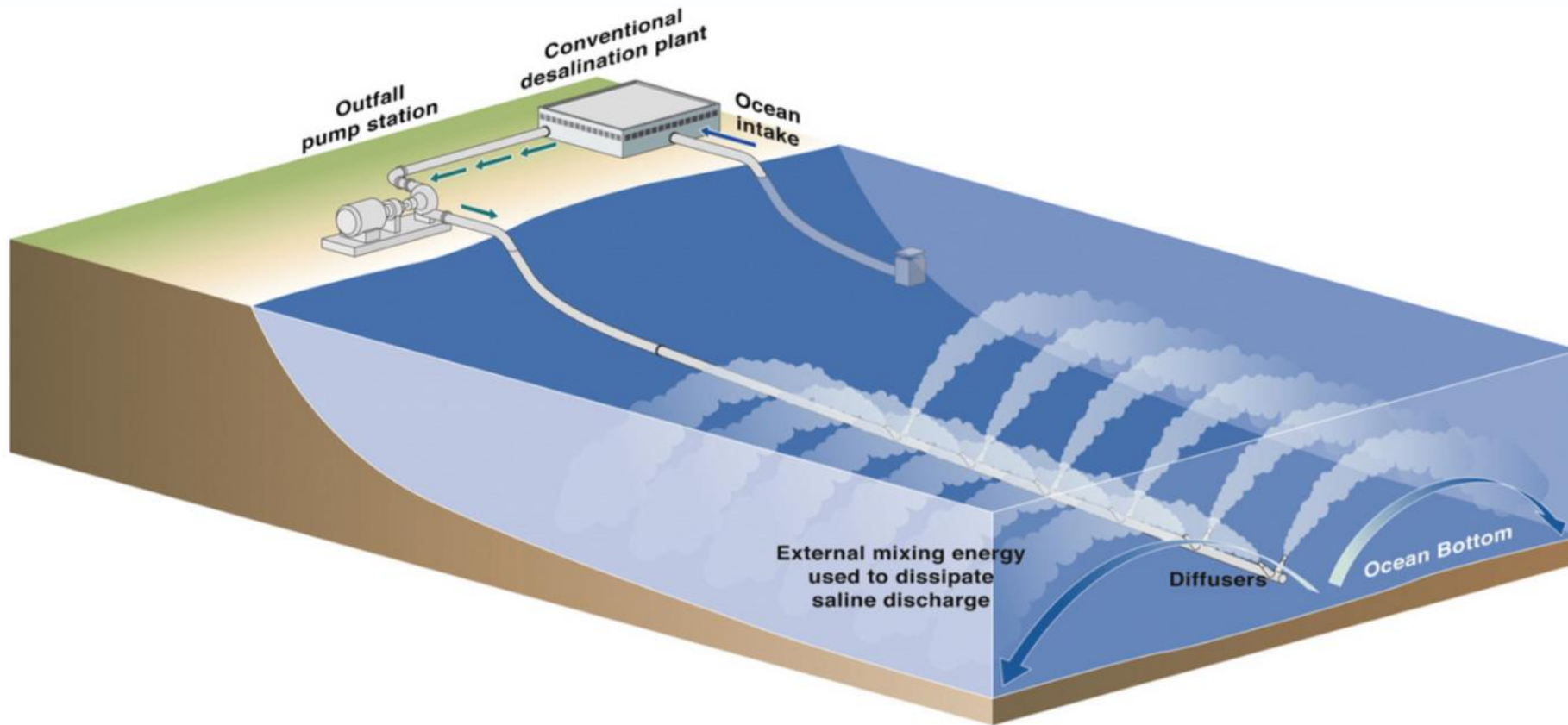


Intake Overview

- Opening sizes 3mm or less (or 2 pennies thick)
- Low inlet velocities, 0.34 mph (<0.5 feet per second)
- Sufficient depth for stable water quality and for mitigating impact to seagrasses



Outfall Overview



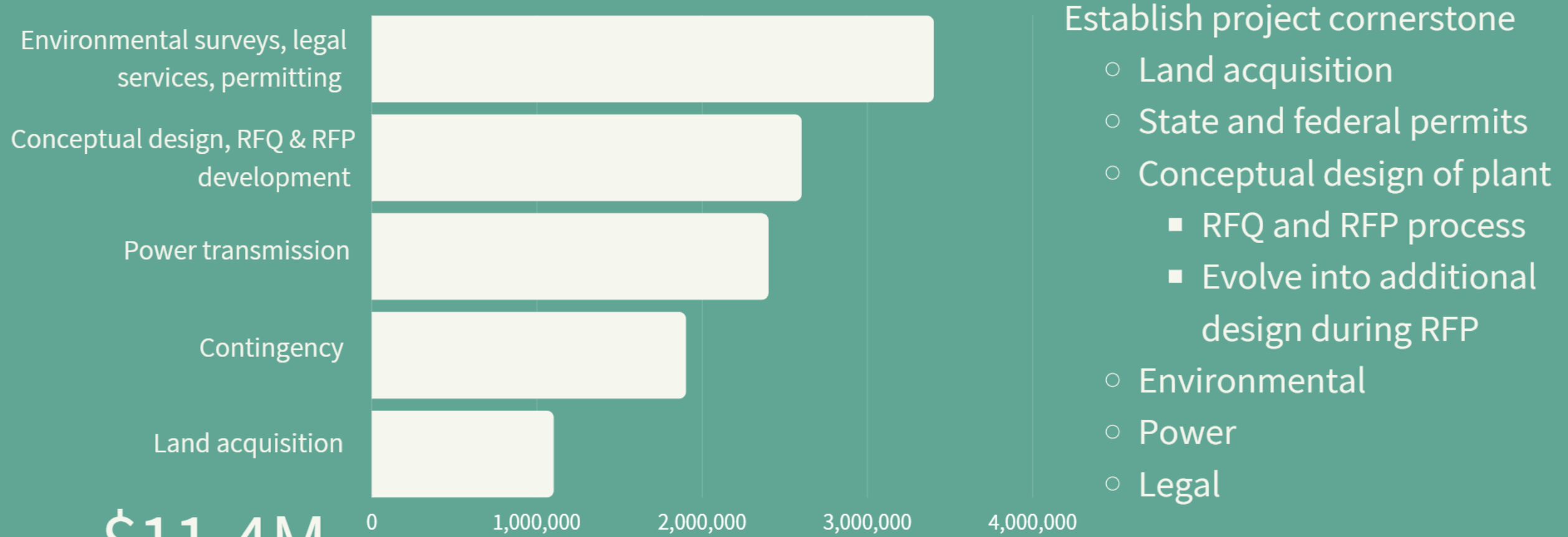
- Permitting requirements
- Jet diffusion
- Temperature < 1.5 degrees Fahrenheit above ambient

Bay Sustainability



- Salinity modeling
- Acoustic Doppler Current Profiler (ADCP)

Project Due Diligence



Cost and Rate Projections

- Up to \$211 million
- All costs are estimates
- Forecasts based on trends in the global market and cost + inflation models
- If seawater desalination is approved:
 - Average residential water customer(s) could see an approximate increase of \$0.77* on their monthly utility bill for water charges
 - The approximate \$0.77 increase could occur once every 2 years (when water rates are normally adjusted)



*rate impact forecasted to 2029

Where to learn more



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