

# Carlsbad Desalination Plant Discharge to the Pacific Ocean

*NPDES Reissuance  
and  
California Water Code Section 13142.5(b)  
Conditional Determination*

May 8, 2019

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Source Control Regulation Unit



# Presentation Outline

- Facility Overview
- Practical Vision & Receiving Waters
- Permitting Process & Requirements
- Intake & Discharge Technologies
- Mitigation
- Public Outreach
- Significant Comments & Responses





# Carlsbad Desalination Plant



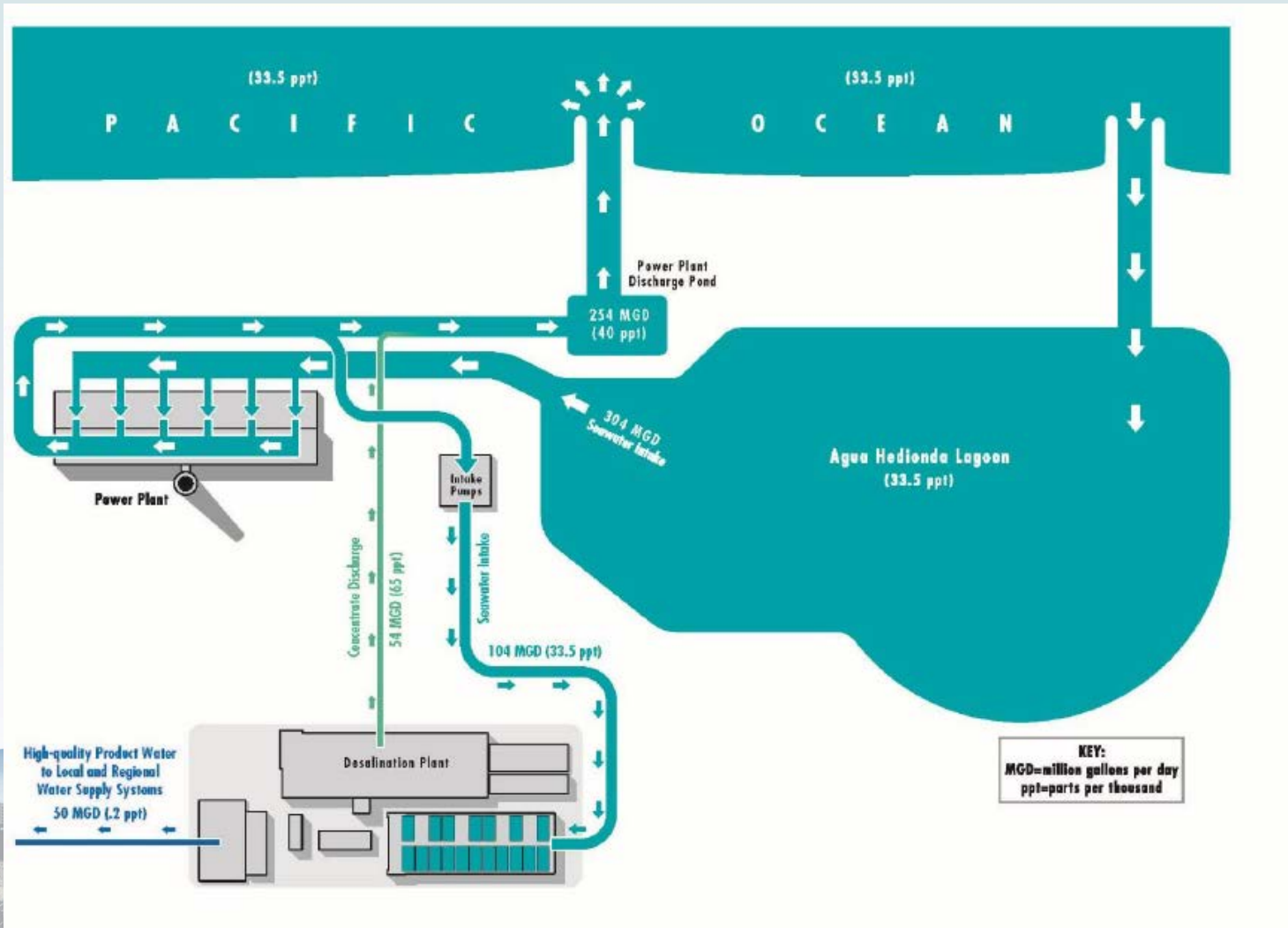


# Desalination Process

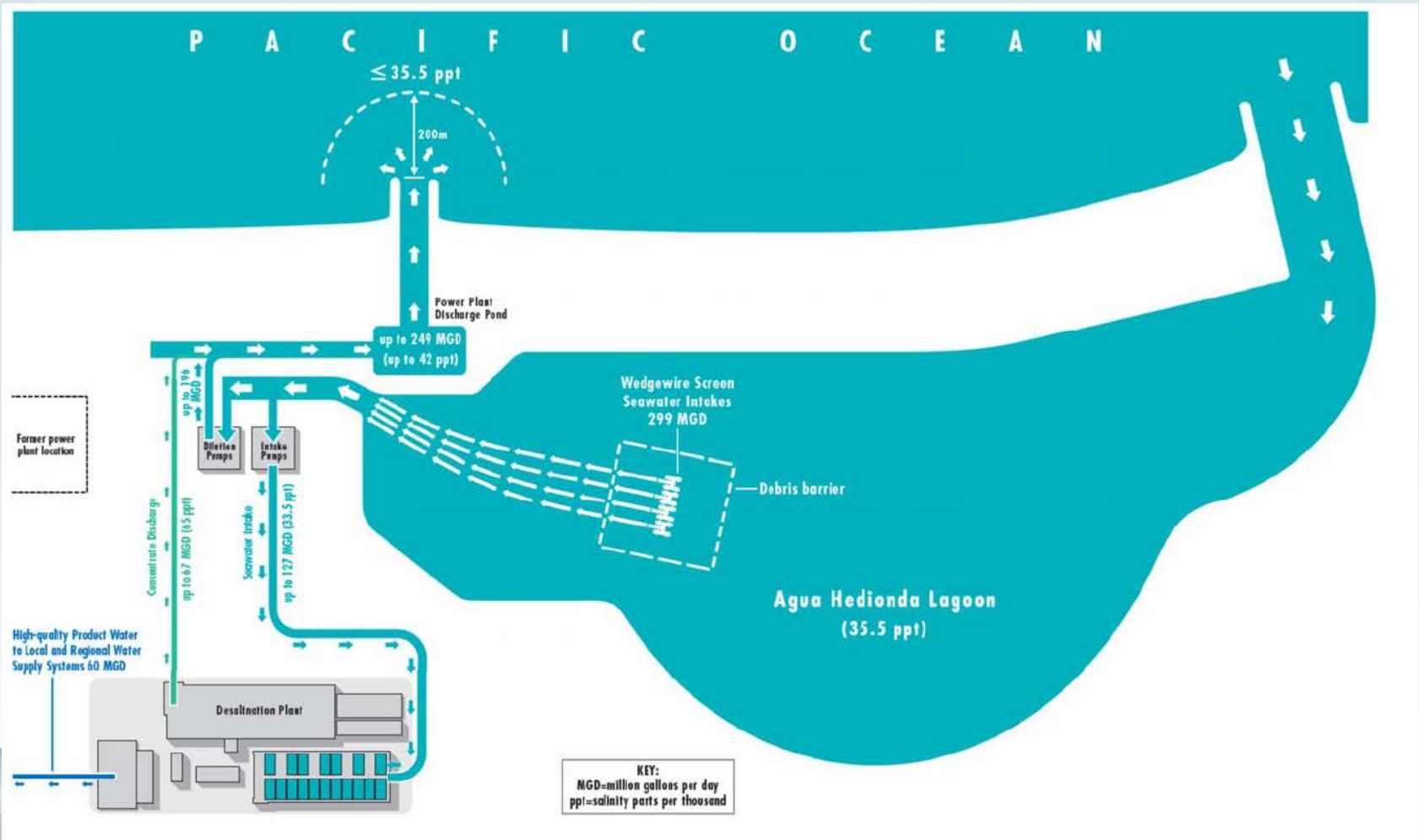




# Co-located Operations



# Stand-alone Operations

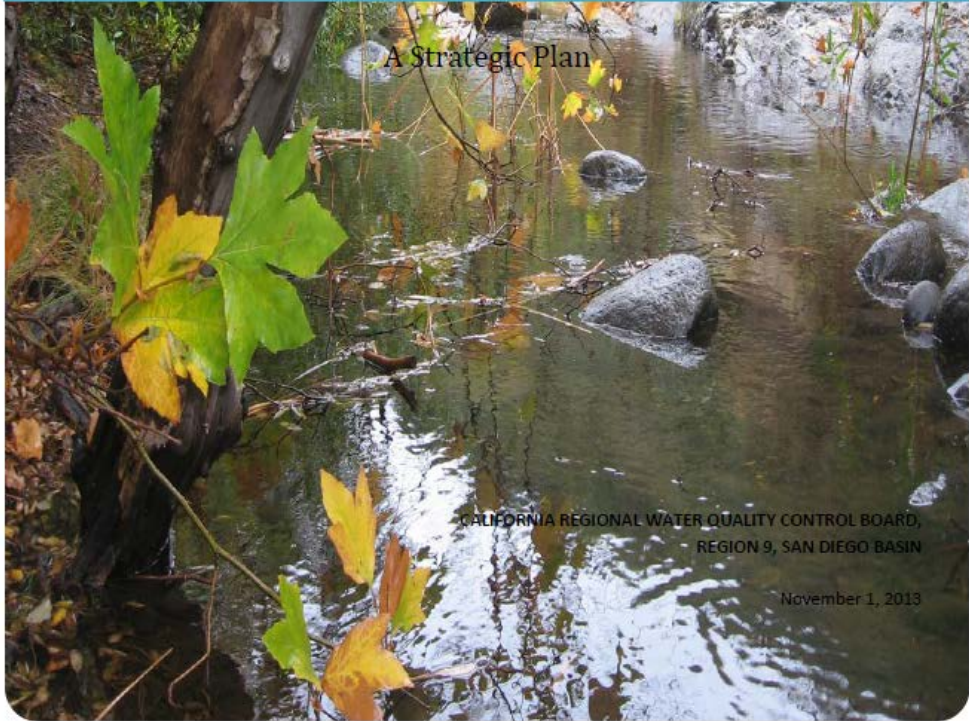




# Practical Vision



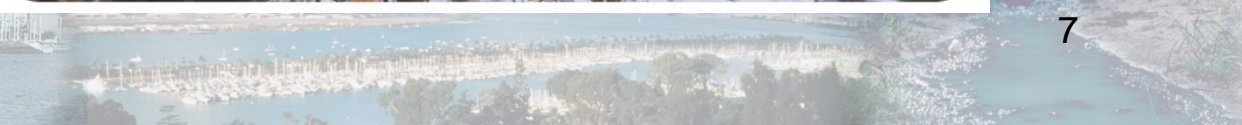
## San Diego Water Board Practical Vision



A Strategic Plan

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD,  
REGION 9, SAN DIEGO BASIN

November 1, 2013



# Agua Hedionda Lagoon





# Pacific Ocean



PHILLIP COLLA  
OCEANLIGHT.COM

# Permitting - Application Timeline

- March 2011 - Initial Application
- September 2015 - Revised Application & Request for Water Code Determination
- 2015 to 2018 – Permit Development & Supplemental Information
- December 2018 – Public Release of Draft Tentative Order



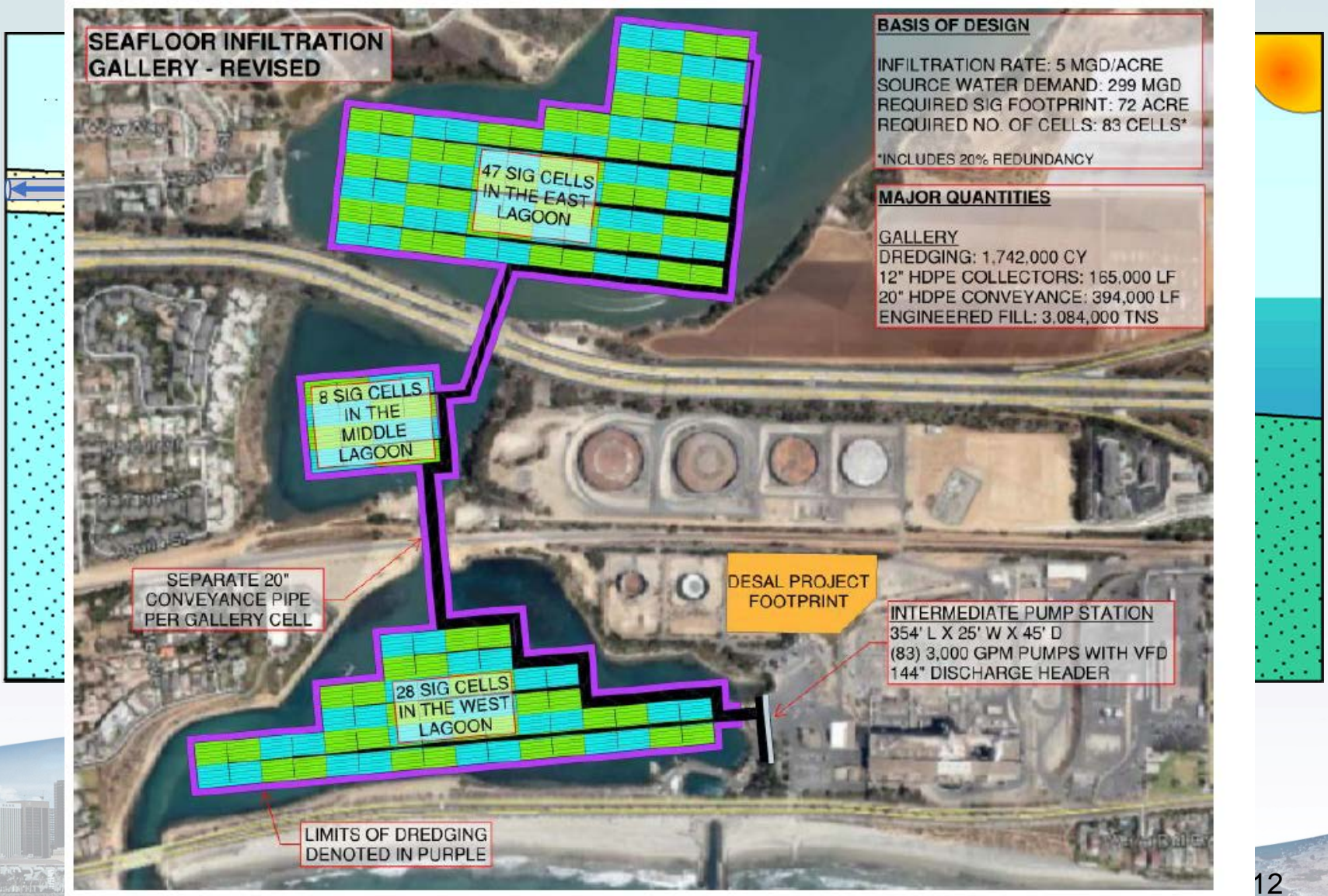


# CWC 13142.5(b) Determination

*“For each new or expanded coastal powerplant or other industrial installation using seawater for cooling, heating, or industrial processing, the best available site, design, technology, and mitigation measures feasible shall be used to minimize the intake and mortality of all forms of marine life.”*



# Intake Technology





# Selected Alternative 21



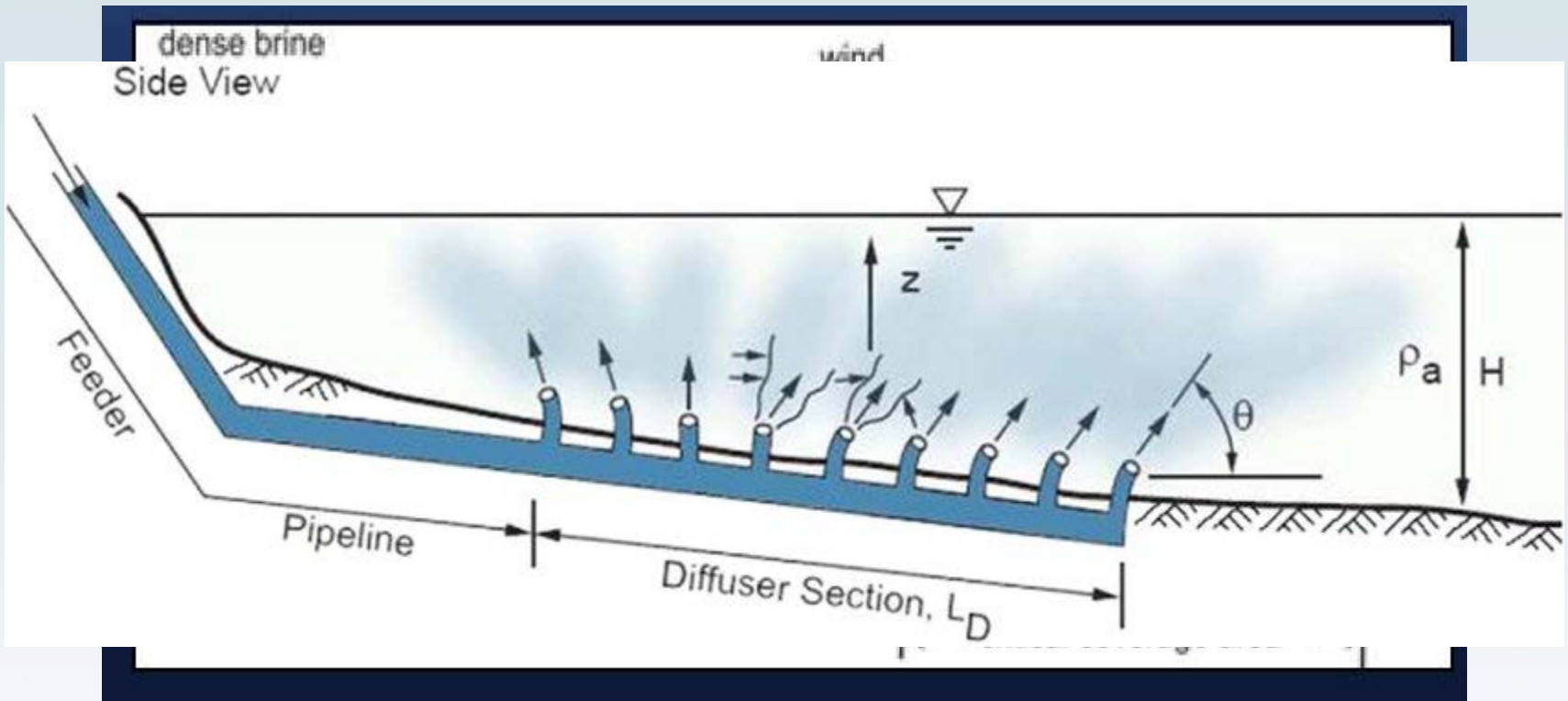
# Compliance Schedule

- New pumps by June 30, 2020
- Secure permits by December 31, 2022
- Construction complete by Sept. 1, 2023





# Discharge Technology

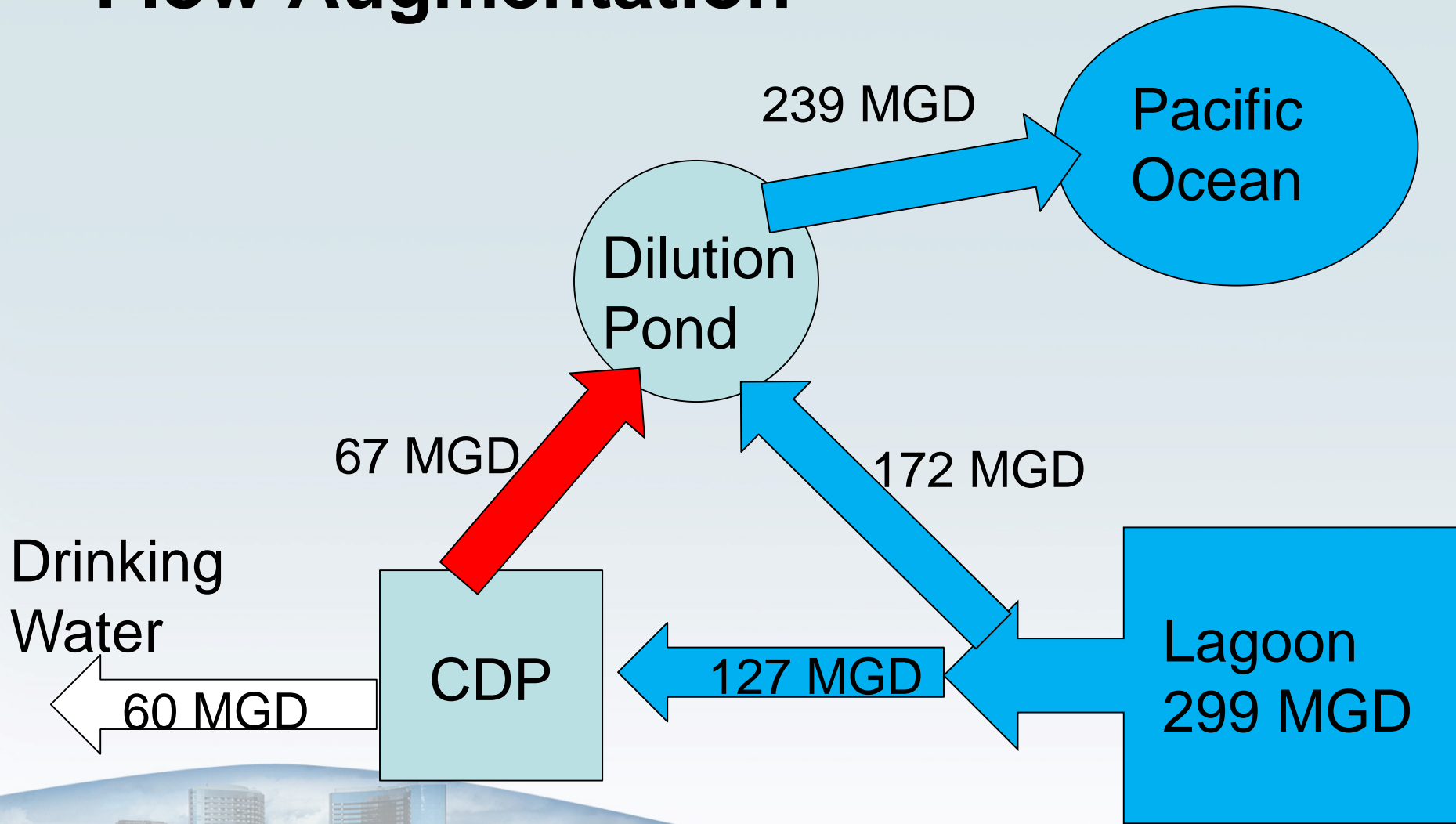


# Flow Augmentation





# Flow Augmentation



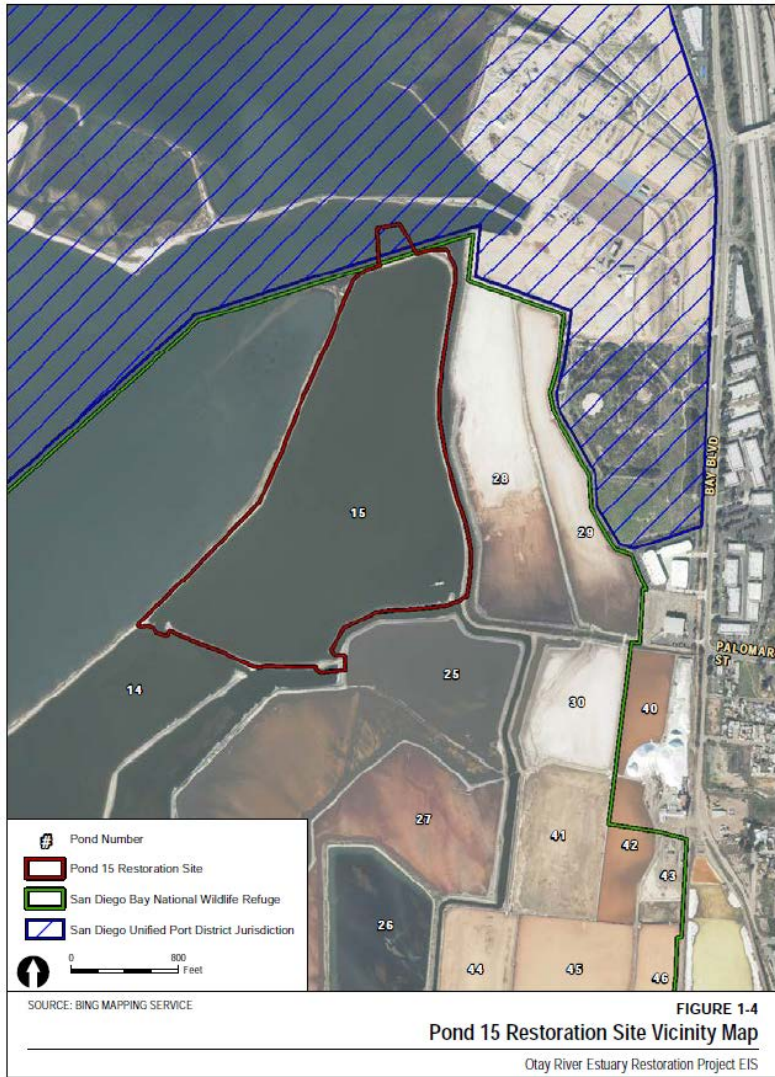
# Special Studies

- Marine Life Mitigation Plan Updated by June 2020
- Multiport Diffuser Analysis by May 2021
- Climate Change Action Plan by May 2022
- Flow Augmentation Study by 2025





# Mitigation – 68.3 Acres



# Additional Mitigation

- Old intake pumps taking in more water until the new intake pumps are operational; and
- Time gap between incurring impacts and mitigation being complete.





# Public Outreach

- Many meetings with Poseidon and the San Diego County Water Authority
- Meetings with Surfrider and Coastkeeper
- Monthly Executive Officer Reports with status updates
- Dedicated Website



# Comment Letters





# Significant Comments & Responses

## Poseidon Resources

- Comment:
  - Request to change flow limitation to an annual average to provide greater flexibility for plant operations
- Response:
  - Change accepted for individual waste streams
  - Salinity limit unchanged



# Significant Comments & Responses

## Poseidon Resources

- Comment:
  - Requested specifying the marine life impacts caused by a multiport diffuser to be compared to flow augmentation
- Response:
  - Multiport Diffuser Analysis is required in two years time rather than six years time





# Significant Comments & Responses

## Surfrider and Orange County Coastkeeper

- Comment:
  - Requested chronic toxicity compliance point at Monitoring Location M-001, undiluted brine
- Response:
  - Toxicity monitoring required at M-001 & 2
  - Sediment toxicity monitoring required



# Conclusion

