Pure Water Phase 2 Planning Update

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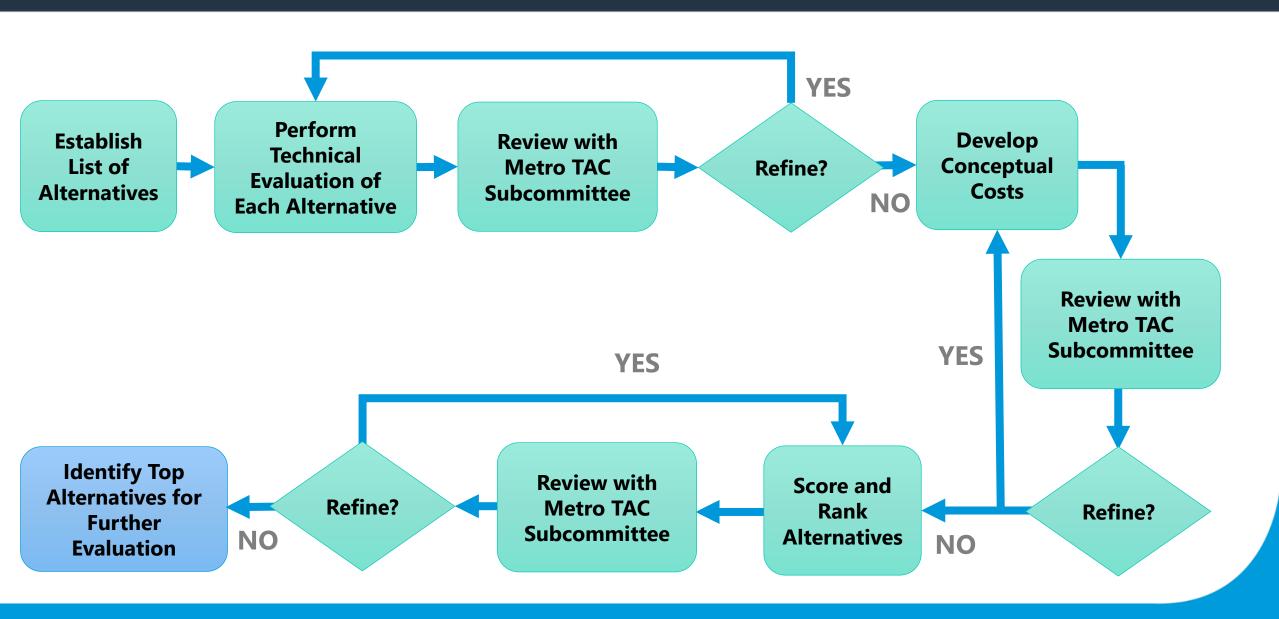


- Completed Work
- Review of Phase 2 Alternatives

Alternatives to Further Evaluate

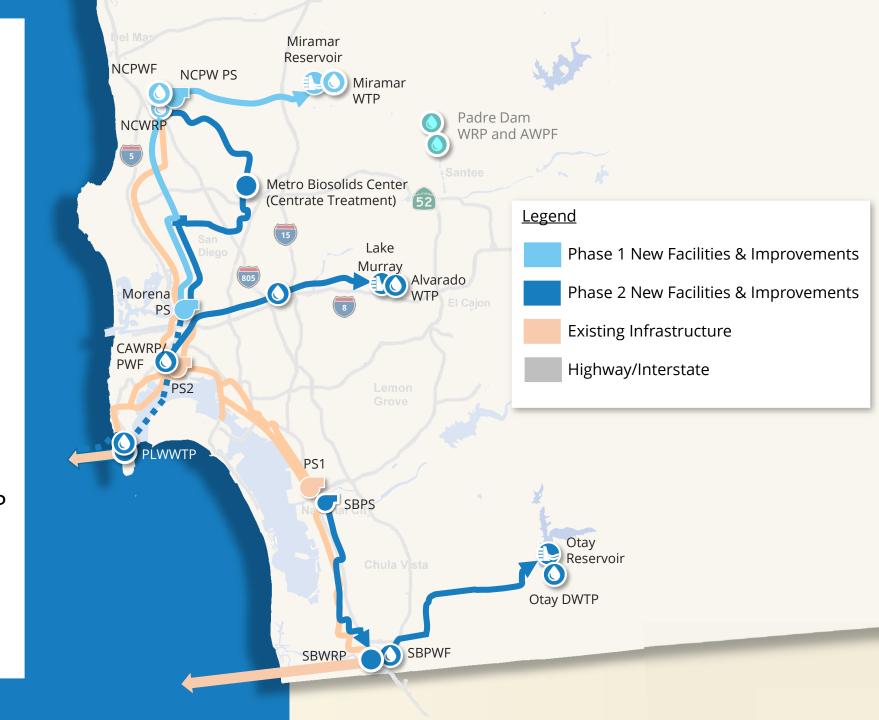


Phase 2 Alternative Analysis – Work Completed



Alternative Development includes combinations of:

- Water Reclamation Plant
 - Point Loma
 - Harbor Drive
 - South Bay
- Purified Water Facility
 - Harbor Drive
 - Mission Valley
 - South Bay
- With and Without Waiver/Secondary Equivalency
- Brine/Centrate bypass of PLWTP directly to ocean outfall
- Padre Dam 10.5 mgd ECAWP facility a part of a "regional" 83 mgd solution





Phase 2 Alternative Description

Alternative	Description
1 – Baseline	WRP at Harbor Drive PWF at Mission Valley for 53 mgd
2 – Baseline with Brine/Centrate Bypass PLWTP	Alt 1 with treated centrate and brine to Pt. Loma outfall Full secondary at the PLWTP
3 – WRP at PLWTP	WRP at PLWTP PWF at Harbor Drive for 53 mgd Treated centrate/brine to outfall
4 – 53 mgd at South Bay	WRP and PWF at South Bay
5 – South Bay Hybrid	WRF/PWF at South Bay for 15 mgd WRF/PWF at Harbor Drive for 28 mgd Padre Dam 10 mgd part of 83 mgd Treated centrate/brine to outfall for full secondary
6 – Central Area Hybrid	WRP at Harbor Drive PWF at Mission Valley for 43 mgd Padre Dam 10 mgd part of 83 mgd Treated centrate/brine to outfall for full secondary



Alternatives for Further Evaluation

Alternative [Designation	Waiver / Secondary Equivalency		Brine / Treated Centrate Bypass to PLOO		Phase 2 Purified Water Production (mgd)	
		Yes	No	Yes	No	53	43
1	A (1)	Χ			X	Χ	
	B (2)		X		X	Χ	
Secondary	С	Χ		X		Χ	
at Harbor	D		X	X		Χ	
Drive	E	Χ			X		Χ
	F		X		X		Χ
	G (3)	Х		X			X
	H (4)		X	X			X
3	A (5)	Х		X		Χ	
Secondary	B (6)		X	X		Х	
at Point	Ċ	X		X			X
Loma	D		X	X			Х
Matan							

Notes:

- Alternative 1A in this study
- Alternative 1B in this study
- Alternative 6A in this study
- Alternative 6B in this study
- Alternative 3A in this study
- Alternative 3B in this study



Conceptual Phase 2 Milestones (1)

Milestone	Phase 2
Phase 2 refinement of alternatives	July 2019 – June 2020
Demonstration testing	October 2019 (design/construction) - 2026
10% Design	July 2023 – July 2024
Environmental Permitting	July 2024 – July 2029
30% Design	January 2025 – January 2026
Final Design	2027-2029
Construction	2029 – 2033 ⁽²⁾

- 1. To be updated during the alternative refinement
- 2. 2035 deadline for Pure Water production



