

Initial screening results

Initial Screening Criteria	Vertical Beach Wells	Onshore Infiltration Gallery	Radial Collector Wells	Slant Wells	Subsurface Infiltration Galleries	HDD Wells
Geotechnical Hazards						
1 Seismic Hazard						
a. Project facilities would cross a known fault line, or be exposed to a seismic hazard that could otherwise not be protected from loss by design	PF	PF	PF	PF	NF	PF
Hydrogeologic Factors						
2 Impact on existing freshwater aquifers, local water supplies, or existing water users						
a. Volume of groundwater in storage is reduced due to subsurface intake pumping, impacting drought supply & requiring additional desalination to make up for loss of groundwater.	PF	PF	PF	PF	PF	PF
b. Operation of subsurface intake causes salt water intrusion into groundwater aquifers.	PF	PF	PF	PF	PF	PF
3 Impact to sensitive habitats such as marshlands, drainage areas, etc.						
a. Operation of subsurface intake drains surface water from sensitive habitat areas or adversely changes water quality.	NF	NF	NF	NF	PF	PF
4 Insufficient length of beach available for replacing full yield derived from existing open ocean intake.						
a. Small individual facility yield, large number of facilities required, & minimum spacing between facilities requires more shoreline than is available.	PF*	PF*	PF*	PF*	PF	PF
Benthic Topography						
5 Land type makes intake construction infeasible.						
a. Depth to bedrock too shallow (i.e., less than 40-feet deep); rocky coastline; cliffs	PF	PF	PF	PF	PF	PF
Oceanographic Factors						
6 Erosion, sediment deposition, sea level rise, or tsunami hazards.						
a. Oceanographic hazards make aspects of the project infrastructure vulnerable in a way that cannot be protected &/or would prevent the City from being able to receive funding or insurance for this concept.	PF	PF (4)	PF	PF	NF	PF
Notes:						
(1) NF = Not Feasible (2) PF = Potentially Feasible (3) PF* = Potentially Feasible, but does not meet current study goals (4) Potentially feasible at Leadbetter & West Beach only. Sediment transport conditions at East Beach make the implementation of an onshore infiltration gallery infeasible (refer to Section 3.4.2).						

Initial screening results (continued)

Initial Screening Criteria	Vertical Beach Wells	Onshore Infiltration Gallery	Radial Collector Wells	Slant Wells	Subsurface Infiltration Galleries	HDD Wells
Presence of Sensitive Habitats						
7 Proximity to marine protected areas						
a. Location would require construction within a marine protected area.	PF	PF	PF	PF	PF	PF
Design & Construction Constraints						
8 Adequate capacity						
a. Subsurface material lacks adequate transmissivity to meet target yield of at least 15,898 gpm (i.e., build-out intake capacity necessary to produce 10,000 AFY).	NF	NF	NF	NF	PF	PF
9 Lack of adequate linear beach front for technical feasibility						
a. Length of beachfront available is not sufficient for construction of the required number of wells of all or portion of intake to meet target yield.	NF	NF	NF	NF	PF	PF
10 Lack of adequate land for required on-shore facilities						
a. Surface area needed for on-shore footprint (i.e., pump house) of an intake unit is greater than the available onshore area.	PF	PF	PF	PF	PF	PF
b. Requires condemnation of property for new on-shore intake pumping facilities.	PF	PF	PF	PF	PF	PF
11 Lack of adequate land for required on-shore construction staging						
a. The amount of land available to stage construction does not meet need.	PF	PF	PF	PF	PF	PF
12 Precedent for subsurface intake technology						
a. Intake technology has not been used before in a similar seawater or fresh water application at a similar scale.	PF	PF	PF	PF	PF	NF
Passes Initial Screening? Yes (Y) or No (N)	N	N	N	N	N	N
Notes:						
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(4) Potentially feasible at Leadbetter & West Beach only. Sediment transport conditions at East Beach make the implementation of an onshore infiltration gallery infeasible (refer to Section 3.4.2).						