

Appendix C

Site Selection Criteria Table

Appendix C- Brackish Desalination Siting Criteria Data Summary

DATUM	PURPOSE	DATA SOURCE
1) Regional Supply and Demand Analysis, including:		
a) Regional population	Future demand	DB12, Internal GIS analysis
b) Long term municipal shortages averaged over region	Future Demand	DB12, Internal GIS analysis
c) Short term vulnerability to drought	Immediate and future demand	NOAA, TCEQ, Watermaster
d) Interconnectivity between existing distribution networks	Joint Regional Use	Facility operators, Irrigation District Managers
e) Regional supplies		
i) Existing Facilities		
(1) Existing Groundwater Desalination Facilities		
(a) Wellfield	Current production and additional capacity	DB12, TCEQ Water Supply System Database, Directly from facility operators
(i) Location		
(ii) Facility capacity, land on site, any planned expansions?		
(iii) MAG limitation?		
(b) Treatment Plant	Current production and additional capacity	DB12, TCEQ Water Supply System Database, Directly from facility operators
(i) Location		
(ii) Power source and limitations		
(iii) Capacity, available land on site, any planned expansions?		
(iv) If planned, on what basis (adopted Cap Improvement Budget, etc.)		
(c) Storage	Current production and additional capacity	DB12, TCEQ Water Supply System Database, Directly from facility operators
(i) Location		
(ii) Capacity, any planned expansions?		
(iii) If planned, on what basis (adopted Cap Improvement Budget, etc.)		

<ul style="list-style-type: none"> (d) Distribution <ul style="list-style-type: none"> (i) Location (ii) Capacity, any planned expansions? (iii) If planned, on what basis (adopted Cap Improvement Budget, etc.) (iv) Available ROW 	<p>Current production and additional capacity</p>	<p>DB12, TCEQ Water Supply System Database, Directly from facility operators</p>
<ul style="list-style-type: none"> (e) Power Infrastructure <ul style="list-style-type: none"> (i) Proximity to existing generators (ii) Existing Capacity (iii) Cost (\$/kwh) (iv) Potential for renewable/dedicated power source 	<p>Current production and additional capacity</p>	
<ul style="list-style-type: none"> (f) Contractual agreements and service areas 	<p>Joint Regional use</p>	<p>DB12, TCEQ Water Supply System Database, Directly from facility operators</p>
<ul style="list-style-type: none"> (g) Brine disposal method <ul style="list-style-type: none"> (i) Location receiving brine (ii) Conveyance method and distance (iii) Current capacity/ expansion potential (iv) (see also Regulatory) 	<p>Capacity, joint regional use/ future use</p>	<p>TCEQ Water Supply System Database, Directly from facility operators</p>
<ul style="list-style-type: none"> (2) Existing (other) water treatment facilities <ul style="list-style-type: none"> (a) Source <ul style="list-style-type: none"> (i) Volume (ii) Quality (b) Treatment type (c) Service area (d) capacity 	<p>Could provide infrastructure for desalinated water</p>	<p>TCEQ Water Supply System Database, Directly from facility operators</p>
<ul style="list-style-type: none"> (1) Existing (other) wastewater treatment facilities <ul style="list-style-type: none"> (a) Source <ul style="list-style-type: none"> (i) Volume (ii) Quality (b) Treatment type (c) Service area (d) capacity 	<p>Treatment or disposal of brine</p>	<p>TCEQ Water Supply System Database, Directly from facility operators</p>

2) Legal, regulatory, and institutional factors	Joint Regional Use	CCN data, RGRWA Input, discussions with local organizations/officials/facility managers
a) Analysis of water providers and potential for regional distribution oversight/management		
b) Environmental impacts		
i) site specific impacts on natural environment of new plant or expansion, and new pipelines or storage reservoirs	Potential NEPA issues	
3) Aquifer analysis (Supplemented by the TWDB BRACS study)		
a) Available volumes	Availability for treatment	TWDB Productive Aquifer areas map, GAM model data -> GIS saturated thickness map
b) Quality	Required extent/cost of treatment	TWDB TDS map/data (what is already published), BRACS Study not likely to be complete within timeline.
c) Accessibility	Difficulty/Cost implications	Internal GIS analysis, BRACS study not available within timeline, but may be useful for later analysis.
i) Depth		
ii) Distance to users		

