

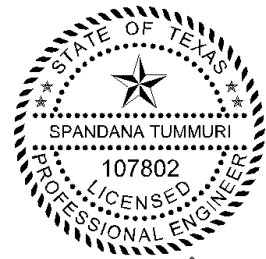
# FINAL MEMORANDUM



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**TO:** David Parkhill, Davies Mtundu  
**FROM:** Spandana Tummuri  
**SUBJECT:** Preliminary Strategy Identification and Evaluation (Task 1104)  
**DATE:** 2016/11/23  
**PROJECT:** Raw Water Supply Master Plan 16-015-1 (SJR15616)



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FREESE AND NICHOLS, INC.  
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F-2144

The San Jacinto River Authority (SJRA) retained Freese and Nichols, Inc. (FNI) to develop a raw water supply master plan (RWSMP) for their Highlands and Lake Conroe Divisions which, in turn, serves the Groundwater Reduction Plan (GRP) and The Woodlands Divisions. This RWSMP consists of four components:

- Evaluation of Demand Scenarios
- Evaluation of Supply Scenarios and Needs
- Preliminary Strategy Identification and Evaluation
- Strategy Evaluation and Selection

The purpose of this technical memorandum is to summarize the approach used for preliminary strategy identification and evaluation. Technical Memoranda for Tasks 1102 and 1103 summarize the evolution of the RWSMP by way of describing the future demands for the SJRA service area, available supplies, and the projected needs/surplus in the SJRA service area. The objective of the preliminary strategy identification and evaluation task was to develop a list of the potential supply sources that could be developed by SJRA to meet the future need in the service area.

A secondary objective was to develop an approach to strategically evaluate the supply sources and determine the most preferable supply options for which the SJRA may develop a detailed feasibility study. In the RWSMP, it is prudent to consider the potential supply options that are available for SJRA to meet its future need. However, SJRA will eventually select the supply option that is most viable for its planning triple bottom line approach (economics, environment, and social benefits). Evaluation of each and every supply options in a detailed manner and determination of the feasibility of the supply option in meeting the planning triple bottom line is an expensive process. To select the most promising supply options for detailed evaluation, and to “cull out” the undesirable supply options, a supply source screening process was developed.

The details of the supply options considered, the approach used for screening the supply options, and the conclusions from the screening analysis are discussed below.

## Definitions

Brief descriptions of the frequently used terms in this memorandum are provided below.

Supply Source – a source of supply either developed or to be developed, either currently contracted or potentially to be contracted by SJRA, originating from surface water sources, groundwater sources, or alternatives sources such as reuse, conservation, desalination, and others.

Strategy or Water Management Strategy – a water supply source, either existing supply or new source. This could be a reservoir, groundwater wells, reuse supply, conservation (demand reduction), desalination, or any other potential source.

Scenarios – An alternative future condition for the supply availability that is a combination of the known risk variables that define a potential future condition. There can be multiple scenarios developed in this Study depending on the combinations of the known risk variables considered.

Strategy Portfolio – A combination of strategies to address water supply needs for the RWSMP planning horizon.

Implementation Schedule or Action Plan – A plan summarizing the assortment of strategies that should be developed and the schedule for incorporating them into the SJRA supply portfolio.

Alternatives – It is another option for a strategy or a scenario or assortment or the action plan.

*The terms “supply sources”, “strategies”, and “water management strategies” are frequently used in this memorandum, and all terms are meant to describe the water supply sources that could meet SJRA’s future need.*

## Supply Strategies

Referring to the water management strategies described in the Region H regional plans (2006, 2011, and 2016) and other feasibility studies conducted for supply options in the region, a list of the potentially viable strategies was developed. Separate lists of strategies were developed for SJRA’s Montgomery County service area and the Highlands service area. SJRA’s Montgomery County service area includes the current and potential future Groundwater Reduction Plan (GRP) Participants. SJRA’s Highlands service area includes various industrial, irrigation, and municipal customers in eastern Harris County. *Table 1* includes the list of future supply sources or strategies considered as the potentially viable sources for meeting SJRA’s future needs in the service areas. For strategies that can be operated and managed in multiple ways, the options are discussed as sub-types within a given strategy type. The list of potential strategies presented in *Table 1* is just a starting point of the various supply options that can be developed by SJRA.

The strategies SJRA may consider are not limited to this list and the list may be expanded in the future to include additional strategies as more information becomes available. Descriptions of the projects, as conceived in this RWSMP, are presented below. There are multiple ways a strategy can be identified, developed, and implemented. The descriptions provided below are just preliminary draft versions of the projects that may be conceived. The project descriptions will be updated (if needed) in the future as more information is made available by means of detailed strategy evaluation and feasibility studies.

**Table 1 –Water Management Strategies Considered for Preliminary Strategy Evaluation**

Number	Strategy Name	Strategy Sub-Type	Strategy Considered?	
			Highlands Service Area	Montgomery County Service Area
1	Aquifer Storage and Recovery	Developed by SJRA Customers		Y
		Developed by SJRA (GRP Treated)		Y
		Developed by SJRA (Mildly Treated)		Y
2	Bedias Reservoir		Y	Y
3	Brazos River Supplies		Y	Y
4	Catahoula Aquifer Supplies	Developed by SJRA Customers (Treated)		Y
		Developed by SJRA Customers (Blended)		Y
		Developed by SJRA (Lake Conroe)		Y
		Developed by SJRA (Treated)		Y
		Developed by SJRA (Blended)		Y
5	Conservation	TWDB Baseline		Y
		SJRA Recommendations		Y
6	Direct Reuse	GRP Participants		Y
		Woodlands		Y
7	East Texas Water Transfer	Neches Basin	Y	Y
		Sabine Basin	Y	Y
8	Lake Creek Reservoir		Y	Y
9	Lake Creek Scalping	Run-of-River Diversion		Y
		Storage in Lake Conroe	Y	Y
		Dedicated Storage	Y	Y
10	Lake Livingston Transfer	Livingston to Conroe		Y
		Livingston to Highlands	Y	
11	Purchase Groundwater	Purchase from Eastern Basins	Y	Y
		Purchase from Western Basins	Y	Y
12	Purchase Surface Water	TRA	Y	Y
		CLCND	Y	
13	Regional Return Flows	Lake Conroe		Y
		Lake Houston	Y	
		Lake Houston w/ South Plant		Y
14	Seawater Desalination		Y	Y
15	Trinity Return Flows		Y	Y
16	Increase Lake Conroe Conservation Pool			Y

## **Project Descriptions**

Aquifer Storage and Recovery (ASR) – Aquifer Storage and Recovery is a water management strategy where groundwater is artificially recharged, increasing the volume of water stored in an aquifer and allowing for subsequent withdrawal at a future date. Either SJRA or its GRP participants can develop the ASR strategy. For either option, the ASR strategy was considered in the Gulf Coast Aquifer. The original source of supply for the ASR project could be surface water or groundwater. The ASR strategy developed by SJRA can consider injecting either fully treated water into the aquifer or mildly treated water. Water fully treated to potable standards may be dispersed to either SJRA wells in the Woodlands or to SJRA participants to allow for distribution of the supply geographically. Water that would be treated to some lesser degree that would still allow for aquifer injection would require a dedicated well field to prevent comingling with treated water supplies.

Bedias Reservoir – Bedias Reservoir is a potential future source of surface water supply that would provide approximately 75,000 acre-feet per year. The conceptual reservoir site in the Trinity River Basin is located within Madison County, several miles west of Highway 75 crossing and includes Bedias and Caney Creeks. The drainage area is approximately 395 square miles. The reservoir would inundate about 10,000 acres with conservation storage of approximately 192,700 acre-feet. Prior Regional Water Plans have conceptualized the project as jointly developed by the Trinity River Authority and the San Jacinto River Authority. An interbasin transfer to the San Jacinto Basin and a lengthy transmission system would be required to deliver water to either Montgomery County or the Highlands system of SJRA's service area. It was assumed that SJRA could use existing or proposed CWA conveyance systems to deliver supplies to the Highlands system, if appropriate contract provisions were agreed to and paid for.

Brazos River Supplies – This project will involve a contract with Brazos River Authority for surface water supplies. The Brazos River Authority has submitted a permit application to TCEQ in order to utilize system operation of reservoirs in the Brazos River Basin to allow diversion of additional reliable yield. Implementing this strategy for the SJRA service area would require an interbasin transfer from the Brazos River Basin to the San Jacinto River Basin, as well as significantly long transmission infrastructure.

Catahoula Aquifer Supplies – This project reflects development of groundwater wells in the Catahoula Aquifer in Montgomery County. The project can be implemented either by SJRA or by any of its Montgomery County customers. When developed by SJRA, the Catahoula groundwater supplies can be transferred to Lake Conroe, transferred to a parallel Water Treatment Plant (WTP) to develop treated supplies, or combined with the WTP supplies, blended with other groundwater supplies to develop a blended supply of adequate quality. Similarly, the participants can develop the Catahoula groundwater supplies either as a treated option or a blended option. For the SJRA option that includes transfer to Lake Conroe, water will be produced from the Catahoula Aquifer located adjacent to Lewis Creek Reservoir. From that point, water may be delivered to Lewis Creek Reservoir for industrial use. Alternately, a bed and banks transfer utilizing Lewis Creek could convey water to Lake Conroe to serve either industrial or municipal needs.

Conservation (Texas Water Development Board Baseline and SJRA Conservation Plan Recommendations)  
Water conservation decreases or attenuates future supply needs through demand reduction. The demands projected for SJRA as part of the 2016 Regional Water Plan for Region H have an embedded

quantity of conservation savings. This quantity has been determined based on the assumption that water will be saved as a result of anticipated future, natural installation of plumbing fixtures and appliances. The reduction in demands because of these basic efforts is termed as the baseline conservation recommended by the Texas Water Development Board. It is assumed that the SJRA demands will be reduced by approximately 9.0 percent by 2070 based on the baseline conservation methods applied by TWDB. TWDB anticipates that these savings will occur without active management by SJRA or other sponsors due to the natural replacement of less efficient fixtures and appliances over time. While the TWDB conservation plan reflects the baseline conservation already included in the policy decisions made thus far, each entity can develop an entity-specific conservation plan. The SJRA water conservation plan focused on advanced conservation practices such as outdoor watering restrictions, water loss reductions, and other advanced initiatives. The goal, as highlighted in the water conservation plan, is to reduce the water demands by 1% every year.

Direct Reuse – Direct reuse is a strategy of utilizing treated wastewater effluent to meet water demand. Unlike indirect reuse, the reclaimed portion of the effluent is typically conveyed by pipe instead of discharged to a stream for subsequent diversion at a location downstream. Direct wastewater reuse is typically applied to green space demands such as municipal irrigation of golf courses and maintenance of green spaces in master-planned communities. In this study, direct reuse is evaluated as a potential strategy that can be implemented by the customers in SJRA’s service area within the Woodlands or by other GRP participants. Entities planning for this strategy would be required to get a permit for use of reclaimed wastewater effluent. Transmission and distribution system infrastructure would be required to convey the direct reuse supplies to points of use. Use of direct reuse would make these supplies inaccessible for indirect reuse projects which may divert water downstream from the point of discharge.

East Texas Transfer – This strategy includes the transmission of water from East Texas through canal and pipeline conveyance to diversion points in the Trinity and San Jacinto Basins. The strategy would include a pump station for potential transfer of Sabine River Authority supplies in Toledo Bend Reservoir from the Sabine River to the Neches River Basin. The water will be conveyed from the Neches to the Trinity River Basin through the Lower Neches Valley Authority Canals to the Devers Canal, and to the Trinity River near the Coastal Water Authority (CWA) Trinity River Pump Station. Existing and planned conveyance systems may potentially be used to deliver the water to SJRA’s Highlands system and, therefore, there may not be a need for additional conveyance systems. However, additional transmission system is required to deliver the water to SJRA’s Montgomery County system. The concept utilizes existing infrastructure that is already in place across the river and coastal basins in order to deliver water at a reasonable cost wherever possible.

Lake Creek Reservoir – Lake Creek is located southwest side of Lake Conroe, joining the West Fork of the San Jacinto River below the confluence of Lake Conroe. This strategy includes the development of reservoir storage capacity as an impoundment in western Montgomery County on Lake Creek. The site is located within the San Jacinto River Basin. The total yield from the stored water in this reservoir is approximately 6,000 acre-feet per year based on preliminary estimates. Some transmission system is required to move water from the reservoir to the SJRA customer delivery location which could possibly be performed through a transfer to Lake Conroe. This strategy would be a potential source of supply for the Montgomery County service area and could serve the Highlands area via bed and banks downstream to Lake Houston.

Lake Creek Scalping – Lake Creek is located on the southwest side of Lake Conroe, joining the West Fork of San Jacinto River below the confluence of Lake Conroe. SJRA conducted various studies to determine the feasibility of using “scalped” supplies from Lake Creek (i.e. no storage reservoir) and the potential location for diverting the supplies. Depending on the diversion point, up to 10,000 acre-feet per year of supplies are available for capture and distribution. The project can be conceived as one of these three options. The first option assumes that supplies from Lake Creek can be withdrawn as a run-of-river diversion and sent directly to a treatment or final use facility. These supplies would only be available during short periods and could not be relied upon on a regular basis. SJRA will need to apply for a run-of-river diversion permit for this strategy. In the second option, supplies from Lake Creek can be diverted and transferred to Lake Conroe to help maintain Lake Conroe lake levels. The water can be diverted by means of a diversion pump station and a transmission pipeline from Lake Creek to Lake Conroe. Once the water is added to Lake Conroe, it becomes part of the SJRA existing supply system. The third option considers that supplies from Lake Creek can be diverted to a new off-channel storage facility for temporary storage before being conveyed to final use facilities. All three alternatives of this strategy must be implemented by SJRA.

Lake Livingston Transfer – SJRA has signed an agreement with the Trinity River Authority for the option to purchase up to 50,000 acre-feet of water per year from TRA’s existing supplies within Lake Livingston. The 50,000 acre-feet of supply is apportioned from TRA’s existing rights associated with Lake Livingston and the Wallisville Saltwater Barrier. The supplies from the Lake Livingston agreement with TRA could potentially be delivered using the existing conveyance system or through a new conveyance pipeline. In the Highlands system, SJRA currently contracts with CWA to convey its Trinity River Basin run-of-river rights to the Highlands system service area through the existing CWA Trinity Canal. An additional new conveyance system is required to deliver the water from Trinity River Basin to the Montgomery County service area. Water may be directly delivered to Lake Conroe or diverted to treatment plant owned and operated by SJRA. A new interbasin transfer permit is required to move these Livingston supplies to Lake Conroe.

Purchased Groundwater – SJRA can purchase groundwater from basins east and west of the SJRA’s Montgomery County and Highlands service areas. Groundwater supplies could be procured from formations within the Trinity River Basin area from the Gulf Coast and Carrizo Aquifers. Groundwater could also be obtained from groundwater aquifers within the Brazos River Basin area and the Neches/Sabine River Basin area. SJRA will have to contract with the local entities selling this groundwater for the purchase of the water. Water will be conveyed from the eastern and western basins by means of a transmission system or by utilizing bed and banks transfer in some limited circumstances.

Purchased Surface Water – SJRA may seek to purchase additional surface water from Trinity River Authority (in addition to the current agreement they have for 50,000 acre-feet per year from Lake Livingston) and/or the Chambers-Liberty Counties Navigation District (CLCND). Supplies purchased from TRA can be delivered to either Montgomery County or the Highlands system service areas. Additional transmission systems and an interbasin transfer permit is required for delivering any TRA supplies to the Montgomery County service area. Potentially, no interbasin transfer permit would be required for transmission to SJRA customers in the Trinity-San Jacinto Coastal Basin service area. SJRA may use existing conveyance systems to deliver water in the Highlands system. SJRA currently owns run-of-river rights that are diverted at the CWA Main Pump Station including rights previously purchased from the CLCND diversion point in the Trinity Basin. SJRA contracts with CWA to use CWA’s transmission system to deliver

supplies to its customers in the Highlands system. A similar approach can be used for delivering the additional supplies purchased from CLCND.

Seawater Desalination – The reasonable proximity of the region to Galveston Bay and the Gulf of Mexico makes seawater desalination a worthy consideration, especially for the Highlands service area that covers the vicinity of Baytown. Recent desalination developments in the United States have targeted colocation with industrial and energy facilities that may provide economic benefit for the development of these supplies. Furthermore, the benefits of highly pure desalinated water may be realized by some industries that may use the water for activities such as providing boiler feed. Because of the proximity of the proposed location to SJRA's Highlands system service area, this strategy will be a potentially feasible strategy for the Highlands system. Due to the need of the long conveyance system needed to move water to the Montgomery County service area, it may not be a feasible alternative for the Montgomery County service area.

Regional Return Flows – The projected population growth in Montgomery and Harris Counties is expected to result in the generation of significant volumes of future return flows. Three different scenarios are considered in this study for using this supply strategy: permitting return flows generated in the Montgomery County service area for diversion at Lake Conroe for treatment at the GRP treatment plant, permitting return flows generated in the Lake Houston watershed for diversion at Lake Houston for use in the Highlands system, and permitting return flows in the Lake Houston watershed area for treatment at a new South Montgomery County treatment plant for use by GRP customers.

Increase Lake Conroe Conservation Pool – SJRA can apply for a permit to increase the Lake Conroe conservation pool and store additional supplies in the lake. The additional supply could be captured from runoff in the Lake Conroe watershed, supplemented by groundwater supplies or transferred from other surface water sources such as Lake Creek or Lake Livingston. Varying yields are possible under each scenario. The permit for storing the additional supplies and increasing the conservation pool would be subject to the TCEQ's new environmental flow requirements and would likely impact the yield of the existing Lake Conroe water right as the amount permitted by the existing water right may be subjected to environmental flow requirements.

## **Water Management Strategy Screening**

The selection of the most preferable strategies for detailed evaluation was conducted using a screening process developed for the RWSMP study. A list of scoring criteria was developed to quantify the relevance of the strategies to help SJRA meet the planning triple bottom line. Each criterion was scored on a scale ranging from one (*less favorable*) to four (*more favorable*). Based on the information available from the Region H regional planning reports and other feasibility study reports, the strategies were assigned a score for each selection criterion. A total of 14 scoring criteria were developed to evaluate the strategies. The list of criteria, scoring range, and the descriptions of the strategies are presented in *Table 2*.

The overall preference of a strategy was determined by the summation of the score assigned to the various criteria. However, not all criteria impact the quantification of the water management strategy the same way. From the list of the criteria, SJRA determined the importance of each criterion and quantified the importance in driving the overall project score by means of a weighting factor. A weighting factor is simply a factor used to define the importance of the screening criteria. The factor defines how the screening criteria would be weighed in developing the overall strategy score. The weighting factors were assigned

a value between one (*low importance*) and 100 (*high importance*). The sum of the weighting factors for the screening criteria was set to be a 100. The overall strategy score was determined as the sum product of the score assigned to the criteria and the weighting factor associated with the criteria.

Strategies were scored separately for the Highlands and the Montgomery County systems and were ranked based on the scores developed from the product of criteria scores and the weighting factors. A detailed summary of the criteria scores and the strategy scores is included in *Attachment A*. Ranks were assigned to the strategies such that the strategy with the highest score was given the lowest rank. A lowest rank meant that the strategy ranked best among the list of the strategies. In cases of ties where multiple strategies have the same score, the strategies were given the same rank (e.g., if three strategies have the same score (270) and a rank 9, the three strategies were assigned the same rank 9. The next strategy with a lower score (260) was assigned rank 12). *Tables 3 and 4* include the summary of the ranks assigned to strategies relevant to Highlands and Montgomery County systems respectively. SJRA will consider the list of strategies and their respective ranking to develop the list of strategies to be considered for a detailed strategy evaluation.

Another objective of the preliminary evaluation of the strategies considered in the RWSMP was to develop a list of gaps in the information available in the published reports on the strategies considered in the study. *Table 5* includes a summary of the gaps identified for the water management strategies reviewed in this study. This list provides understanding of the significant issues yet to be resolve before full understanding a strategy's potential can be gained, and will serve as a starting point for scoping future efforts to explore these alternatives.



**Table 2. List and Description of the Screening Criteria Considered for RWSMP Strategy Evaluation**

<b>Cooperation</b>	Weighting Factor (Low [1] - High [100]):			<b>4</b>
<b>Description:</b> Attributes quality to a project based on the potential for interaction with other entities.				
<b>Scoring:</b>				
<b>Less Favorable 1</b>	<b>2</b>	<b>3</b>	<b>More Favorable 4</b>	
Significant potential obstacles in working with other stakeholders to develop project	Potentially some obstacles in working with other stakeholders to develop project	Potentially some opportunity to develop project synergistically with other stakeholders	Significant opportunity to develop project synergistically with other stakeholders	

<b>Cost</b>	Weighting Factor (Low [1] - High [100]):			<b>40</b>
<b>Description:</b> Estimated cost of water for a project. This value will be based on preliminary estimates and regional planning-level data.				
<b>Scoring:</b>				
<b>Less Favorable 1</b>	<b>2</b>	<b>3</b>	<b>More Favorable 4</b>	
>\$1,000 per ac-ft	\$500 to \$1,000 per ac-ft	\$250 to \$500 per ac-ft	<\$250 per ac-ft	

<b>Diversification</b>	Weighting Factor (Low [1] - High [100]):			<b>2</b>
<b>Description:</b> Scoring based on how likely a project is to provide diversification to the existing SJRA water supply portfolio.				
<b>Scoring:</b>				
<b>Less Favorable 1</b>	<b>2</b>	<b>3</b>	<b>More Favorable 4</b>	
Supply originates from sources linked to existing SJRA supplies	Supply originates from sources linked to existing SJRA supplies but may be influenced by other factors	Supply developed from sources unrelated to existing SJRA supplies	Supply developed from a variety of water resource outside of current SJRA portfolio	

<b>Environmental</b>	Weighting Factor (Low [1] - High [100]):			<b>6</b>
<b>Description:</b> Describes the extent of environmental impacts required for implementation of the project.				
<b>Scoring:</b>				
<b>Less Favorable 1</b>	<b>2</b>	<b>3</b>	<b>More Favorable 4</b>	
Significant environmental impact is expected; significant environmental studies and mitigation may be required	Some notable environmental impact; uncertain course for studies and mitigation	Some notable environmental impact; routine process for permitting	Minor environmental impact; environmental studies have been completed on similar projects	

<b>Funding</b>	Weighting Factor (Low [1] - High [100]):			<b>4</b>
<b>Description:</b> Related to the ease at which alternative funding may be obtained for the project and if special incentives may be available for project development.				
<b>Scoring:</b>				
<b>Less Favorable 1</b>	<b>2</b>	<b>3</b>	<b>More Favorable 4</b>	
No obvious potential opportunities for funding	Common funding mechanisms may be utilized; project will compete equally with other competing projects	Specialized funding mechanisms exist	Project will receive beneficial consideration in a funding program due to type of project or source of water	

<b>Land Acquisition</b>	Weighting Factor (Low [1] - High [100]):			<b>4</b>
<b>Description:</b> Refers to the number of land acres that must be acquired in order to implement the project.				
<b>Scoring:</b>				
<b>Less Favorable 1</b>	<b>2</b>	<b>3</b>	<b>More Favorable 4</b>	
Significant land impact (>1,000 ac)	100-1,000 ac	5-100 ac	Minimal land impact (<5 ac)	

<b>Legal</b>	Weighting Factor (Low [1] - High [100]):			<b>6</b>
<b>Description:</b> Defines the level of legal obstacles that must be overcome in implementing the project.				
<b>Scoring:</b>				
<b>Less Favorable</b> <b>1</b>	<b>2</b>	<b>3</b>	<b>More Favorable</b> <b>4</b>	
Significant permitting required; extensive contracting	Moderate level of permitting and contracting; several unknowns	Moderate level of permitting and contracting; few unknowns	Minimal permitting required; simple contracting	

<b>Location</b>	Weighting Factor (Low [1] - High [100]):			<b>6</b>
<b>Description:</b> Related to the location of the developed supply and proximity to potential demands served.				
<b>Scoring:</b>				
<b>Less Favorable</b> <b>1</b>	<b>2</b>	<b>3</b>	<b>More Favorable</b> <b>4</b>	
IBT required, long distance from SJRA service area	major conveyance required to meet the majority of identified needs	Some conveyance required to meet identified demands	Limited conveyance needs	

<b>Magnitude</b>	Weighting Factor (Low [1] - High [100]):			<b>4</b>
<b>Description:</b> Describes the potential yield of a strategy. Values is based on maximum potential without regard for "right-sizing" to meet identified demands.				
<b>Scoring:</b>				
<b>Less Favorable</b> <b>1</b>	<b>2</b>	<b>3</b>	<b>More Favorable</b> <b>4</b>	
<5,000 ac-ft per year	5,000 to 25,000 ac-ft per year	25,000 to 50,000 ac-ft/yr	>50,000 ac-ft per year	

<b>Other Supplies</b>	Weighting Factor (Low [1] - High [100]):			<b>2</b>
<b>Description:</b> Defines how the project interacts with other projects or existing supplies in either preventing the development of other alternatives or enhancing the yield of existing or future supplies.				
<b>Scoring:</b>				
<b>Less Favorable</b> <b>1</b>	<b>2</b>	<b>3</b>	<b>More Favorable</b> <b>4</b>	
Negative impacts to existing and other potential supplies	Negative impacts to other potential projects	Opportunity to enhance other potential projects	Opportunity to enhance existing supplies and other potential supplies	

<b>Public</b>	Weighting Factor (Low [1] - High [100]):			<b>6</b>
<b>Description:</b> Describes public support or potential opposition for a project concept. This is considered from an overall perspective, noting projects are likely to receive both positive and negative support from various sections of the public.				
<b>Scoring:</b>				
<b>Less Favorable</b> <b>1</b>	<b>2</b>	<b>3</b>	<b>More Favorable</b> <b>4</b>	
No local support; significant opposition	Minimal local support; some opposition	Local support; minimal opposition	Widespread local support; opportunity for ancillary community benefits	

<b>Scalability</b>	Weighting Factor (Low [1] - High [100]):			<b>4</b>
<b>Description:</b> Defines the ability of a project to be implemented by smaller stakeholders in partnership with SJRA.				
<b>Scoring:</b>				
<b>Less Favorable</b> <b>1</b>	<b>2</b>	<b>3</b>	<b>More Favorable</b> <b>4</b>	
Project requires significant infrastructure and development by a major sponsor	Project may be implemented by a small number of larger entities	Project may be implemented by most existing and potential entities	Project can be implemented by entities of all sizes	

<b>Schedule</b>	Weighting Factor (Low [1] - High [100]):			<b>6</b>
<b>Description:</b> Defines the anticipated schedule for the development of a project. Projects with shorter lead-times are preferred.				
<b>Scoring:</b>				
<b>Less Favorable</b> <b>1</b>	<b>2</b>	<b>3</b>	<b>More Favorable</b> <b>4</b>	
>30 years	15-30 years	5 to 15 years	0 to 5 years	

<b>Yield Risk</b>	Weighting Factor (Low [1] - High [100]):			<b>6</b>
<b>Description:</b> Determined by the risk associated with a potential project's yield being reduced due to regulatory or environmental issues.				
<b>Scoring:</b>				
<b>Less Favorable</b> <b>1</b>	<b>2</b>	<b>3</b>	<b>More Favorable</b> <b>4</b>	
High level of uncertainty that project yield can be developed or will be maintained in the long term. High risk of supply availability	Moderate risk that a project's yield cannot be realized or will diminish over time. Moderate risk of supply availability	Some risk that project yield will not be realized or will be reduce over time. Some risk of supply availability	Virtually no risk of project yield cannot be achieved or will be reduced over time. No potential risk of supply availability	

**Table 3. List of most preferable strategies to meet SJRA future needs in the Highlands system**

SJRA Highlands System Projects (Sorted)				
Number	Score	Rank	Strategy Name	Sub-Type
1	342	1	Purchase Surface Water	TRA
2	328	2	Lake Livingston Transfer	Livingston to Highlands
3	318	3	Trinity Return Flows	
4	316	4	Regional Return Flows	Lake Houston
5	308	5	Purchase Surface Water	CLCND
6	250	6	Purchase Groundwater	Purchase from Eastern Basins
7	250	6	Purchase Groundwater	Purchase from Western Basins
8	242	8	East Texas Water Transfer	Neches Basin
9	242	8	East Texas Water Transfer	Sabine Basin
10	234	10	Seawater Desalination	
11	220	11	Lake Creek Reservoir	
12	212	12	Bedias Reservoir	
13	204	13	Brazos River Supplies	

**Table 4. List of most preferable strategies to meet SJRA future needs in the Montgomery County system**

Montgomery County System Projects (Sorted)				
Number	Score	Rank	Strategy Name	Sub-Type
1	364	1	Conservation	TWDB Baseline
2	348	2	Catahoula Aquifer Supplies	Developed by SJRA Customers (Blended)
3	338	3	Conservation	SJRA Water Conservation Plan
4	304	4	Regional Return Flows	Lake Conroe
5	302	5	Direct Reuse, Non-Potable	GRP Participants
6	300	6	Direct Reuse, Non-Potable	Woodlands
7	274	7	Catahoula Aquifer Supplies	Developed by SJRA (Lake Conroe)
8	270	8	Catahoula Aquifer Supplies	Developed by SJRA Customers (Treated)
9	268	9	Catahoula Aquifer Supplies	Developed by SJRA (Blended)
10	262	10	Lake Livingston Transfer	Livingston to Conroe
11	262	10	Purchase Surface Water	TRA
12	258	12	Aquifer Storage and Recovery	Developed by SJRA Customers
13	250	13	Purchase Groundwater	Purchase from Eastern Basins
14	250	13	Purchase Groundwater	Purchase from Western Basins
15	236	15	Aquifer Storage and Recovery	Developed by SJRA (Mildly Treated)
16	234	16	Catahoula Aquifer Supplies	Developed by SJRA (Treated)
17	230	17	Aquifer Storage and Recovery	Developed by SJRA (GRP Treated)
18	228	18	Lake Creek Scalping	Run-of-River Diversion
19	218	19	Regional Return Flows	Lake Houston w/ South Plant
20	214	20	Lake Creek Reservoir	
21	204	21	Brazos River Supplies	
22	202	22	East Texas Water Transfer	Neches Basin
23	202	22	East Texas Water Transfer	
24	200	24	Increase Lake Conroe Conservation Pool	
25	188	25	Lake Creek Scalping	Storage in Lake Conroe
26	180	26	Lake Creek Scalping	
27	172	27	Bedias Reservoir	
28	172	27	Seawater Desalination	

**Table 5. Summary of Data Gaps Identified in the Strategy Evaluation for the Raw Water Supply Masterplan**

Project			
Number	Strategy Name	Sub-Type	Data Gaps
1	Aquifer Storage and Recovery	Developed by SJRA GRP Participants	Local Aquifer Characteristics, Aquifer Storage Potential, Source of Supply, Treatment Costs, Potential Participants Interested
2	Aquifer Storage and Recovery	Developed by SJRA (GRP Treated)	Local Aquifer Characteristics, Aquifer Storage Potential, Source of Supply, Treatment Costs
3	Aquifer Storage and Recovery	Developed by SJRA (Mildly Treated)	Local Aquifer Characteristics, Aquifer Storage Potential, Source of Supply, Treatment Costs
4	Bedias Reservoir		Yield, Environmental/Permitting Issues
5	Brazos River Supplies		Contracting, Water Quality Issues, Competition for Supplies, Reliability in Brazos Basin
6	Catahoula Aquifer Supplies	Developed by SJRA GRP Participants(Treated)	Groundwater Quality, Yield, Treatment Costs, Potential Participants
7	Catahoula Aquifer Supplies	Developed by SJRA GRP Participants (Blended)	Groundwater Quality, Yield, Blending Ratios, Potential Participants
8	Catahoula Aquifer Supplies	Developed by SJRA (Lake Conroe)	Groundwater Quality, Yield, Impact on Lake Conroe, Permitting Issues
9	Catahoula Aquifer Supplies	Developed by SJRA (Treated)	Groundwater Quality, Yield, Treatment Costs
10	Catahoula Aquifer Supplies	Developed by SJRA (Blended)	Groundwater Quality, Yield, Blending Ratios
11	Conservation	TWDB Baseline	Plan Implementation, Public Participation
12	Conservation	SJRA Water Conservation Plan	Plan Implementation, Public Participation
13	Direct Reuse, Non-Potable	GRP Participants	Potential GRP Participants, Timing of Source Availability, Volume
14	Direct Reuse, Non-Potable	Woodlands	Timing of Source Availability, Volume

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Project			
Number	Strategy Name	Sub-Type	Data Gaps
15	East Texas Water Transfer	Neches Basin	Potential Partnership, Transmission Route, Volume, Permitting
16	East Texas Water Transfer	Sabine Basin	Potential Partnership, Transmission Route, Volume, Permitting
17	Lake Creek Reservoir		Environmental/Permitting, Yield
18	Lake Creek Scalping	Run-of-River Diversion	Environmental/Permitting
19	Lake Creek Scalping	Storage in Lake Conroe	Environmental/Permitting, Water Quality (Blending), Yield
20	Lake Creek Scalping	Dedicated Storage	Environmental/Permitting, Location
21	Lake Livingston Transfer	Livingston to Conroe	Permitting Issues, Water Quality
22	Lake Livingston Transfer	Livingston to Highlands	Permitting Issues, Water Quality
23	Purchase Groundwater	Purchase from Eastern Basins	Availability, Aquifer source, Water Quality, Competition
24	Purchase Groundwater	Purchase from Western Basins	Availability, Aquifer source, Water Quality, Competition
25	Purchase Surface Water	TRA	Contracting Issues, Availability/Reliability
26	Purchase Surface Water	CLCND	Contracting Issues, Availability/Reliability
27	Increase Lake Conroe Conservation Pool		Permitting Issues, Yield, Operations Impacts
28	Regional Return Flows	Lake Conroe	Timing of supply availability, Contract/Agreement
29	Regional Return Flows	Lake Houston	Timing of supply availability, Contract/Agreement
30	Regional Return Flows	Lake Houston w/ South Plant	Timing of supply availability, Treatment Costs, Contract/Agreement
31	Seawater Desalination		Water Quality/Treatment Costs, Transmission
32	Trinity Return Flows		Timing of Supply Availability

Attachment A

SJRA RAW WATER SUPPLY MASTER PLAN STRATEGY EVALUATION  
RESULTS



Strategy Name:		Aquifer Storage and Recovery			
Strategy Sub-Type:		Developed by SJRA			
		Highlands System		Montgomery County	
		Criteria Score	Explanation	Criteria Score	Explanation
Cooperation				2	Potentially some obstacles in working with other stakeholders to develop project 2016 RWP: Requires some coordination between river authorities and GCDs in which the aquifer is located. May have potential for joint development of an ASR project. Other governmental entities and LS GCD may be involved.
Cost				2	\$500 to \$1,000 per ac-ft 2016 RWP: \$516/ac-ft (during loan period, dependent upon project configuration). This option does not include significant transmission system but the cost reflects the cost required to develop the well field.
Diversification				2	Supply originates from sources linked to existing SJRA supplies but may be influenced by other factors Doesn't create a new supply, but directs excess surface water or groundwater supplies to aquifers for storage. Water can be stored for later use.
Environmental				3	Some notable environmental impact; routine process for permitting 2016 RWP: Minimal environmental impacts expected; Aquifer Storage and Recovery is not anticipated to affect acreage or vulnerable species. The project will not directly impact environmental flows. However, these flows may be impacted by projects developed to provide raw water to an ASR project. In addition, an ASR project may allow for additional return flow during drought conditions. The project is not anticipated to impact agricultural land or production.
Funding				4	Project will receive beneficial consideration in a funding program due to type of project or source of water 2016 RWP: Level of sponsor commitment unknown for most Water User Groups. Typical funding available for ASR. Research funds by BOR and TWDB funds for special studies available for developing potential for ASR studies.
Land Acquisitor				3	5-100 ac Moderate Land Acquisition, based on cost per acre and agreeability of land owners.
Legal				3	Moderate level of permitting and contracting; few unknowns 2016 RWP: Moderate permitting challenges due to recent legislation changes.
Location				3	Some conveyance required to meet identified demands 2016 RWP: Typically located near points of use.
Magnitude				2	5,000 to 25,000 ac-ft per year 2016 RWP: Depends on water supply availability that can be stored.
Other Supplies				4	Opportunity to enhance existing supplies and other potential supplies 2016 RWP: May be used to enhance the firm portion of yield associated with other projects such as surface water development. Use of ASR may reduce the need for development of additional surface water supplied and which may reduce bay and estuary inflows.
Public				2	Minimal local support; some opposition 2016 RWP: Projects typically encounter opposition. Limited negative impacts. ASR was never done before in Montgomery County so there is a potential for opposition because of the uncertainty.
Scalability				1	Project requires significant infrastructure and development by a major sponsor Can be conducted on various scales.
Schedule				3	5 to 15 years 2016 RWP: For the development of an ASR project there normally is a sequence of studies and pilot testing that occur before the infrastructure for a project is built. This sequence can require at least a few years for a moderate to large-scale project.
Yield Risk				1	High level of uncertainty that project yield can be developed or will be maintained in the long term. High risk of supply availability 2016 RWP: Existing studies in Region H have not yielded beneficial applications of ASR so far. However, if a pilot is successful, there is limited risk of yield reduction. There is potential loss of treated water that is unrecoverable.
		N/A	<b>Highlands System Score</b>	<b>230.00</b>	<b>Montgomery County Score</b>

Strategy Name:		Aquifer Storage and Recovery			
Strategy Sub-Type:		Developed by SJRA Participants			
		Highlands System		Montgomery County	
		Criteria Score	Explanation	Criteria Score	Explanation
Cooperation				2	Potentially some obstacles in working with other stakeholders to develop project 2016 RWP: Requires some coordination between river authorities and GCDs in which the aquifer is located. May have potential for joint development of an ASR project.
Cost				2	\$500 to \$1,000 per ac-ft 2016 RWP: \$516/ac-ft (during loan period, dependent upon project configuration). This option does not include significant transmission system. GRP Participants' wells need to be improved to support ASR operations. No need to develop a new well field.
Diversification				2	Supply originates from sources linked to existing SJRA supplies but may be influenced by other factors Doesn't create a new supply, but directs excess surface water or groundwater supplies to aquifers for storage. Water can be stored for later use.
Environmental				4	Minor environmental impact; environmental studies have been completed on similar projects 2016 RWP: Minimal environmental impacts expected; Aquifer Storage and Recovery is not anticipated to affect acreage or vulnerable species. The project will not directly impact environmental flows. However, these flows may be impacted by projects developed to provide raw water to an ASR project. In addition, an ASR project may allow for additional return flow during drought conditions. The project is not anticipated to impact agricultural land or production.
Funding				4	Project will receive beneficial consideration in a funding program due to type of project or source of water 2016 RWP: Level of sponsor commitment unknown for most WUGS. Typical funding available for ASR. Research funds by BOR and TWDB funds for special studies available for exploring potential for ASR studies.
Land Acquisition				4	Minimal land impact (<5 ac) Moderate Land Acquisition. Potentially use Participants' wells.
Legal				3	Moderate level of permitting and contracting; few unknowns 2016 RWP: Moderate permitting challenges due to recent legislation changes.
Location				4	Limited conveyance needs 2016 RWP: Typically located near points of use.
Magnitude				2	5,000 to 25,000 ac-ft per year 2016 RWP: Depends on water supply availability and volume that can be stored.
Other Supplies				4	Opportunity to enhance existing supplies and other potential supplies 2016 RWP: May be used to enhance the firm portion of yield associated with other projects such as surface water development. Use of ASR may reduce the need for development of additional surface water supplied and which may reduce bay and estuary inflows.
Public				2	Minimal local support; some opposition 2016 RWP: Projects typically encounter opposition. Some negative impacts. ASR was never done before in Montgomery County so there is a potential for opposition because of the uncertainty.
Scalability				4	Project can be implemented by entities of all sizes Can be conducted on various scales.
Schedule				3	5 to 15 years 2016 RWP: <5 years; For the development of an ASR project there normally is a sequence of studies and pilot testing that occur before the infrastructure for a project is built. This sequence can require at least a few years for a moderate to large-scale project.
Yield Risk				1	High level of uncertainty that project yield can be developed or will be maintained in the long term. High risk of supply availability 2016 RWP: Existing studies in Region H have not yielded beneficial applications of ASR so far. However, if a pilot is successful, there is limited risk of yield reduction. There is potential loss of treated water that is unrecoverable.
		N/A	<b>Highlands System Score</b>	<b>258.00</b>	<b>Montgomery County Score</b>

Strategy Name:		Aquifer Storage and Recovery			
Strategy Sub-Type:		Developed by SJRA (Mildly Treated)			
		Highlands System		Montgomery County	
		Criteria Score	Explanation	Criteria Score	Explanation
Cooperation				2	Potentially some obstacles in working with other stakeholders to develop project 2016 RWP: Requires some coordination between river authorities and GCDs in which the aquifer is located. May have potential for joint development of an ASR project. Other governmental entities and LS GCD may be involved.
Cost				2	\$500 to \$1,000 per ac-ft Less treatment than normal. Project requires dedicated well field development to convey the non-potable water. Cost reflects the cost required to develop wells, treat and convey the water through transmission system.
Diversification				2	Supply originates from sources linked to existing SJRA supplies but may be influenced by other factors Doesn't create a new supply, but directs excess surface water or groundwater supplies to aquifers for storage. Water can be stored for later use.
Environmental				3	Some notable environmental impact; routine process for permitting 2016 RWP: Minimal environmental impacts expected; Aquifer Storage and Recovery is not anticipated to affect acreage or vulnerable species. The project will not directly impact environmental flows. However, these flows may be impacted by projects developed to provide raw water to an ASR project. In addition, an ASR project may allow for additional return flow during drought conditions. The project is not anticipated to impact agricultural land or production.
Funding				4	Project will receive beneficial consideration in a funding program due to type of project or source of water 2016 RWP: Level of sponsor commitment unknown for most Water User Groups. Typical funding available for ASR. Research funds by BOR and TWDB funds for special studies available for exploring potential for ASR studies.
Land Acquisition				3	5-100 ac Moderate Land Acquisition.
Legal				3	Moderate level of permitting and contracting; few unknowns 2016 RWP: Moderate permitting challenges due to recent legislation changes.
Location				4	Limited conveyance needs 2016 RWP: Typically located near points of use.
Magnitude				2	5,000 to 25,000 ac-ft per year 2016 RWP: Depends on water supply availability and volume that can be stored.
Other Supplies				4	Opportunity to enhance existing supplies and other potential supplies 2016 RWP: May be used to enhance the firm portion of yield associated with other projects such as surface water development. Use of ASR may reduce the need for development of additional surface water supplied and which may reduce bay and estuary inflows.
Public				2	Minimal local support; some opposition 2016 RWP: Projects typically encounter opposition. Limited negative impacts. ASR was never done before in Montgomery County so there is a potential for opposition because of the uncertainty.
Scalability				1	Project requires significant infrastructure and development by a major sponsor Can be conducted on various scales.
Schedule				3	5 to 15 years 2016 RWP: 5-15 years; For the development of an ASR project there normally is a sequence of studies and pilot testing that occur before the infrastructure for a project is built. This sequence can require at least a few years for a moderate to large-scale project.
Yield Risk				1	High level of uncertainty that project yield can be developed or will be maintained in the long term. High risk of supply availability 2016 RWP: Existing studies in Region H have not yielded beneficial applications of ASR so far. However, if a pilot is successful, there is limited risk of yield reduction. There is potential loss of treated water that is unrecoverable.
		N/A	<b>Highlands System Score</b>	236.00	<b>Montgomery County Score</b>

Strategy Name: Strategy Sub-Type:		Bedias Reservoir				
		Highlands System		Montgomery County		
		Criteria Score	Explanation	Criteria Score	Explanation	
Cooperation	2	Potentially some obstacles in working with other stakeholders to develop project	2011 RWP: joint development from TRA and SJRA.	2	Potentially some obstacles in working with other stakeholders to develop project	2011 RWP: joint development from TRA and SJRA; This project requires an interbasin transfer to the San Jacinto Basin.
Cost	3	\$250 to \$500 per ac-ft	2011 RWP: \$237/ac-ft. Project produces raw water.	2	\$500 to \$1,000 per ac-ft	2011 RWP: \$237/ac-ft. Project produces raw water. Also need transmission system to transfer into basin.
Diversification	3	Supply developed from sources unrelated to existing SJRA supplies	A new reservoir would add new sources of water to Highlands. However, the source of supply (Trinity basin) is not new to Highlands system as SJRA already receives water from Trinity basin.	3	Supply developed from sources unrelated to existing SJRA supplies	A new dam would add new sources of water to Montgomery County. Addition of supplies from Trinity Basin will bring new supplies to the Montgomery System as historically this system has relied on San Jacinto Basin supplies only.
Environmental	1	Significant environmental impact is expected; significant environmental studies and mitigation may be required	2011 RWP: Some endangered species have been identified. There are about 7,300 acres of bottomland hardwoods, 7,000 acres of grasslands, and 7,000 acres of post oak-elm-hackberry forest. Probable moderate to high impacts on wildlife habitats.	1	Significant environmental impact is expected; significant environmental studies and mitigation may be required	2011 RWP: Some endangered species have been identified. There are about 7,300 acres of bottomland hardwoods, 7,000 acres of grasslands, and 7,000 acres of post oak-elm-hackberry forest. Probable moderate to high impacts on wildlife habitats.
Funding	2	Common funding mechanisms may be utilized; project will compete equally with other competing projects	Typical funding sources.	2	Common funding mechanisms may be utilized; project will compete equally with other competing projects	Typical funding sources.
Land Acquisition	1	Significant land impact (>1,000 ac)	27,400 acres impacted by project.	1	Significant land impact (>1,000 ac)	27,400 acres impacted by project.
Legal	1	Significant permitting required; extensive contracting	2011 RWP: This project requires an interbasin transfer to the San Jacinto Basin.	1	Significant permitting required; extensive contracting	2011 RWP: This project requires an interbasin transfer to the San Jacinto Basin.
Location	1	IBT required, long distance from SJRA service area	Inconvenient for SJRA customers, as the dam is located within Trinity River surroundings. Water would be transferred to SJRA by CWA canal.	1	IBT required, long distance from SJRA service area	Inconvenient for SJRA customers, as the dam is located within TRA bounds. Water would be transferred to SJRA through a new Inter-Basin Transfer.
Magnitude	4	>50,000 ac-ft per year	2011 RWP: 90700 acft/yr	4	>50,000 ac-ft per year	2011 RWP: 90700 acft/yr
Other Supplies	2	Negative impacts to other potential projects	Potential impacts due to seniority to Livingston.	2	Negative impacts to other potential projects	Potential impacts due to seniority to Livingston.
Public	1	No local support; significant opposition	Potential opposition to any reservoir project.	1	No local support; significant opposition	Potential opposition to any reservoir project.
Scalability	1	Project requires significant infrastructure and development by a major sponsor	Large project, difficult to scale to WUGs or other smaller entities.	1	Project requires significant infrastructure and development by a major sponsor	Large project, difficult to scale to WUGs or other smaller entities.
Schedule	1	>30 years	Greater than 20 years.	1	>30 years	Greater than 20 years.
Yield Risk	2	Moderate risk that a project's yield cannot be realized or will diminish over time. Moderate risk of supply availability	Environmental permitting status unknown- may impact feasibility of project. Less yield risk once the project is constructed.	2	Moderate risk that a project's yield cannot be realized or will diminish over time. Moderate risk of supply availability	Environmental permitting status unknown- may impact feasibility of project. Less known yield risk once the project is constructed.
		212.00	<b>Highlands System Score</b>	172.00	<b>Montgomery County Score</b>	

Strategy Name: Strategy Sub-Type:		Brazos River Supplies				
		Highlands System		Montgomery County		
		Criteria Score	Explanation	Criteria Score	Explanation	
Cooperation	1	Significant potential obstacles in working with other stakeholders to develop project	Multiple entities have already inquired about immediate and potential future supplies from the Brazos River. Significant opposition from water rights holders in Brazos River Basin.	1	Significant potential obstacles in working with other stakeholders to develop project	Multiple entities have already inquired about immediate and potential future supplies from the Brazos River. Significant opposition from water rights holders in Brazos River Basin.
Cost	2	\$500 to \$1,000 per ac-ft	Current BRA system rate for contract water is \$62.50/ac-ft, requires major inter-basin transfer, included transfer of raw water. Transmission cost is less significant for Highlands.	2	\$500 to \$1,000 per ac-ft	Current BRA system rate for contract water is \$62.50/ac-ft, requires major inter-basin transfer, included treatment of raw water. Transmission cost is significant.
Diversification	4	Supply developed from a variety of water resources outside of current SJRA portfolio	It is a new source of supply for SJRA. Vulnerable to low supplies due to drought in the BRA system.	4	Supply developed from a variety of water resources outside of current SJRA portfolio	It is a new source of supply for SJRA. Vulnerable to low supplies due to drought in the BRA system.
Environmental	2	Some notable environmental impact; uncertain course for studies and mitigation	Strategy yield could be impacted by instream flow requirements; utilization of additional flow could impact bay and estuary inflows; overall environmental impacts should be low when compared to other projects requiring development of infrastructure.	2	Some notable environmental impact; uncertain course for studies and mitigation	Strategy yield could be impacted by instream flow requirements; utilization of additional flow could impact bay and estuary inflows; overall environmental impacts should be low when compared to other projects requiring development of infrastructure.
Funding	2	Common funding mechanisms may be utilized; project will compete equally with other competing projects	Unknown.	2	Common funding mechanisms may be utilized; project will compete equally with other competing projects	Unknown.
Land Acquisition	2	100-1,000 ac	Transmission system.	2	100-1,000 ac	Transmission system.
Legal	3	Moderate level of permitting and contracting; few unknowns	Beyond the permitting currently underway, legal challenges to this strategy are expected to be minimal as this is a contract strategy; TCEQ has requested that BRA submit a detailed accounting plan for the use of water from the permit.	3	Moderate level of permitting and contracting; few unknowns	Beyond the permitting currently underway, legal challenges to this strategy are expected to be minimal as this is a contract strategy; TCEQ has requested that BRA submit a detailed accounting plan for the use of water from the permit.
Location	1	IBT required, long distance from SJRA service area	River is far from Highlands, will require significant transportation infrastructure.	1	IBT required, long distance from SJRA service area	River is far from Montgomery County, will require significant transportation infrastructure.
Magnitude	3	25,000 to 50,000 ac-ft/yr	25,000 ac-ft/yr to 100,000 ac-ft/yr	3	25,000 to 50,000 ac-ft/yr	25,000 ac-ft/yr to 100,000 ac-ft/yr
Other Supplies	4	Opportunity to enhance existing supplies and other potential supplies	No known issues.	4	Opportunity to enhance existing supplies and other potential supplies	No known issues.
Public	2	Minimal local support; some opposition	Public opposition along transmission route.	2	Minimal local support; some opposition	Public opposition along transmission route.
Scalability	1	Project requires significant infrastructure and development by a major sponsor	Cannot be implemented by smaller entities as the project needs an inter-basin transfer.	1	Project requires significant infrastructure and development by a major sponsor	Cannot be implemented by smaller entities as the project needs an inter-basin transfer.
Schedule	2	15-30 years	> 10 years, given TCEQ approval of the system operations permit and inter-basin transfer.	2	15-30 years	> 10 years, given TCEQ approval of the system operations permit and inter-basin transfer.
Yield Risk	2	Moderate risk that a project's yield cannot be realized or will diminish over time. Moderate risk of supply availability	Typical	2	Moderate risk that a project's yield cannot be realized or will diminish over time. Moderate risk of supply availability	Typical
		204.0	<b>Highlands System Score</b>	204.00	<b>Montgomery County Score</b>	



Strategy Name:		Catahoula Aquifer Supplies			
Strategy Sub-Type:		Developed by SJRA (Deliver to Lake)			
		Highlands System		Montgomery County	
		Criteria Score	Explanation	Criteria Score	Explanation
Cooperation				3	Potentially some opportunity to develop project synergistically with other stakeholders 2016 RWP: mostly contained within SJRA, coordination required with industrial customers.
Cost				3	\$250 to \$500 per ac-ft 2016 RWP: \$213/acft (during loan period), \$96/acft (after loan period); Competitive cost to other new raw water projects. May require treatment, fee to CoH for storage.
Diversification				4	Supply developed from a variety of water resources outside of current SJRA portfolio New source of supply, currently not part of SJRA supply portfolio.
Environmental				2	Some notable environmental impact; uncertain course for studies and mitigation 2016 RWP: Minimal impacts identified from project development. Project will provide a slight improvement in instream flows but may increase the salinity of flows. Preliminary siting of the project has been performed in order to avoid wetlands and other features of environmental quality that may be impacted. The project will discharge groundwater containing an elevated level of dissolved solids and radioactive nuclei and heat into natural water courses and care should be taken in limiting impacts related to water quality. Impacts to streams leading to Lake Conroe.
Funding				3	Specialized funding mechanisms exist Bureau of Reclamation grant for under-utilized supplies. Other state funding sources from TWDB.
Land Acquisition				3	5-100 ac Limited. Coordinate with Industrial Customers.
Legal				3	Moderate level of permitting and contracting; few unknowns 2016 RWP: Permits required for test bore, completed wells, storage in Lewis Creek Reservoir, and poor quality discharge in streams leading to Lake Conroe and Lake Conroe. Some uncertainty associated with future changes to groundwater regulations.
Location				4	Limited conveyance needs 2016 RWP: Project is located near Lake Conroe where it may serve existing and future SJRA customers.
Magnitude				2	5,000 to 25,000 ac-ft per year 2016 RWP: 7,840 acft/yr
Other Supplies				4	Opportunity to enhance existing supplies and other potential supplies 2016 RWP: Project may provide water for the comprehensive SJRA GRP, although poorer quality.
Public				2	Minimal local support; some opposition 2016 RWP: Some local support for Catahoula Aquifer projects, but not necessarily for discharging into Lake Conroe.
Scalability				1	Project requires significant infrastructure and development by a major sponsor 2016 RWP: relatively small scale, within SJRA service area.
Schedule				3	5 to 15 years 2016 RWP: Short development timeline associated with wells. First pilot wells to determine any changes in water quality over time.
Yield Risk				1	High level of uncertainty that project yield can be developed or will be maintained in the long term. High risk of supply availability Uncertain longterm viability.
		N/A	<b>Highlands System Score</b>	274.00	<b>Montgomery County Score</b>

Strategy Name:		Catahoula Aquifer Supplies				
Strategy Sub-Type:		Developed by SJRA (Treated at Water Treatment Plant)				
		Highlands System		Montgomery County		
		Criteria Score	Explanation	Criteria Score	Explanation	
Cooperation				3	Potentially some opportunity to develop project synergistically with other stakeholders	2016 RWP: mostly contained within SJRA, coordination required with industrial customers.
Cost				2	\$500 to \$1,000 per ac-ft	2016 RWP: \$1,085/acft (during loan period), \$634/acft (after loan period); Requires treatment. Strategy will require well field development.
Diversification				4	Supply developed from a variety of water resources outside of current SJRA portfolio	New source of supply.
Environmental				3	Some notable environmental impact; routine process for permitting	2016 RWP: Minimal impacts identified from project development. Project will provide a slight improvement in instream flows but may increase the salinity of the flows. Preliminary siting of the project has been performed in order to avoid wetlands and other features of environmental quality that may be impacted. The project will discharge groundwater containing an elevated level of dissolved solids into natural water courses and care should be taken in limiting impacts related to water quality.
Funding				3	Specialized funding mechanisms exist	Bureau of Reclamation grant for under-utilized supplies. Other state funding sources from TWDB.
Land Acquisition				3	5-100 ac	Need land for treatment also. Coordinate with Industrial Participants.
Legal				3	Moderate level of permitting and contracting; few unknowns	2016 RWP: Permits required for test bore, completed wells, storage in Lewis Creek Reservoir, and poor quality discharge in streams leading to Lake Conroe and Lake Conroe. Some uncertainty associated with future changes to groundwater regulations.
Location				3	Some conveyance required to meet identified demands	2016 RWP: Project is located near Lake Conroe, at the WTP, where it may serve existing and future SJRA customers.
Magnitude				2	5,000 to 25,000 ac-ft per year	2016 RWP: 18,000 ac-ft/year allocated to treated or blended Catahoula strategy.
Other Supplies				4	Opportunity to enhance existing supplies and other potential supplies	2016 RWP: Project may provide water for the comprehensive SJRA GRP, although poorer quality.
Public				2	Minimal local support; some opposition	2016 RWP: Some local support for Catahoula Aquifer projects, but not necessarily for discharging into Lake Conroe.
Scalability				1	Project requires significant infrastructure and development by a major sponsor	2016 RWP: relatively small scale, within SJRA service area.
Schedule				3	5 to 15 years	2016 RWP: Short development timeline associated with wells. Will definitely need pilot treatment and wells, then design and construction.
Yield Risk				1	High level of uncertainty that project yield can be developed or will be maintained in the long term. High risk of supply availability	Uncertain longterm viability.
		N/A	<b>Highlands System Score</b>	234.00	<b>Montgomery County Score</b>	

Strategy Name:		Catahoula Aquifer Supplies				
Strategy Sub-Type:		Developed by SJRA (Blended)				
		Highlands System		Montgomery County		
		Criteria Score	Explanation	Criteria Score	Explanation	
Cooperation				2	Potentially some obstacles in working with other stakeholders to develop project	2016 RWP: project will be funded by SJRA. Coordination with Industrial Customers required.
Cost				3	\$250 to \$500 per ac-ft	2016 RWP: \$278/acft (during loan period), \$152/acft (after loan period). Project includes well field development. Groundwater supplies will be blended with SJRA's existing or future surface water supplies.
Diversification				2	Supply originates from sources linked to existing SJRA supplies but may be influenced by other factors	New source of supply.
Environmental				3	Some notable environmental impact; routine process for permitting	2016 RWP: Minimal impacts identified from project development. Project will provide a slight improvement in instream flows. Preliminary siting of the project has been performed in order to avoid wetlands and other features of environmental quality that may be impacted. The project will discharge groundwater containing an elevated level of dissolved solids into natural water courses and care should be taken in limiting impacts related to water quality.
Funding				3	Specialized funding mechanisms exist	Bureau of Reclamation grant for under-utilized supplies. Other state funding sources from TWDB.
Land Acquisition				3	5-100 ac	Limited. Land needed for blending tanks/infrastructure.
Legal				3	Moderate level of permitting and contracting; few unknowns	2016 RWP: Permits required for test bore, completed wells, storage in Lewis Creek Reservoir, and poor quality discharge in streams leading to Lake Conroe and Lake Conroe. Some uncertainty associated with future changes to groundwater regulations.
Location				3	Some conveyance required to meet identified demands	2016 RWP: Project is located near Lake Conroe where it may serve existing and future SJRA participants.
Magnitude				2	5,000 to 25,000 ac-ft per year	2016 RWP: 18,000 ac-ft/year allocated to treated or blended Catahoula strategy.
Other Supplies				2	Negative impacts to other potential projects	2016 RWP: Project may provide water for the comprehensive SJRA GRP, although poorer quality. But requires another source to blend.
Public				3	Local support; minimal opposition	2016 RWP: Some local support for Catahoula Aquifer projects.
Scalability				1	Project requires significant infrastructure and development by a major sponsor	2016 RWP: relatively small scale, within SJRA service area.
Schedule				3	5 to 15 years	2016 RWP: Short development timeline associated with wells. Will need pilot to determine blend rates and different water qualities.
Yield Risk				1	High level of uncertainty that project yield can be developed or will be maintained in the long term. High risk of supply availability	Uncertain longterm viability.
		234.00	<b>Highlands System Score</b>	268.00	<b>Montgomery County Score</b>	



Strategy Name:		Catahoula Aquifer Supplies			
Strategy Sub-Type:		Developed by SJRA Participants (Treated)			
		Highlands System		Montgomery County	
		Criteria Score	Explanation	Criteria Score	Explanation
Cooperation				4	Significant opportunity to develop project synergistically with other stakeholders 2016 RWP: Developed by SJRA Participants.
Cost				2	\$500 to \$1,000 per ac-ft 2016 RWP: \$1,085/acft (during loan period), \$634/acft (after loan period); Requires treatment. Strategy will require well field development.
Diversification				4	Supply developed from a variety of water resources outside of current SJRA portfolio New source of supply.
Environmental				4	Minor environmental impact; environmental studies have been completed on similar projects 2016 RWP: Minimal impacts identified from project development.
Funding				3	Specialized funding mechanisms exist Bureau of Reclamation grant for under-utilized supplies. Other state funding sources from TWDB.
Land Acquisition				4	Minimal land impact (<5 ac) Limited
Legal				3	Moderate level of permitting and contracting; few unknowns 2016 RWP: Permits required for test bore and completed wells Some uncertainty associated with future changes to groundwater regulations.
Location				4	Limited conveyance needs 2016 RWP: Project is located near customer city delivery points.
Magnitude				2	5,000 to 25,000 ac-ft per year 2016 RWP: 18,000 ac-ft/year allocated to treated or blended Catahoula strategy.
Other Supplies				3	Opportunity to enhance other potential projects 2016 RWP: Project may provide water for the comprehensive SJRA GRP, although poorer quality.
Public				3	Local support; minimal opposition 2016 RWP: Some local support for Catahoula Aquifer projects.
Scalability				4	Project can be implemented by entities of all sizes 2016 RWP: relatively small scale, within SJRA service area.
Schedule				3	5 to 15 years 2016 RWP: Short development timeline associated with wells. Piloting needed for treatment.
Yield Risk				1	High level of uncertainty that project yield can be developed or will be maintained in the long term. High risk of supply availability Uncertain longterm viability.
		N/A	<b>Highlands System Score</b>	270.00	<b>Montgomery County Score</b>

Strategy Name:		Catahoula Aquifer Supplies			
Strategy Sub-Type:		Developed by SJRA Participants (Blended)			
		Highlands System		Montgomery County	
		Criteria Score	Explanation	Criteria Score	Explanation
Cooperation				4	Significant opportunity to develop project synergistically with other stakeholders 2016 RWP: Developed by SJRA Participants.
Cost				4	<\$250 per ac-ft 2016 RWP: \$278/acft (during loan period), \$152/acft (after loan period). Project includes well field development. Groundwater supplies will be blended with SJRA's existing or future surface water supplies.
Diversification				4	Supply developed from a variety of water resources outside of current SJRA portfolio New source of supply.
Environmental				4	Minor environmental impact; environmental studies have been completed on similar projects 2016 RWP: Minimal impacts identified from project development.
Funding				3	Specialized funding mechanisms exist Bureau of Reclamation grant for under-utilized supplies. Other state funding sources from TWDB.
Land Acquisition				4	Minimal land impact (<5 ac) Limited. Land needed for blending tanks/infrastructure. Coordinate with Entergy.
Legal				3	Moderate level of permitting and contracting; few unknowns 2016 RWP: Permits required for test bore and completed wells. Some uncertainty associated with future changes to groundwater regulations.
Location				4	Limited conveyance needs 2016 RWP: Project is located near Lake Conroe where it may serve existing and future SJRA participants.
Magnitude				2	5,000 to 25,000 ac-ft per year 2016 RWP: 18,000 ac-ft/year allocated to treated or blended Catahoula strategy.
Other Supplies				2	Negative impacts to other potential projects 2016 RWP: Project may provide water for the comprehensive SJRA GRP, although poorer quality. But requires another source to blend.
Public				3	Local support; minimal opposition 2016 RWP: Some local support for Catahoula Aquifer projects.
Scalability				4	Project can be implemented by entities of all sizes 2016 RWP: relatively small scale, within SJRA service area.
Schedule				3	5 to 15 years 2016 RWP: Short development timeline associated with wells. Will need pilot to determine blend rates and different water qualities.
Yield Risk				1	High level of uncertainty that project yield can be developed or will be maintained in the long term. High risk of supply availability Uncertain longterm viability.
		N/A	<b>Highlands System Score</b>	348.00	<b>Montgomery County Score</b>

Strategy Name: Strategy Sub-Type:		Conservation			
		TWDB Baseline			
		Highlands System		Montgomery County	
		Criteria Score	Explanation	Criteria Score	Explanation
Cooperation				3	Potentially some opportunity to develop project synergistically with other stakeholders RWP 2016: Requires coordination between small systems on conservation plans and attitudes.
Cost				4	<\$250 per ac-ft 2016 RWP: Based on anticipated installation of efficient plumbing fixtures and appliances (no cost) ; Water conservation approaches consistently achieve high scores related to cost.
Diversification				3	Supply developed from sources unrelated to existing SJRA supplies 2016 RWP: Does not add another source of water, but instead decreases demand and reliance on existing sources.
Environmental				4	Minor environmental impact; environmental studies have been completed on similar projects 2016 RWP: Generally, there are no significant negative environmental impacts associated with the conservation projects or that may results from implementation of the conservation management project.
Funding				4	Project will receive beneficial consideration in a funding program due to type of project or source of water 2016 RWP: Although sponsors are identified, commitment to implementation varies considerably. Dedicated SWIFT funds are available through the TWDB funding program.
Land Acquisition				4	Minimal land impact (<5 ac) No applicable cost.
Legal				3	Moderate level of permitting and contracting; few unknowns 2016 RWP: Requires identifying utility to manage conservations measures.
Location				4	Limited conveyance needs n/a
Magnitude				2	5,000 to 25,000 ac-ft per year SJRA RWSMP: 6,000 (2020)- 30,000 (2070) ac-ft/yr;
Other Supplies				2	Negative impacts to other potential projects 2016 RWP: Conservation may negatively impact the availability of return flows for development into indirect reuse projects.
Public				4	Widespread local support; opportunity for ancillary community benefits 2016 RWP: No opposition to conservation efforts. Local support to initiatives.
Scalability				4	Project can be implemented by entities of all sizes 2016 RWP: Can be implemented at every level.
Schedule				3	5 to 15 years 2016 RWP: 2020 with ongoing annual expenditures; Conservation programs can be implemented in a relatively short period of time.
Yield Risk				3	Some risk that project yield will not be realized or will be reduce over time. Some risk of supply availability Uncertain near and long-term efficacy.
		N/A	<b>Highlands System Score</b>	364.00	<b>Montgomery County Score</b>

Strategy Name:		Conservation			
Strategy Sub-Type:		SJRA Water Conservation Plan			
		Highlands System		Montgomery County	
		Criteria Score	Explanation	Criteria Score	Explanation
Cooperation				3	Potentially some opportunity to develop project synergistically with other stakeholders RWP 2016: Requires coordination between small systems on conservation plans and attitudes.
Cost				3	\$250 to \$500 per ac-ft 2016 RWP: \$726/acft; Water conservation approaches consistently achieve high scores related to cost. This is particularly affordable considering these projects offset the cost of treated, municipal supply.
Diversification				3	Supply developed from sources unrelated to existing SJRA supplies 2016 RWP: Does not add another source of water, but instead decreases demand and reliance on existing supplies.
Environmental				4	Minor environmental impact; environmental studies have been completed on similar projects 2016 RWP: Generally, there are no significant negative environmental impacts associated with the conservation projects or that may result from implementation of the conservation management project.
Funding				4	Project will receive beneficial consideration in a funding program due to type of project or source of water 2016 RWP: Although sponsors are identified, commitment to implementation varies considerably. Dedicated SWIFT funds allocated by TWDB.
Land Acquisition				4	Minimal land impact (<5 ac) Limited
Legal				3	Moderate level of permitting and contracting; few unknowns 2016 RWP: Requires identifying utility to manage conservations measures.
Location				4	Limited conveyance needs n/a
Magnitude				4	>50,000 ac-ft per year SJRA RWSMP: 118,122 ac-ft/yr (2070)
Other Supplies				2	Negative impacts to other potential projects 2016 RWP: Conservation may negatively impact the availability of return flows for development into indirect reuse projects.
Public				4	Widespread local support; opportunity for ancillary community benefits 2016 RWP: No opposition to conservation efforts. Local support for initiatives.
Scalability				4	Project can be implemented by entities of all sizes 2016 RWP: Can be implemented at every level.
Schedule				4	0 to 5 years 2016 RWP: Conservation programs can be implemented in a relatively short period of time.
Yield Risk				3	Some risk that project yield will not be realized or will be reduce over time. Some risk of supply availability Uncertain future viability.
		N/A	<b>Highlands System Score</b>	338.00	<b>Montgomery County Score</b>

Strategy Name:		Direct, Non-Potable Reuse				
Strategy Sub-Type:		Developed by Other GRP Participants				
		Highlands System		Montgomery County		
		Criteria Score	Explanation	Criteria Score	Explanation	
Cooperation				4	Significant opportunity to develop project synergistically with other stakeholders	Minimal cooperation required between agencies - individual customers.
Cost				3	\$250 to \$500 per ac-ft	2016 RWP: \$161-290/ac-ft (during loan period), \$62/ac-ft (after loan period); The project is somewhat economical compared to alternative raw water supply projects. Costs increase as distance between wastewater treatment plant and need increases.
Diversification				3	Supply developed from sources unrelated to existing SJRA supplies	New source of supply currently not in SJRA supply portfolio.
Environmental				3	Some notable environmental impact; routine process for permitting	2016 RWP: Impacts from project are unlikely to exceed regular land development impacts for master planned communities. Project will reduce the level of flows returned to streams to a level to be determined through the permitting process. Reduced environmental flows.
Funding				4	Project will receive beneficial consideration in a funding program due to type of project or source of water	2016 RWP: Some stakeholders have come forward to support this project although potential stakeholders have implemented similar projects within the basin and region. Dedicated SWIFT funding sources.
Land Acquisition				3	5-100 ac	2016 RWP: minimal. Easements for transmission/distribution system.
Legal				3	Moderate level of permitting and contracting; few unknowns	2016 RWP: Simplified permitting process (direct reuse components retrofitted into existing system); will require SWPPP and permit for use of reclaimed wastewater effluent; Permit process must be initiated.
Location				3	Some conveyance required to meet identified demands	2016 RWP: Direct reuse infrastructure would be located in close proximity to points of water use. WWTP has to be located near need for reuse (sportsfields, etc).
Magnitude				2	5,000 to 25,000 ac-ft per year	SJRA Feasibility Study: 8,447 ac-ft/yr - 29,411 ac-ft/yr.
Other Supplies				2	Negative impacts to other potential projects	2016 RWP: Diversion of discharges would create reduction in environmental flows. May impact the yield of existing reuse permits owned by SJRA.
Public				2	Minimal local support; some opposition	2016 RWP: Some opposition to the proposed project. Public reception not 100%, previous complaints about sportsfields irrigated with WW effluent.
Scalability				3	Project may be implemented by most existing and potential entities	could be scaled to smaller entities, provided a WWTP is available.
Schedule				4	0 to 5 years	2016 RWP: 1-3 years. Need a study to match sources with areas of need.
Yield Risk				3	Some risk that project yield will not be realized or will be reduce over time. Some risk of supply availability	2016 RWP: Minimal risk to availability of supply. Reduced yield due to current/future environmental flow needs.
		N/A	<b>Highlands System Score</b>		302.00	<b>Montgomery County Score</b>

Strategy Name:		Direct, Non-Potable Reuse				
Strategy Sub-Type:		Developed by Woodlands				
		Highlands System		Montgomery County		
		Criteria Score	Explanation	Criteria Score	Explanation	
Cooperation				4	Significant opportunity to develop project synergistically with other stakeholders	Minimal cooperation required between agencies - individual customers.
Cost				3	\$250 to \$500 per ac-ft	2016 RWP: \$161-290/ac-ft (during loan period), \$62/ac-ft (after loan period); The project is somewhat economical compared to alternative raw water supply projects. Costs increase as distance between wastewater treatment plant and need increases.
Diversification				3	Supply developed from sources unrelated to existing SJRA supplies	New use for reclaimed wastewater.
Environmental				3	Some notable environmental impact; routine process for permitting	2016 RWP: Impacts from project are unlikely to exceed regular land development impacts for master planned communities. Project will reduce the level of flows returned to streams to a level to be determined through the permitting process.
Funding				4	Project will receive beneficial consideration in a funding program due to type of project or source of water	2016 RWP: Some stakeholders have come forward to support this project although potential stakeholders have implemented similar projects within the basin and region. Dedicated SWIFT funding sources.
Land Acquisition				3	5-100 ac	2016 RWP: minimal. Easements for transmission/distribution system.
Legal				3	Moderate level of permitting and contracting; few unknowns	2016 RWP: Simplified permitting process (direct reuse components retrofitted into existing system); will require SWPPP and permit for use of reclaimed wastewater effluent; Permit process must be initiated.
Location				3	Some conveyance required to meet identified demands	2016 RWP: Direct reuse infrastructure would be located in close proximity to points of water use. WWTP has to be located near need for reuse (sportsfields, etc).
Magnitude				2	5,000 to 25,000 ac-ft per year	Magnitude varies based on The Woodlands wastewater discharges.
Other Supplies				1	Negative impacts to existing and other potential supplies	2016 RWP: Diversion of discharges would create reduction in environmental flows. May impact the yield of existing reuse permits owned by SJRA.
Public				2	Minimal local support; some opposition	2016 RWP: Some opposition to the proposed project. Public reception not 100%, previous complaints about sportsfields irrigated with WW effluent.
Scalability				3	Project may be implemented by most existing and potential entities	could be scaled to smaller entities, provided a WWTP is available.
Schedule				4	0 to 5 years	2016 RWP: 1-3 years. Need a study to match sources with areas of need.
Yield Risk				3	Some risk that project yield will not be realized or will be reduce over time. Some risk of supply availability	2016 RWP: Minimal risk to availability of supply. Reduced yield due to current/future environmental flow needs.
		N/A	<b>Highlands System Score</b>	<b>300.00</b>	<b>Montgomery County Score</b>	



Strategy Name:		East Texas Water Transfer				
Strategy Sub-Type:						
		Highlands System		Montgomery County		
		Criteria Score	Explanation	Criteria Score	Explanation	
Cooperation	2	Potentially some obstacles in working with other stakeholders to develop project	2016 RWP: Requires cooperation of large water rights holders (such as COH) to make exchanges possible. Politically will be difficult, lots of obstacles.	2	Potentially some obstacles in working with other stakeholders to develop project	2016 RWP: Requires cooperation of large water rights holders (such as COH) to make exchanges possible. Politically will be difficult, lots of obstacles.
Cost	3	\$250 to \$500 per ac-ft	2016 RWP: \$145/acft (during loan period), \$15/acft (after loan period). Plus cost of water.	2	\$500 to \$1,000 per ac-ft	2016 RWP: \$145/acft (during loan period), \$15/acft (after loan period). Plus cost of water. High transmission costs. Total project cost also includes \$317/ac-ft/yr for the additional transmission system needs to be constructed by SJRA to bring water to Montgomery system. The \$145/acft only considers delivery of water to COH facilities.
Diversification	4	Supply developed from a variety of water resources outside of current SJRA portfolio	Creates a new source of water, not linked to existing SJRA supplies.	4	Supply developed from a variety of water resources outside of current SJRA portfolio	Creates a new source of water, not linked to existing SJRA supplies.
Environmental	2	Some notable environmental impact; uncertain course for studies and mitigation	2016 RWP: Project alters environmental flows patterns in each basin although these impacts will be limited through prescribed environmental flows standards; necessary to use existing corridors/canals to minimize impacts.	2	Some notable environmental impact; uncertain course for studies and mitigation	2016 RWP: Project alters environmental flows patterns in each basin although these impacts will be limited through prescribed environmental flows standards; necessary to use existing corridors/canals to minimize impacts.
Funding	2	Common funding mechanisms may be utilized; project will compete equally with other competing projects	2016 RWP: Sponsors identified based on needs and the required mechanics of the project. Currently, these stakeholders are not actively committed to development.	2	Common funding mechanisms may be utilized; project will compete equally with other competing projects	2016 RWP: Sponsors identified based on needs and the required mechanics of the project. Currently, these stakeholders are not actively committed to development.
Land Acquisition	1	Significant land impact (>1,000 ac)	2016 RWP: \$4,287,127 in land and easements	1	Significant land impact (>1,000 ac)	2016 RWP: \$4,287,127 in land and easements
Legal	1	Significant permitting required; extensive contracting	2016 RWP: Significant challenges to pursue permits and acquire required right-of-way; amendments to permits for storage and appropriation of water in the Sabine River Basin required; will require a permit process with TCEQ for unappropriated excess flows.	1	Significant permitting required; extensive contracting	2016 RWP: Significant challenges to pursue permits and acquire required right-of-way; amendments to permits for storage and appropriation of water in the Sabine River Basin required; will require a permit process with TCEQ for unappropriated excess flows.
Location	1	IBT required, long distance from SJRA service area	2016 RWP: Considerable interbasin transfer required to convey water from outside of Region H.	1	IBT required, long distance from SJRA service area	2016 RWP: Considerable interbasin transfer required to convey water from outside of Region H.
Magnitude	4	>50,000 ac-ft per year	2016 RWP: > 250,000 acft/yr	4	>50,000 ac-ft per year	2016 RWP: > 250,000 acft/yr
Other Supplies	4	Opportunity to enhance existing supplies and other potential supplies	2016 RWP: Project enables the use of existing water supplies and may be combined with other projects such as TRA to SJRA Transfer to achieve comprehensive, regional goals.	4	Opportunity to enhance existing supplies and other potential supplies	2016 RWP: Project enables the use of existing water supplies and may be combined with other projects such as TRA to SJRA Transfer to achieve comprehensive, regional goals.
Public	2	Minimal local support; some opposition	2016 RWP: Possible opposition	2	Minimal local support; some opposition	2016 RWP: Probable opposition
Scalability	1	Project requires significant infrastructure and development by a major sponsor	2016 RWP: The magnitude of this project dictates that it be accomplished by major water providers in response to large, growing demands among their many customers. In effect, this water may be utilized by Water User Groups of many sizes that receive water from these major providers. This project will be accomplished by specific, regional water providers based on strategic needs when current water supplies become inadequate to meet future needs.	1	Project requires significant infrastructure and development by a major sponsor	2016 RWP: The magnitude of this project dictates that it be accomplished by major water providers in response to large, growing demands among their many customers. In effect, this water may be utilized by Water User Groups of many sizes that receive water from these major providers. This project will be accomplished by specific, regional water providers based on strategic needs when current water supplies become inadequate to meet future needs.
Schedule	2	15-30 years	2016 RWP: approx 20 year development timeline.	2	15-30 years	2016 RWP: approx 20 year development timeline.
Yield Risk	3	Some risk that project yield will not be realized or will be reduce over time. Some risk of supply availability	As the withdrawal of the additional 250,000 ac-ft/yr of water from the Sabine River Basin is permitted, there should be no yield risk for permitting, provided necessary environmental regulations are met.	3	Some risk that project yield will not be realized or will be reduce over time. Some risk of supply availability	As the withdrawal of the additional 250,000 ac-ft/yr of water from the Sabine River Basin is permitted, there should be no yield risk for permitting, provided necessary environmental regulations are met.
		242.00	<b>Highlands System Score</b>	202.00	<b>Montgomery County Score</b>	

Strategy Name:		Lake Creek Reservoir			
Strategy Sub-Type:					
		Highlands System		Montgomery County	
		Criteria Score	Explanation	Criteria Score	Explanation
Cooperation	2	Potentially some obstacles in working with other stakeholders to develop project	Coordinate with multiple stakeholders in the region.	2	Potentially some obstacles in working with other stakeholders to develop project
Cost	2	\$500 to \$1,000 per ac-ft	2011 RWP: \$583/ac-ft	2	\$500 to \$1,000 per ac-ft
Diversification	2	Supply originates from sources linked to existing SJRA supplies but may be influenced by other factors	Creates a new water supply for the region.	2	Supply originates from sources linked to existing SJRA supplies but may be influenced by other factors
Environmental	2	Some notable environmental impact; uncertain course for studies and mitigation	2011 RWP: Some endangered species have been identified. There are about 2,200 acres of bottomland hardwoods, 7,000 acres of oak, hickory, pine forest, and 1,800 acres of shrubland and grasses. Probable high environmental impacts.	2	Some notable environmental impact; uncertain course for studies and mitigation
Funding	2	Common funding mechanisms may be utilized; project will compete equally with other competing projects	Typical funding options.	2	Common funding mechanisms may be utilized; project will compete equally with other competing projects
Land Acquisition	1	Significant land impact (>1,000 ac)	2011 RWP: Significant clearing and relocation of utilities and roadways is required; 19,400 acres impacted by project.	1	Significant land impact (>1,000 ac)
Legal	2	Moderate level of permitting and contracting; several unknowns	2011 RWP: Permitting probably required for environmental impacts and relocation of utilities and roadways; preferred site by Bureau of Reclamation for SJR basin (positive B/C ratio).	2	Moderate level of permitting and contracting; several unknowns
Location	4	Limited conveyance needs	2011 RWP: Approximately 5 miles southwest of Conroe on Lake Creek within southern Montgomery County. The site is located within the San Jacinto River Basin and is in Region H.	3	Some conveyance required to meet identified demands
Magnitude	4	>50,000 ac-ft per year	2011 RWP: 67,200 acft/yr	4	>50,000 ac-ft per year
Other Supplies	3	Opportunity to enhance other potential projects	Improve supply reliability in Highlands system	3	Opportunity to enhance other potential projects
Public	3	Local support; minimal opposition	Minimal opposition.	3	Local support; minimal opposition
Scalability	1	Project requires significant infrastructure and development by a major sponsor	Large project, difficult to scale to Water User Groups or other smaller entities.	1	Project requires significant infrastructure and development by a major sponsor
Schedule	2	15-30 years	Permitting and construction may take up to 20 years.	2	15-30 years
Yield Risk	2	Moderate risk that a project's yield cannot be realized or will diminish over time. Moderate risk of supply availability	Yield risk due to sedimentation and environmental flows.	2	Moderate risk that a project's yield cannot be realized or will diminish over time. Moderate risk of supply availability
		220.00	<b>Highlands System Score</b>	214.00	<b>Montgomery County Score</b>



Strategy Name:		Lake Creek Scalping			
Strategy Sub-Type:		Run of River Supplies			
		Highlands System		Montgomery County	
		Criteria Score	Explanation	Criteria Score	Explanation
Cooperation				2	Potentially some obstacles in working with other stakeholders to develop project LCS Feasibility Phase II: Minimal cooperation required between entities.
Cost				2	\$500 to \$1,000 per ac-ft LCS Feasibility Phase II: \$854-1740/acft (for year 2020, based on capacity of pump station).
Diversification				1	Supply originates from sources linked to existing SJRA supplies LCS Feasibility Phase II: Adds a new source of water to the SJRA system, by diverting flows from Lake Creek to Lake Conroe. Supply from San Jacinto basin.
Environmental				3	Some notable environmental impact; routine process for permitting LCS Feasibility Phase II: will reduce flows in Lake Creek, possibly with environmental consequences. Other environmental issues should be mitigated.
Funding				2	Common funding mechanisms may be utilized; project will compete equally with other competing projects Typical funding sources.
Land Acquisition				3	5-100 ac LCS Feasibility Phase II: \$230,045 for land acquisition and easements.
Legal				1	Significant permitting required; extensive contracting LCS Feasibility Phase II: significant permitting required. Water Right permits, 404 etc..
Location				4	Limited conveyance needs Good proximity; plan diverts flow from Lake Creek to Lake Conroe, with a direct pipeline. The water then joins the SJRA supply system. Yield varies by the sub-type of the scalping location selected.
Magnitude				2	5,000 to 25,000 ac-ft per year LCS Feasibility Phase II: 922 ac-ft per year to 10,000 ac-ft per year.
Other Supplies				2	Negative impacts to other potential projects May impact availability of other supplies.
Public				3	Local support; minimal opposition Minimal opposition.
Scalability				1	Project requires significant infrastructure and development by a major sponsor LCS Feasibility Phase II: Bases on the capacity constraints of the infrastructure.
Schedule				3	5 to 15 years approximately 10 years.
Yield Risk				3	Some risk that project yield will not be realized or will be reduce over time. Some risk of supply availability LCS Feasibility Phase II: Environmental flow requirements as part of Senate Bill 3 were considered in the memo. Same concerns as other San Jacinto basin supplies.
		N/A	<b>Highlands System Score</b>	228.00	<b>Montgomery County Score</b>

Strategy Name:		Lake Creek Scalping			
Strategy Sub-Type:		Storage in Lake Conroe			
		Highlands System		Montgomery County	
		Criteria Score	Explanation	Criteria Score	Explanation
Cooperation				2	Potentially some obstacles in working with other stakeholders to develop project LCS Feasibility Phase II: Minimal cooperation required between entities.
Cost				1	>\$1,000 per ac-ft LCS Feasibility Phase II: \$854-1740/acft (for year 2020, based on capacity of pump station).
Diversification				1	Supply originates from sources linked to existing SJRA supplies LCS Feasibility Phase II: Adds a new source of water to the SJRA system, by diverting flows from Lake Creek to Lake Conroe. Supply from San Jacinto basin.
Environmental				3	Some notable environmental impact; routine process for permitting LCS Feasibility Phase II: will reduce flows in Lake Creek, possibly with environmental consequences. Other environmental issues should be mitigated.
Funding				2	Common funding mechanisms may be utilized; project will compete equally with other competing projects Typical funding options.
Land Acquisition				4	Minimal land impact (<5 ac) LCS Feasibility Phase II: \$230,045 for land acquisition and easements.
Legal				1	Significant permitting required; extensive contracting LCS Feasibility Phase II: significant permitting required. Water Right permits, 404 etc..
Location				3	Some conveyance required to meet identified demands Good proximity; plan diverts flow from Lake Creek to Lake Conroe, with a direct pipeline. The water then joins the SJRA supply system. Yield varies by the sub-type of the scalping location selected.
Magnitude				2	5,000 to 25,000 ac-ft per year LCS Feasibility Phase II: 922-10,055 ac-ft/yr
Other Supplies				3	Opportunity to enhance other potential projects Positively enhance the reliability of Lake Conroe.
Public				3	Local support; minimal opposition Minimal Opposition.
Scalability				1	Project requires significant infrastructure and development by a major sponsor LCS Feasibility Phase II: Based on the capacity constraints of the infrastructure.
Schedule				3	5 to 15 years Approximately 10 years.
Yield Risk				3	Some risk that project yield will not be realized or will be reduce over time. Some risk of supply availability LCS Feasibility Phase II: Environmental flow requirements as part of Senate Bill 3 were considered in the memo. Same concerns as other San Jacinto basin supplies.
		N/A	<b>Highlands System Score</b>	<b>188.00</b>	<b>Montgomery County Score</b>

Strategy Name:		Lake Creek Scalping			
Strategy Sub-Type:		Dedicated Storage			
		Highlands System		Montgomery County	
		Criteria Score	Explanation	Criteria Score	Explanation
Cooperation				2	Potentially some obstacles in working with other stakeholders to develop project LCS Feasibility Phase II: Minimal cooperation required between entities.
Cost				1	>\$1,000 per ac-ft LCS Feasibility Phase II: \$854-1740/acft (for year 2020, based on capacity of pump station).
Diversification				1	Supply originates from sources linked to existing SJRA supplies LCS Feasibility Phase II: Adds a new source of water to the SJRA system, by diverting flows from Lake Creek to Lake Conroe. Supply from San Jacinto basin.
Environment				3	Some notable environmental impact; routine process for permitting LCS Feasibility Phase II: will reduce flows in Lake Creek, possibly with environmental consequences. Other environmental issues should be mitigated.
Funding				2	Common funding mechanisms may be utilized; project will compete equally with other competing projects Typical funding options.
Land Acquisition				2	100-1,000 ac LCS Feasibility Phase II: \$230,045 for land acquisition and easements.
Legal				1	Significant permitting required; extensive contracting LCS Feasibility Phase II: significant permitting required. Water Right permits, 404 etc..
Location				3	Some conveyance required to meet identified demands Good proximity; plan diverts flow from Lake Creek to off-channel storage, with a direct pipeline. The water then joins the SJRA supply system. Yield varies by the sub-type of the scalping location selected.
Magnitude				2	5,000 to 25,000 ac-ft per year LCS Feasibility Phase II: 922-10,055 ac-ft/yr
Other Supplies				3	Opportunity to enhance other potential projects Positively enhance the reliability of supplies in Montgomery County system.
Public				3	Local support; minimal opposition Minimal opposition.
Scalability				1	Project requires significant infrastructure and development by a major sponsor LCS Feasibility Phase II: Based on the capacity constraints of the infrastructure.
Schedule				3	5 to 15 years Approximately 10 years.
Yield Risk				3	Some risk that project yield will not be realized or will be reduce over time. Some risk of supply availability LCS Feasibility Phase II: Environmental flow requirements as part of Senate Bill 3 were considered in the memo. Same concerns as other San Jacinto basin supplies.
		N/A	<b>Highlands System Score</b>	180.00	<b>Montgomery County Score</b>

Strategy Name: Strategy Sub-Type:		Lake Livingston Transfer				
		to Lake Conroe/SJRA Treatment Plant				
		Highlands System		Montgomery County		
		Criteria Score	Explanation	Criteria Score	Explanation	
Cooperation	4	Significant opportunity to develop project synergistically with other stakeholders	2016 RWP: cooperation required between SJRA, TRA, and CWA.	4	Potentially some opportunity to develop project synergistically with other stakeholders	2016 RWP: cooperation required between SJRA, TRA.
Cost	4	<\$250 per ac-ft	2016 RWP: \$311/acft (during loan period), \$32/acft (after loan period); Relatively low-cost project for delivery of raw water. Total cost will also include contract cost of water.	3	\$250 to \$500 per ac-ft	2016 RWP: \$311/acft (during loan period), \$32/acft (after loan period); Relatively low-cost project for delivery of raw water. Total cost will also include contract cost of water. Very high transmission costs.
Diversification	3	Supply developed from sources unrelated to existing SJRA supplies	2016 RWP: The project is associated with water supplies that have already been obtained by SJRA through agreement with TRA (not a new water source, but one previously unused).	3	Supply developed from sources unrelated to existing SJRA supplies	2016 RWP: The project is associated with water supplies that have already been obtained by SJRA through agreement with TRA (not a new water source, but one previously unused).
Environmental	3	Some notable environmental impact; routine process for permitting	2016 RWP: Interbasin transfer has potential impacts to water resources and transmission of species.	3	Some notable environmental impact; routine process for permitting	2016 RWP: Interbasin transfer has potential impacts to water resources and transmission of species; Large portion of pipeline travels through Sam Houston National Forest, must use private lands or existing corridors. Impacts on Lake Conroe water quality.
Funding	2	Common funding mechanisms may be utilized; project will compete equally with other competing projects	2016 RWP: SJRA is committed to exploring options for utilizing this resource (none yet).	2	Common funding mechanisms may be utilized; project will compete equally with other competing projects	2016 RWP: SJRA is committed to exploring options for utilizing this resource (none yet).
Land Acquisition	3	5-100 ac	Land and easement acquisition would generate opposition from existing landowners and environmental groups.	1	Significant land impact (>1,000 ac)	2016 RWP: \$7,170,000 in land and easements.
Legal	3	Moderate level of permitting and contracting; few unknowns	2016 RWP: Although a water right permit exists for the development of the TRA supply, additional permitting will be required to make the supply available in the San Jacinto River Basin. This requirement is not applicable the service of SJRA's demands in the Trinity-San Jacinto Coastal Basin; The project is associated with water supplies that have already been obtained by SJRA through agreement with TRA.	2	Moderate level of permitting and contracting; several unknowns	2016 RWP: Although a water right permit exists for the development of the TRA supply, additional permitting will be required to make the supply available in the San Jacinto River Basin. This requirement is not applicable the service of SJRA's demands in the Trinity-San Jacinto Coastal Basin; The project is associated with water supplies that have already been obtained by SJRA through agreement with TRA.
Location	3	Some conveyance required to meet identified demands	Supply picked up at the CWA Main Canal (as it is currently done) and conveyed to east and west pump stations.	1	IBT required, long distance from SJRA service area	Supply discharged to Lake Conroe or fed directly to treatment plant, depending on intended use.
Magnitude	3	25,000 to 50,000 ac-ft/yr	2016 RWP: 50,000 acft/yr	3	25,000 to 50,000 ac-ft/yr	2016 RWP: 50,000 acft/yr
Other Supplies	4	Opportunity to enhance existing supplies and other potential supplies	2016 RWP: This project takes advantage of an existing water source by making it available to demand centers.	4	Opportunity to enhance existing supplies and other potential supplies	2016 RWP: This project takes advantage of an existing water source by making it available to demand centers.
Public	2	Minimal local support; some opposition	2016 RWP: Local support for development of a surface water supply .	3	Local support; minimal opposition	2016 RWP: Local support for development of a surface water supply in addition to Lake Conroe in Montgomery County.
Scalability	1	Project requires significant infrastructure and development by a major sponsor	2016 RWP: relatively large scale, provides water for the entire SJRA service area.	1		2016 RWP: relatively large scale, provides water for the entire SJRA service area.
Schedule	3	5 to 15 years	2016 RWP: approx 5-year development timeline as IBT is not required for all of Highlands service area.	2	15-30 years	2016 RWP: approx 10 year development timeline. Lots of time needed for studies- changes in water quality, environmental, etc.
Yield Risk	3	Some risk that project yield will not be realized or will be reduce over time. Some risk of supply availability	2016 RWP: Slight risk from natural or man-made disasters related to infrastructure, but none identified from environmental/permitting requirements. Environmental flow requirements could pose a risk to supply availability	3	Some risk that project yield will not be realized or will be reduce over time. Some risk of supply availability	2016 RWP: Slight risk from natural or man-made disasters related to infrastructure, but none identified from environmental/permitting requirements. Environmental flow requirements could pose a risk to supply availability. Reduced environmental flows.
		328.00	<b>Highlands System Score</b>	262.00	<b>Montgomery County Score</b>	

Strategy Name: Strategy Sub-Type:		Purchase Groundwater				
		Eastern (Trinity) Basin				
		Highlands System		Montgomery County		
		Criteria Score	Explanation	Criteria Score	Explanation	
Cooperation	3	Potentially some opportunity to develop project synergistically with other stakeholders	Partnership with another entity serving as owner/operator of well facilities.	3	Potentially some opportunity to develop project synergistically with other stakeholders	Partnership with another entity serving as owner/operator of well facilities.
Cost	2	\$500 to \$1,000 per ac-ft	\$1000/ac-ft, but vary with production quantity (raw water only, additional treatment required). Additional fees for production and export for wells in Groundwater Conservation District (GCD) jurisdiction, \$55/ac-ft.	2	\$500 to \$1,000 per ac-ft	\$1000/ac-ft, but vary with production quantity (raw water only, additional treatment required). Additional fees for production and export for wells in Groundwater Conservation District (GCD) jurisdiction, \$55/ac-ft.
Diversification	4	Supply developed from a variety of water resources outside of current SJRA portfolio	Provides an alternative to surface water use; uses water from Trinity River Basin footprint.	4	Supply developed from a variety of water resources outside of current SJRA portfolio	Provides an alternative to surface water use; uses water from Trinity River Basin footprint.
Environmental	3	Some notable environmental impact; routine process for permitting	Any Groundwater use in excess of recharge will result in accelerated aquifer drawdown, causes subsidence, reduced quality; well field construction causes habitat impact.	3	Some notable environmental impact; routine process for permitting	Any Groundwater use in excess of recharge will result in accelerated aquifer drawdown, causes subsidence, reduced quality; well field construction causes habitat impact.
Funding	2	Common funding mechanisms may be utilized; project will compete equally with other competing projects	Typical funding options.	2	Common funding mechanisms may be utilized; project will compete equally with other competing projects	Typical funding options.
Land Acquisition	3	5-100 ac	The groundwater well field is developed in the basin from which the water is transferred from. There may be some land acquisition for the transmission system.	3	5-100 ac	The groundwater well field is developed in the basin from which the water is transferred from. There may be some land acquisition for the transmission system.
Legal	3	Moderate level of permitting and contracting; few unknowns	Local GCD rules applicable, including permitting with GCD and TCEQ.	3	Moderate level of permitting and contracting; few unknowns	Local GCD rules applicable, including permitting with GCD and TCEQ.
Location	3	Some conveyance required to meet identified demands	Not ideal, usage is outside of immediate area of withdrawal.	3	Some conveyance required to meet identified demands	Not ideal, usage is outside of immediate area of withdrawal.
Magnitude	3	25,000 to 50,000 ac-ft/yr	10,000-50,000 ac-ft/yr	3	25,000 to 50,000 ac-ft/yr	10,000-50,000 ac-ft/yr
Other Supplies	2	Negative impacts to other potential projects	Uses GW supplies from other areas, which may deplete aquifer levels.	2	Negative impacts to other potential projects	Uses GW supplies from other areas, which may deplete aquifer levels.
Public	2	Minimal local support; some opposition	Continued overdrafting of GW could result in public relation challenges; opposition from environmental groups and existing Groundwater users is likely, particularly if overdrafting of Groundwater in unregulated counties.	2	Minimal local support; some opposition	Continued overdrafting of GW could result in public relation challenges; opposition from environmental groups and existing Groundwater users is likely, particularly if overdrafting of Groundwater in unregulated counties.
Scalability	3	Project may be implemented by most existing and potential entities	If infrastructure exists, project can be conducted by smaller entities.	3	Project may be implemented by most existing and potential entities	If infrastructure exists, project can be conducted by smaller entities.
Schedule	3	5 to 15 years	10+ years due to need for greater transmission infrastructure and extensive permitting and coordination; public or agency concerns regarding strategy could result in delayed implementation.	3	5 to 15 years	10+ years due to need for greater transmission infrastructure and extensive permitting and coordination; public or agency concerns regarding strategy could result in delayed implementation.
Yield Risk	3	Some risk that project yield will not be realized or will be reduce over time. Some risk of supply availability	Opposition from environmental groups likely, for source areas without a GCD, any future GCD establishment or rule changes could reduce the viability of this supply drastically.	3	Some risk that project yield will not be realized or will be reduce over time. Some risk of supply availability	Opposition from environmental groups likely, for source areas without a GCD, any future GCD establishment or rule changes could reduce the viability of this supply drastically.
		250.00	<b>Highlands System Score</b>	250.00	<b>Montgomery County Score</b>	



Strategy Name: Strategy Sub-Type:		Purchase Groundwater				
		Western (Brazos) Basin				
		Highlands System		Montgomery County		
		Criteria Score	Explanation	Criteria Score	Explanation	
Cooperation	3	Potentially some opportunity to develop project synergistically with other stakeholders	Partnership with groundwater producing entity for well field infrastructure, or other entities to share infrastructure development costs.	3	Potentially some opportunity to develop project synergistically with other stakeholders	Partnership with groundwater producing entity for well field infrastructure, or other entities to share infrastructure development costs.
Cost	2	\$500 to \$1,000 per ac-ft	\$500/ac-ft, but vary with production quantity (raw water only, additional treatment required).	2	\$500 to \$1,000 per ac-ft	\$500/ac-ft, but vary with production quantity (raw water only, additional treatment required).
Diversification	4	Supply developed from a variety of water resources outside of current SJRA portfolio	Provides an alternative to surface water use; uses water from Brazos River Basin footprint.	4	Supply developed from a variety of water resources outside of current SJRA portfolio	Provides an alternative to surface water use; uses water from Brazos River Basin footprint.
Environmental	3	Some notable environmental impact; routine process for permitting	Any Groundwater use in excess of recharge will result in accelerated aquifer drawdown, causes subsidence, reduced quality; well field construction causes habitat impact.	3	Some notable environmental impact; routine process for permitting	Any Groundwater use in excess of recharge will result in accelerated aquifer drawdown, causes subsidence, reduced quality; well field construction causes habitat impact.
Funding	2	Common funding mechanisms may be utilized; project will compete equally with other competing projects	Typical funding sources.	2	Common funding mechanisms may be utilized; project will compete equally with other competing projects	Typical funding sources.
Land Acquisition	3	5-100 ac	The groundwater well field is developed in the basin from which the water is transferred from. There may be some land acquisition for the transmission system.	3	5-100 ac	The groundwater well field is developed in the basin from which the water is transferred from. There may be some land acquisition for the transmission system.
Legal	3	Moderate level of permitting and contracting; few unknowns	Local Groundwater Conservation District (GCD) rules applicable, including permitting with GCD and TCEQ.	3	Moderate level of permitting and contracting; few unknowns	Local Groundwater Conservation District (GCD) rules applicable, including permitting with GCD and TCEQ.
Location	3	Some conveyance required to meet identified demands	Not ideal, usage is outside of immediate area of withdrawal.	3	Some conveyance required to meet identified demands	Not ideal, usage is outside of immediate area of withdrawal.
Magnitude	3	25,000 to 50,000 ac-ft/yr	10,000-50,000 ac-ft/yr	3	25,000 to 50,000 ac-ft/yr	10,000-50,000 ac-ft/yr
Other Supplies	2	Negative impacts to other potential projects	Uses Groundwater supplies from other areas, which may deplete aquifer levels.	2	Negative impacts to other potential projects	Uses Groundwater supplies from other areas, which may deplete aquifer levels.
Public	2	Minimal local support; some opposition	Continued overdrafting of Groundwater could result in public relation challenges; opposition from environmental groups and existing Groundwater users is likely, particularly if overdrafting of GW in unregulated counties.	2	Minimal local support; some opposition	Continued overdrafting of Groundwater could result in public relation challenges; opposition from environmental groups and existing Groundwater users is likely, particularly if overdrafting of Groundwater in unregulated counties.
Scalability	3	Project may be implemented by most existing and potential entities	Large project, difficult to scale to smaller entities.	3	Project may be implemented by most existing and potential entities	Large project, difficult to scale to smaller entities.
Schedule	3	5 to 15 years	<5 years as it requires limited infrastructure, but public or agency concerns could result in delayed implementation.	3	5 to 15 years	<5 years as it requires limited infrastructure, but public or agency concerns could result in delayed implementation.
Yield Risk	3	Some risk that project yield will not be realized or will be reduce over time. Some risk of supply availability	Opposition from environmental groups likely, for source areas without a GCD, any future GCD establishment or rule changes could reduce the viability of this supply drastically.	3	Some risk that project yield will not be realized or will be reduce over time. Some risk of supply availability	Opposition from environmental groups likely, for source areas without a GCD, any future GCD establishment or rule changes could reduce the viability of this supply drastically.
		250.00	<b>Highlands System Score</b>	250.00	<b>Montgomery County Score</b>	

Strategy Name: Strategy Sub-Type:		Purchase Surface Water				
		Trinity River Authority				
		Highlands System		Montgomery County		
		Criteria Score	Explanation	Criteria Score	Explanation	
Cooperation	4	Significant opportunity to develop project synergistically with other stakeholders	This strategy may foster participation with the Trinity River Authority as an eventual alternative; other users may also be interested in purchasing water.	4	Significant opportunity to develop project synergistically with other stakeholders	This strategy may foster participation with the Trinity River Authority as an eventual alternative; other users may also be interested in purchasing water.
Cost	4	<\$250 per ac-ft	2016 RWP: \$311/acft (during loan period), \$32/acft (after loan period); Relatively low-cost project for delivery of raw water. Total cost will also include contract cost of water. Transmission costs are not significant for this strategy sub-type.	3	\$250 to \$500 per ac-ft	2016 RWP: \$311/acft (during loan period), \$32/acft (after loan period); Relatively low-cost project for delivery of raw water. Total cost will also include contract cost of water. Very high transmission costs.
Diversification	3	Supply developed from sources unrelated to existing SJRA supplies	Would use resources new to both Montgomery County and Highlands, but dependent on supplies in other areas.	3	Supply developed from sources unrelated to existing SJRA supplies	Would use resources new to both Montgomery County and Highlands, but dependent on supplies in other areas.
Environmental	3	Some notable environmental impact; routine process for permitting	Minor issues with construction in SJ-Brazos Coastal Basin; greater variations in reservoir levels and stream flows in Trinity basin; distribution of fresh water flows into Galveston Bay modified.	3	Some notable environmental impact; routine process for permitting	Minor issues with construction in SJ-Brazos Coastal Basin; greater variations in reservoir levels and stream flows in Trinity basin; distribution of fresh water flows into Galveston Bay modified.
Funding	2	Common funding mechanisms may be utilized; project will compete equally with other competing projects	Potential partners who have recently investigated the opportunity for developing a raw water transfer from the Trinity River Basin that may facilitate the development of such a project at more competitive cost.	2	Common funding mechanisms may be utilized; project will compete equally with other competing projects	Potential partners who have recently investigated the opportunity for developing a raw water transfer from the Trinity River Basin that may facilitate the development of such a project at more competitive cost.
Land Acquisitor	4	Minimal land impact (<5 ac)	Potentially project could use the excess capacity in the existing CWA transmission system.	1	Significant land impact (>1,000 ac)	Land and easement acquisition would generate opposition from existing landowners and environmental groups.
Legal	4	Minimal permitting required; simple contracting	No significant permitting required for this option.	2	Moderate level of permitting and contracting; several unknowns	Extensive permitting required for pipeline construction, along with additional permitting from US Army Corps of Engineers.
Location	4	Limited conveyance needs	No significant transmission system required.	1	IBT required, long distance from SJRA service area	Requires significant pipeline construction/use.
Magnitude	3	25,000 to 50,000 ac-ft/yr	The magnitude varies depending on TRA's availability to sell water and SJRA's need for additional supplies.	3	25,000 to 50,000 ac-ft/yr	The magnitude varies depending on TRA's availability to sell water and SJRA's need for additional supplies.
Other Supplies	3	Opportunity to enhance other potential projects	Potentially increase reliability of the existing supplies.	4	Opportunity to enhance existing supplies and other potential supplies	Potentially increase reliability of the existing supplies.
Public	2	Minimal local support; some opposition	Movement of water as well as land and easement acquisition would generate opposition from existing landowners and environmental groups.	3	Local support; minimal opposition	Movement of water as well as land and easement acquisition would generate opposition from existing landowners and environmental groups.
Scalability	1	Project requires significant infrastructure and development by a major sponsor	Large project, difficult to scale.	1	Project requires significant infrastructure and development by a major sponsor	Large project, difficult to scale.
Schedule	3	5 to 15 years	The initial phase of construction could be implemented quickly, subject to contracting and construction process, but could take 5-15 years depending on project specifics.	2	15-30 years	The initial phase of construction could be implemented quickly, subject to contracting and construction process, but could take 5-15 years depending on project specifics.
Yield Risk	3	Some risk that project yield will not be realized or will be reduce over time. Some risk of supply availability	Limitations on yield are likely a function of existing infrastructure capacity.	3	Some risk that project yield will not be realized or will be reduce over time. Some risk of supply availability	Limitations on yield are likely a function of existing infrastructure capacity.
		342.00	<b>Highlands System Score</b>	262.00	<b>Montgomery County Score</b>	

Strategy Name: Strategy Sub-Type:		Purchase Surface Water			
		CLCND			
		Highlands System		Montgomery County	
		Criteria Score	Explanation	Criteria Score	Explanation
Cooperation	4	Significant opportunity to develop project synergistically with other stakeholders	This strategy may foster participation with the other entities as an eventual alternative; other users may also be interested in purchasing water.		
Cost	3	\$250 to \$500 per ac-ft	\$500-1000/ac-ft (raw water only).		
Diversification	3	Supply developed from sources unrelated to existing SJRA supplies	Would use resources new to Highlands service area, but dependent on supplies in other areas.		
Environmental	3	Some notable environmental impact; routine process for permitting	Minor issues with construction in SJ-Brazos Coastal Basin; greater variations in reservoir levels and stream flows in Trinity basin; distribution of fresh water flows into Galveston Bay modified.		
Funding	2	Common funding mechanisms may be utilized; project will compete equally with other competing projects	Potential partners who have recently investigated the opportunity for developing a raw water transfer from the Trinity River Basin that may facilitate the development of such a project at more competitive cost.		
Land Acquisitor	4	Minimal land impact (<5 ac)	Minimal land acquisition. There is enough capacity in the existing CWA infrastructure to transfer the contracted supplies.		
Legal	4	Minimal permitting required; simple contracting	Minimal permitting required.		
Location	4	Limited conveyance needs	Limited conveyance system required. There is enough capacity in the existing CWA infrastructure to transfer the contracted supplies.		
Magnitude	3	25,000 to 50,000 ac-ft/yr	Magnitude varies depending on CLCND's availability to sell water and SJRA's needs in the Highlands system.		
Other Supplies	3	Opportunity to enhance other potential projects	Potentially increase reliability of the existing supplies.		
Public	3	Local support; minimal opposition	Minimal opposition.		
Scalability	1	Project requires significant infrastructure and development by a major sponsor	Large project, difficult to scale.		
Schedule	3	5 to 15 years	The initial phase of construction could be implemented quickly, subject to contracting and construction process, but could take 5-15 years depending on project specifics.		
Yield Risk	3	Some risk that project yield will not be realized or will be reduce over time. Some risk of supply availability	Limitations on yield are likely a function of existing infrastructure capacity.		
		308.00	<b>Highlands System Score</b>	N/A	<b>Montgomery County Score</b>



Strategy Name:		Seawater Desalination				
Strategy Sub-Type:						
		Highlands System		Montgomery County		
		Criteria Score	Explanation	Criteria Score	Explanation	
Cooperation	3	Potentially some opportunity to develop project synergistically with other stakeholders	2016 RWP: Requires coordination with local and regional stakeholders.	2	Potentially some obstacles in working with other stakeholders to develop project	2016 RWP: Requires cooperation with local and regional stakeholders.
Cost	1	>\$1,000 per ac-ft	2016 RWP: \$2,454/ac-ft (during loan period), \$1,461/ac-ft (after loan period).	1	>\$1,000 per ac-ft	2016 RWP: \$2,454/ac-ft (during loan period), \$1,461/ac-ft (after loan period).
Diversification	4	Supply developed from a variety of water resources outside of current SJRA portfolio	2016 RWP: Provides a new source of water, not relying on any other operations.	4	Supply developed from a variety of water resources outside of current SJRA portfolio	2016 RWP: Provides a new source of water, not relying on any other operations.
Environmental	3	Some notable environmental impact; routine process for permitting	2016 RWP: Limited environmental concerns associated with project development. No impact on environmental flows due to location of intake and discharge.	2	Some notable environmental impact; uncertain course for studies and mitigation	2016 RWP: Limited environmental concerns associated with project development. No impact on environmental flows due to location of intake and discharge. Significant transmission system required to transfer water to Montgomery County system.
Funding	2	Common funding mechanisms may be utilized; project will compete equally with other competing projects	Typical funding options.	2	Common funding mechanisms may be utilized; project will compete equally with other competing projects	Typical funding options.
Land Acquisition	4	Minimal land impact (<5 ac)	Requires land acquisition for the facility. Does not need significant land acquisition for transmission to Highlands system as the existing infrastructure can be utilized.	3	5-100 ac	Requires land acquisition for the facility and the transmission system.
Legal	4	Minimal permitting required; simple contracting	2016 RWP: Limited permit requirements. Property available for potential project development. Potential challenges permitting the brine discharge from the discharge facility.	3	Moderate level of permitting and contracting; few unknowns	2016 RWP: Limited permit requirements. Property available for potential project development. Potential challenges permitting the brine discharge from the desalination facility.
Location	4	Limited conveyance needs	More convenient choice for Highlands area, as transportation distances are lesser than for Montgomery County.	1	IBT required, long distance from SJRA service area	2016 RWP: Poor location for use in Montgomery County; water must be transported significant distances.
Magnitude	3	25,000 to 50,000 ac-ft/yr	2016 RWP: 11,200 ac-ft/yr for a 10 mgd plant. 27,900 ac-ft/yr is currently permitted for diversion by NRG.	3	25,000 to 50,000 ac-ft/yr	2016 RWP: 11,200 ac-ft/yr for a 10 mgd plant. 27,900 ac-ft/yr is currently permitted for diversion by NRG.
Other Supplies	4	Opportunity to enhance existing supplies and other potential supplies	No effect on other supplies.	4	Opportunity to enhance existing supplies and other potential supplies	No effect on other supplies.
Public	3	Local support; minimal opposition	2016 RWP: Local support for desalination development.	2	Minimal local support; some opposition	2016 RWP: Local support for desalination development. Potential opposition because of the lengthy transmission system required to move the supplies to Montgomery County system.
Scalability	1	Project requires significant infrastructure and development by a major sponsor	Large scale, difficult to implement on WUG level.	1	Project requires significant infrastructure and development by a major sponsor	Large scale, difficult to implement on WUG level.
Schedule	4	0 to 5 years	2016 RWP: Reasonably short development process due to existing infrastructure for seawater intake and brine discharge.	2	15-30 years	2016 RWP: Development Timelines ~ 5 years; Reasonably short development process due to existing infrastructure for seawater intake and brine discharge.
Yield Risk	3	Some risk that project yield will not be realized or will be reduce over time. Some risk of supply availability	2016 RWP: Risk to project related to natural disasters within proximity to the coast. However, this risk is mitigated through existing, developed infrastructure.	2	Moderate risk that a project's yield cannot be realized or will diminish over time. Moderate risk of supply availability	2016 RWP: Risk to project related to natural disasters within proximity to the coast. However, this risk is mitigated through existing, developed infrastructure.
		234.00	<b>Highlands System Score</b>	172.00	<b>Montgomery County Score</b>	

Strategy Name:		Regional Return Flows			
Strategy Sub-Type:		Lake Houston with South Plant			
		Highlands System		Montgomery County	
		Criteria Score	Explanation	Criteria Score	Explanation
Cooperation				1	Significant potential obstacles in working with other stakeholders to develop project 2016 RWP: Coordination required with multiple stakeholders to determine the availability of the regional return flows.
Cost				2	\$500 to \$1,000 per ac-ft 2016 RWP: This project provides a raw water supply through permit. Additional treatment and transmission costs required for transfer of the supplies.
Diversification				3	Supply developed from sources unrelated to existing SJRA supplies 2016 RWP: New supply created from return flow reuse.
Environmental				3	Some notable environmental impact; routine process for permitting 2016 RWP: Project will reduce the level of flows returned to streams to a level to be determined through the permitting process (as much as 150,994 ac-ft/yr). San Jacinto Basin Regional Return Flows are not anticipated to affect acreage, vulnerable species, or agricultural land and production.
Funding				2	Common funding mechanisms may be utilized; project will compete equally with other competing projects 2016 RWP: No stakeholders have yet come forward to support this project although potential stakeholders have implemented similar projects within the basin and region.
Land Acquisition				3	5-100 ac
Legal				1	Significant permitting required; extensive contracting 2016 RWP: This project would require a water right permit from TCEQ to establish legal authorization over the source return flows. It is also likely that any permit granted would be limited in volume to the authorized discharge of source wastewater treatment plants (WWTPs). Permit could be developed in a relatively short period of time.
Location				3	Some conveyance required to meet identified demands 2016 RWP: This is a large scale project, not specific to any location; will serve Montgomery County.
Magnitude				2	5,000 to 25,000 ac-ft per year Magnitude depends on the expected growth in the Montgomery County that will be potentially served by this project.
Other Supplies				3	Opportunity to enhance other potential projects 2016 RWP: Project takes advantage of existing and planned discharges in the San Jacinto basin, relying on other infrastructure to create a source of supply. The project would be developed in such a way to prevent detrimental impacts to other projects under development.
Public				2	Minimal local support; some opposition 2016 RWP: No known opposition to the proposed project.
Scalability				1	Project requires significant infrastructure and development by a major sponsor 2016 RWP: Once permitted, smaller authorities can make use of this source as well as overarching ones.
Schedule				3	5 to 15 years 2016 RWP: 5 years. Long time to obtain permits.
Yield Risk				3	Some risk that project yield will not be realized or will be reduce over time. Some risk of supply availability 2016 RWP: Minimal risk to availability of supply. Environmental flows may impact availability.
		N/A	<b>Highlands System Score</b>	218.00	<b>Montgomery County Score</b>

Strategy Name: Strategy Sub-Type:		Regional Return Flows				
		Lake Conroe/Lake Houston				
		Highlands System		Montgomery County		
		Criteria Score	Explanation	Criteria Score	Explanation	
Cooperation	1	Significant potential obstacles in working with other stakeholders to develop project	2016 RWP: Coordination required with multiple stakeholders to determine the availability of the regional return flows.	1	Significant potential obstacles in working with other stakeholders to develop project	2016 RWP: Coordination required with multiple stakeholders to determine the availability of the regional return flows.
Cost	4	<\$250 per ac-ft	2016 RWP: \$0/acft (during loan period), \$0/acft (after loan period); This project provides a raw water supply though permit that would rely upon other infrastructure to perfect it as a source of supply.	4	<\$250 per ac-ft	2016 RWP: \$0/acft (during loan period), \$0/acft (after loan period); This project provides a raw water supply though permit that would rely upon other infrastructure to perfect it as a source of supply.
Diversification	3	Supply developed from sources unrelated to existing SJRA supplies	2016 RWP: New supply created from return flow reuse.	3	Supply developed from sources unrelated to existing SJRA supplies	2016 RWP: New supply created from return flow reuse.
Environmental	3	Some notable environmental impact; routine process for permitting	2016 RWP: Project will reduce the level of flows returned to streams to a level to be determined through the permitting process (as much as 150,994 ac-ft/yr). San Jacinto Basin Regional Return Flows are not anticipated to affect acreage, vulnerable species, or agricultural land and production.	3	Some notable environmental impact; routine process for permitting	2016 RWP: Project will reduce the level of flows returned to streams to a level to be determined through the permitting process (as much as 150,994 ac-ft/yr). San Jacinto Basin Regional Return Flows are not anticipated to affect acreage, vulnerable species, or agricultural land and production. Will need to maintain environmental flows downstream.
Funding	2	Common funding mechanisms may be utilized; project will compete equally with other competing projects	2016 RWP: No stakeholders have yet come forward to support this project although potential stakeholders have implemented similar projects within the basin and region.	2	Common funding mechanisms may be utilized; project will compete equally with other competing projects	2016 RWP: No stakeholders have yet come forward to support this project although potential stakeholders have implemented similar projects within the basin and region.
Land Acquisition	4	Minimal land impact (<5 ac)	2016 RWP: No applicable cost.	4	Minimal land impact (<5 ac)	2016 RWP: No applicable cost.
Legal	1	Significant permitting required; extensive contracting	2016 RWP: This project would require a water right permit from TCEQ to establish legal authorization over the source return flows. It is also likely that any permit granted would be limited in volume to the authorized discharge of source wastewater treatment plants (WWTPs). Permit could be developed in a relatively short period of time.	1	Significant permitting required; extensive contracting	2016 RWP: This project would require a water right permit from TCEQ to establish legal authorization over the source return flows. It is also likely that any permit granted would be limited in volume to the authorized discharge of source wastewater treatment plants (WWTPs). Permit could be developed in a relatively short period of time.
Location	4	Limited conveyance needs	2016 RWP: This is a large scale project, not specific to any location; will serve both Montgomery County and Highlands	4	Limited conveyance needs	2016 RWP: This is a large scale project, not specific to any location; will serve both Montgomery County and Highlands
Magnitude	4	>50,000 ac-ft per year	2016 RWP: 59,525-150,994 acft/yr (but all is not directed to Conroe/Highlands)	1	<5,000 ac-ft per year	14,000 ac-ft per year. Very limited into Lake Conroe.
Other Supplies	3	Opportunity to enhance other potential projects	2016 RWP: Project takes advantage of existing and planned discharges in the San Jacinto basin, relying on other infrastructure to create a source of supply. The project would be developed in such a way to prevent detrimental impacts to other projects under development.	3	Opportunity to enhance other potential projects	2016 RWP: Project takes advantage of existing and planned discharges in the San Jacinto basin, above Lake Conroe dam, relying on other infrastructure to create a source of supply. The project would be developed in such a way to prevent detrimental impacts to other projects under development.
Public	2	Minimal local support; some opposition	2016 RWP: Some oppositions to the proposed project.	2	Minimal local support; some opposition	2016 RWP: Some opposition to the proposed project.
Scalability	1	Project requires significant infrastructure and development by a major sponsor	2016 RWP: Once permitted, smaller authorities can make use of this source as well as overarching ones.	1	Project requires significant infrastructure and development by a major sponsor	2016 RWP: Once permitted, smaller authorities can make use of this source as well as overarching ones.
Schedule	3	5 to 15 years	2016 RWP: 5 - 10 years.	3	5 to 15 years	2016 RWP: 5 - 10 years.
Yield Risk	3	Some risk that project yield will not be realized or will be reduce over time. Some risk of supply availability	2016 RWP: Minimal risk to availability of supply. Environmental flows may impact availability.	3	Some risk that project yield will not be realized or will be reduce over time. Some risk of supply availability	2016 RWP: Minimal risk to availability of supply. Environmental flows may impact availability.
		316.00	<b>Highlands System Score</b>	304.00	<b>Montgomery County Score</b>	

Strategy Name:		Trinity Return Flows			
Strategy Sub-Type:					
		Highlands System		Montgomery County	
		Criteria Score	Explanation	Criteria Score	Explanation
Cooperation	1	Significant potential obstacles in working with other stakeholders to develop project	2016 RWP: Coordination required with multiple stakeholders to determine the availability of the regional return flows.		
Cost	4	<\$250 per ac-ft	2016 RWP: \$0/acft (during loan period), \$0/acft (after loan period); This project provides a raw water supply through permit that would rely upon other infrastructure to perfect it as a source of supply.		
Diversification	4	Supply developed from a variety of water resources outside of current SJRA portfolio	2016 RWP: New supply created from return flow reuse.		
Environmental	3	Some notable environmental impact; routine process for permitting	2016 RWP: Project will reduce the level of flows returned to streams to a level to be determined through the permitting process (as much as 150,994 ac-ft/yr). San Jacinto Basin Regional Return Flows are not anticipated to affect acreage, vulnerable species, or agricultural land and production.		
Funding	2	Common funding mechanisms may be utilized; project will compete equally with other competing projects	2016 RWP: No stakeholders have yet come forward to support this project although potential stakeholders have implemented similar projects within the basin and region.		
Land Acquisition	4	Minimal land impact (<5 ac)	2016 RWP: No applicable cost.		
Legal	2	Moderate level of permitting and contracting; several unknowns	2016 RWP: This project would require a water right permit from TCEQ to establish legal authorization over the source return flows. It is also likely that any permit granted would be limited in volume to the authorized discharge of source wastewater treatment plants (WWTPs). Permit could be developed in a relatively short period of time.		
Location	4	Limited conveyance needs	2016 RWP: This is a large scale project, not specific to any location; will serve both Montgomery County and Highlands.		
Magnitude	4	>50,000 ac-ft per year	Magnitude varies based on the availability of return flows in the Trinity basin and SJRA's needs in Highlands system.		
Other Supplies	3	Opportunity to enhance other potential projects	2016 RWP: Project takes advantage of existing and planned discharges in the San Jacinto basin, relying on other infrastructure to create a source of supply. The project would be developed in such a way to prevent detrimental impacts to other projects under development.		
Public	2	Minimal local support; some opposition	2016 RWP: No known opposition to the proposed project.		
Scalability	1	Project requires significant infrastructure and development by a major sponsor	2016 RWP: Once permitted, smaller authorities can make use of this source as well as overarching ones.		
Schedule	3	5 to 15 years	2016 RWP: 5 - 10 years		
Yield Risk	2	Moderate risk that a project's yield cannot be realized or will diminish over time. Moderate risk of supply availability	Uncertainty in the volume of return flows available in Trinity River Basin for use.		
		318.00	<b>Highlands System Score</b>	N/A	<b>Montgomery County Score</b>

Strategy Name:		Increase Lake Conroe Conservation Pool			
Strategy Sub-Type:					
		Highlands System		Montgomery County	
		Criteria Score	Explanation	Criteria Score	Explanation
Cooperation				2	Potentially some obstacles in working with other stakeholders to develop project Would required coordination with multiple regional stakeholders.
Cost				2	\$500 to \$1,000 per ac-ft Source would be high flows in West Fork San Jacinto.
Diversification				1	Supply originates from sources linked to existing SJRA supplies Supplies added to Lake Conroe.
Environmental				2	Some notable environmental impact; uncertain course for studies and mitigation Potential issues with water quality, permitting, and opening up of the existing permit. May lose current yield to environmental flow requirements.
Funding				2	Common funding mechanisms may be utilized; project will compete equally with other competing projects No specific funding program available. Typical.
Land Acquisition				2	100-1,000 ac Project would inundate additional area around Lake Conroe.
Legal				1	Significant permitting required; extensive contracting Some amount of permitting required for adding supplies to Lake Conroe. New permit to increase storage potential of Lake Conroe.
Location				4	Limited conveyance needs Depends on the source of supply used to maintain the lake levels.
Magnitude				1	<5,000 ac-ft per year Approximate amount needed to maintain lake levels.
Other Supplies				1	Negative impacts to existing and other potential supplies May impact the yield availability of Lake Conroe as the permit, when reopened, may be subject to environmental flows.
Public				2	Minimal local support; some opposition Some public support this strategy. Mixed public support.
Scalability				1	Project requires significant infrastructure and development by a major sponsor SJRA will have to be the sole sponsor of this project.
Schedule				3	5 to 15 years Depends on the time taken to permit the additional inflows.
Yield Risk				2	Moderate risk that a project's yield cannot be realized or will diminish over time. Moderate risk of supply availability Potential issues with water quality, permitting, and opening up of the existing permit. May lose current yield to environmental flow requirements.
		N/A	<b>Highlands System Score</b>	200.00	<b>Montgomery County Score</b>