

## Water for Texas 2012: Amendment #1:

The following changes were made to the 2012 State Water Plan on November 20, 2014 as a result of Board approval of a minor amendment in Region N.

# **SUMMARY OF CHANGES:**

Changes to Appendix A.2 of the 2012 State Water Plan: Recommended Water Management Strategies and Costs Estimates												
					Water Supply Volume (acre-feet per year)							
Change	Region	Recommended Water Management Strategy	Total Capital Costs	First Decade Estimated Annual Average Unit Cost (\$/acre- foot/year)	2010	2020	2030	2040	2050	2060	Estimated Annual Average Unit Cost (\$/acre- foot/year)	
ADDED	N	SEAWATER DESALINATION	\$260,914,000	\$1,696	-	28,000	28,000	28,000	28,000	28,000	\$884	

Changes to Ap	Changes to Appendix A.3 of the 2012 State Water Plan: Alternative Water Management Strategies and Costs Estimates											
					Water Supply Volume (acre-feet per year)							
Change	Region	Recommended Water Management Strategy	Total Capital Costs	First Decade Estimated Annual Average Unit Cost (\$/acre- foot/year)	2010	2020	2030	2040	2050	2060	Estimated Annual Average Unit Cost (\$/acre- foot/year)	
DELETED	N	DESALINATION	\$260,914,000	\$1,696	-	-	-	28,000	28,000	28,000	\$1,696	



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### **CHANGES TO WATER FOR TEXAS 2012 STATE WATER PLAN**

ext:	
	These strategies included 563 unique water supply projects designed to meet needs for additional water supplies for Texas during drought (this
Page 4: Paragraph 4: Change second sentence to:	figure is lower than presented in previous plans because it does not separately count each entity participating in a given project.)
Page 110 : Paragraph 2 : Change second bullet to:	Recommended water management strategy volume in 2060 - 184,326 acre-feet per year
Page 110 : Paragraph 2 : Change third bullet to:	Total capital cost - \$917 million
Page 110 : Paragraph 2 : Change fourth bullet to:	Conservation accounts for <u>4</u> percent of 2060 strategy volumes
rage 110 . raragraph 2 . Change fourth ballet to.	The Coastal Bend Regional Water Planning Group recommended a variety of water management strategies to meet future needs including two
	proposed off-channel reservoirs, groundwater development, interbasin transfers of surface water from the Colorado River Basin, seawater
Page 112: Paragraph 4: Change first sentence to:	desalination, and conservation.
ruge 112 : rungruph 4 : change mat sentence to.	Implementing all recommended strategies in the Coastal Bend plan would result in 184,326 acre-feet of additional water supplies in 2060 (Figures
Page 112: Paragraph 4: Change second sentence to:	N.3 and N.4) at a total capital cost of \$917 million (Appendix A).
Page 114: Paragraph 1: Change first sentence to:	Conservation strategies represent approximately 4 percent
Page 114: Paragraph 2: Change fourth bullet to:	Seawater desalination would provide 28,000 acre-feet per year of water starting in 2020 with a capital cost of \$261 million.
Tuge 1111 Lundhaphi 2 Tunange Tourin Sanet to	The regional planning groups recommended 563 unique water projects designed to meet needs for additional water supplies for Texas during
Page 187: Paragraph 1: Change first sentence to:	drought, resulting in a total, if implemented, of 9.0 million acre-feet per year in additional water supplies by 2060.
	These strategies included 563 unique water supply projects designed to meet needs for additional water supplies for Texas during drought (this
Page 189: Paragraph 4: Change second sentence to:	figure is lower than presented in previous plans because it does not separately count each entity participating in a given project.)
	Desalination, the process of removing salt from seawater or brackish water, is expected to produce nearly 338,000 acre-feet potable water by
Page 196: Paragraph 7: Change first sentence to:	2060.
	This amount is about 23 percent of the \$232 billion in the total costs for water supplies, water treatment and distribution, wastewater treatment
Page 211: Paragraph 1: Change third sentence to:	and collection, and flood control required for the state of Texas in the next 50 years.
<u> </u>	Current TWDB estimates indicate that Texas will need to invest about \$232 billion by 2060 to meet the state's needs for water supply, water and
Page 214: Paragraph 5: Change first sentence to:	wastewater infrastructure, and flood control.



### Water for Texas 2012: Amendment #1:

The following changes were made to the 2012 State Water Plan on November 20, 2014 as a result of Board approval of a minor amendment in Region N.

#### CHANGES TO WATER FOR TEXAS 2012 STATE WATER PLAN

	l Figures											
					DECADE TO							
				UNITS	2010	2020	2030	2040	2050	2060		
_		Water Supplies from Water Management Strategies in the State	Update to the	_								
Page 5:	Figure ES.4.	: Water Plan (AFY)	following:	acre-feet per year	2,049,353	4,511,040	5,859,779	6,546,415	7,937,290	9,032,839		
		Total Capital Costs for Water supplies, Water Treatment and				_						
	Distribution, Wastewater Treatment and Collection, and Flood	Update to the		Capital costs of water mana		gement strate	gies recommer	ded in 2012 St	tate Water			
Page 7:	Figure ES.6.	: Control (Billions of Dollars)	following:	billions of dollars	Plan \$53.4							
		Total Capital Costs for Water supplies, Water Treatment and										
		Distribution, Wastewater Treatment and Collection, and Flood	Update to the									
Page 8:	Figure ES.6.	: Control (Billions of Dollars)	following:		Total capital costs: \$232B							
		Recommended Water Management Strategy Water Supply Volumes	Update to the	seawater								
Page 115 :	Figure N.3.	: for 2010-2060 (AFY)	following:	desalination	0	28,000	28,000	28,000	28,000	28,000		
		Recommended Water Management Strategies - Relative Share of	Update to the									
Page 115 :	Figure N.4.	: Supply.	following:	percent	Groundwater 17.1%; Reuse 0.1%; Municipal Conservation 1.3%;							
					Irrigation Cons							
					New Major Reservoir 25.3%; Other Surface Water 38.4%;							
					Seawater Desa	lination 15.29	6					
		Recommended Water Management Strategy Supply Volumes by	Update to the	Region N acre-feet								
Page 188 :	Table 7.1.	: Region (AFY)	following:	per year	46,954	109,020	158,539	158,017	161,430	184,326		
				Total acre-feet per								
				year	2,049,353	4,511,040	5,859,799	6,546,415	7,937,290	9,032,839		
				Seawater								
		Recommended Water Management Strategy Supply Volumes by	Update to the	Desalination acre-								
Page 189 :	Table 7.2.	: Type of Strategy (AFY)	following:	feet per year	125	28,125	28,143	34,049	68,021	153,514		
				Total Supply								
				Volume acre-feet								
				per year	2,049,353	4,511,040	5,859,779	6,546,415	7,937,290	9,032,839		
		Relative Volumes of Recommended Water Management Strategies in	Update to the									
Page 191 :	Figure 7.2.	: 2060.	following:	percent	Groundwater	8.9%; Municip	al Conservatio	n 7.2%;				
					Groundwater	Desalination 2	.0%; Conjunct	ive Use 1.5%;				
					Seawater Desa	lination 1.7%;	Aquifer Stora	ge and Recove	ry 0.9%;			
					Other Conserv	ation 0.3%; Br	ush Control 0.	.2%; Weather				
						20/ Curface I	<b>Vater Desalina</b>	ation <0.1%;				
					Modification (	1.270, Surrace v						
							Irrigation Con	servation 16.7	%;			
						Water <u>33.8%</u> ;		servation 16.7	%;			
		Recommended Water Management Strategy Capital Costs by Region	Update to the	Region N Millions of	Other Surface New Major Re	Water <u>33.8%</u> ;		servation 16.7	%;			
Page 195 :	Table 7.5.	Recommended Water Management Strategy Capital Costs by Region : (Millions of Dollars)	Update to the following:	Region N Millions of Dollars	Other Surface New Major Re	Water <u>33.8%</u> ;		servation 16.7	%; \$0	\$139	\$!	
Page 195 :	Table 7.5.				Other Surface New Major Re	Water <u>33.8%;</u> servoir <u>16.6%;</u>	Reuse <u>10.1%</u>			\$139	\$	
Page 195 :	Table 7.5.			Dollars	Other Surface New Major Re	Water <u>33.8%;</u> servoir <u>16.6%;</u>	Reuse <u>10.1%</u>			\$139 \$4,702	\$ \$53,	
Page 195 :	Table 7.5.			Dollars Total Millions of	Other Surface New Major Re \$45	Water <u>33.8%;</u> servoir <u>16.6%;</u> \$374	\$360	\$0	\$0			
Page 195 :		: (Millions of Dollars)	following:	Dollars Total Millions of Dollars	Other Surface New Major Re \$45	Water <u>33.8%;</u> servoir <u>16.6%;</u> \$374 \$14,798	\$360 \$7,592	\$0 \$3,127	\$0			
		: (Millions of Dollars)  Existing Supplies and Recommended Water Management Strategy	following: Update to the	Dollars Total Millions of Dollars Region N acre-feet	Other Surface New Major Re \$45 \$22,097 Water Manage	Water <u>33.8%;</u> servoir <u>16.6%;</u> \$374 \$14,798	\$360 \$7,592	\$0 \$3,127	\$0			
		: (Millions of Dollars)  Existing Supplies and Recommended Water Management Strategy : Supplies by Region (AFY)  Water Needs, Needs Met by Plans, and Strategy Supply by Region	following:  Update to the following:	Dollars Total Millions of Dollars Region N acre-feet per year	Other Surface New Major Re \$45 \$22,097 Water Manage	Water <u>33.8%;</u> servoir <u>16.6%;</u> \$374 \$14,798 ement Strateg	\$360 \$7,592 y Supplies <u>184</u>	\$0 \$3,127	\$0			
Page 195 :	Figure 7.4.	: (Millions of Dollars)  Existing Supplies and Recommended Water Management Strategy : Supplies by Region (AFY)  Water Needs, Needs Met by Plans, and Strategy Supply by Region	Update to the following:	Dollars Total Millions of Dollars Region N acre-feet per year Region N acre-feet	Other Surface New Major Re \$45 \$22,097 Water Manage	Water <u>33.8%;</u> servoir <u>16.6%;</u> \$374 \$14,798 ement Strateg	\$360 \$7,592 y Supplies <u>184</u>	\$0 \$3,127	\$0			
Page 195 :	Figure 7.4. Figure 7.5.	: (Millions of Dollars)  Existing Supplies and Recommended Water Management Strategy : Supplies by Region (AFY)  Water Needs, Needs Met by Plans, and Strategy Supply by Region : (AFY)	Update to the following:  Update to the following:	Dollars Total Millions of Dollars Region N acre-feet per year Region N acre-feet	Other Surface New Major Re \$45 \$22,097 Water Manage	Water 33.8%; servoir 16.6%; \$374 \$14,798 ement Strateg	\$360 \$7,592 y Supplies <u>184</u>	\$0 \$3,127	\$0			
Page 195 :	Figure 7.4. Figure 7.5.	: (Millions of Dollars)  Existing Supplies and Recommended Water Management Strategy : Supplies by Region (AFY)  Water Needs, Needs Met by Plans, and Strategy Supply by Region : (AFY)  Total Capital Costs of Recommended Water Management Strategies	Update to the following: Update to the following: Update to the following: Update to the	Dollars Total Millions of Dollars Region N acre-feet per year Region N acre-feet per year	Other Surface New Major Re \$45 \$22,097 Water Manage Water Manage	Water 33.8%; servoir 16.6%; \$374 \$14,798 ement Strateg	\$360 \$7,592 y Supplies <u>184</u>	\$0 \$3,127	\$0			
Page 195 :	Figure 7.4. Figure 7.5.	(Millions of Dollars)  Existing Supplies and Recommended Water Management Strategy     Supplies by Region (AFY)     Water Needs, Needs Met by Plans, and Strategy Supply by Region     (AFY)     Total Capital Costs of Recommended Water Management Strategies     by Water Use Category (Billions of Dollars)	Update to the following: Update to the following: Update to the following: Update to the	Dollars Total Millions of Dollars Region N acre-feet per year Region N acre-feet per year	Other Surface New Major Ref \$45 \$22,097 Water Manage Water Manage Manufacturing	Water <u>33.8%;</u> servoir <u>16.6%;</u> \$374 \$14,798 ement Strateg ement Strateg	\$360 \$7,592 y Supplies <u>184</u> y Supplies <u>184</u>	\$0 \$3,127	\$0 \$1,095	\$4,702		
Page 197 :	Figure 7.4. Figure 7.5. Figure 9.1.	Existing Supplies and Recommended Water Management Strategy Supplies by Region (AFY) Water Needs, Needs Met by Plans, and Strategy Supply by Region (AFY) Total Capital Costs of Recommended Water Management Strategies by Water Use Category (Billions of Dollars) Total Capital Costs for Water supplies, Water Treatment and	Update to the following: Update to the following: Update to the following: Update to the following: Update to the	Dollars Total Millions of Dollars Region N acre-feet per year Region N acre-feet per year	Other Surface New Major Ref \$45 \$22,097 Water Manage Water Manage Manufacturing Capital costs of	Water <u>33.8%;</u> servoir <u>16.6%;</u> \$374 \$14,798 ement Strateg ement Strateg	\$360 \$7,592 y Supplies <u>184</u> y Supplies <u>184</u>	\$0 \$3,127 ,326	\$0 \$1,095	\$4,702		
Page 195 : Page 197 : Page 213 :	Figure 7.4. Figure 7.5. Figure 9.1.	Existing Supplies and Recommended Water Management Strategy Supplies by Region (AFY) Water Needs, Needs Met by Plans, and Strategy Supply by Region (AFY) Total Capital Costs of Recommended Water Management Strategies by Water Use Category (Billions of Dollars) Total Capital Costs for Water supplies, Water Treatment and Distribution, Wastewater Treatment and Collection, and Flood	following:  Update to the following:  Update to the following:  Update to the following:  Update to the following:	Dollars Total Millions of Dollars Region N acre-feet per year Region N acre-feet per year billions of dollars	Other Surface New Major Ref \$45 \$22,097 Water Manage Water Manage Manufacturing	Water <u>33.8%;</u> servoir <u>16.6%;</u> \$374 \$14,798 ement Strateg ement Strateg	\$360 \$7,592 y Supplies <u>184</u> y Supplies <u>184</u>	\$0 \$3,127 ,326	\$0 \$1,095	\$4,702		
Page 195 : Page 197 : Page 213 :	Figure 7.4. Figure 7.5. Figure 9.1.	Existing Supplies and Recommended Water Management Strategy Supplies by Region (AFY) Water Needs, Needs Met by Plans, and Strategy Supply by Region (AFY) Total Capital Costs of Recommended Water Management Strategies by Water Use Category (Billions of Dollars) Total Capital Costs for Water supplies, Water Treatment and Distribution, Wastewater Treatment and Collection, and Flood	following:  Update to the	Dollars Total Millions of Dollars Region N acre-feet per year Region N acre-feet per year billions of dollars billions of dollars	Other Surface New Major Re  \$45  \$22,097  Water Manage Water Manage Manufacturing Capital costs of Plan \$53.4	Water 33.8%; servoir 16.6%; \$374 \$14,798 ement Strateg ement Strateg g: \$3.7 f water manage	\$360 \$7,592 y Supplies 184 y Supplies 184 gement strate	\$0 \$3,127 ,326	\$0 \$1,095	\$4,702		
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Page 195 : Page 197 : Page 213 : Page 215 :	Figure 7.4. Figure 7.5. Figure 9.1. Figure 9.2.	Existing Supplies and Recommended Water Management Strategy Supplies by Region (AFY) Water Needs, Needs Met by Plans, and Strategy Supply by Region (AFY) Total Capital Costs of Recommended Water Management Strategies by Water Use Category (Billions of Dollars) Total Capital Costs for Water supplies, Water Treatment and Distribution, Wastewater Treatment and Collection, and Flood Control (Billions of Dollars)	Update to the following: Update to the	Dollars Total Millions of Dollars Region N acre-feet per year Region N acre-feet per year billions of dollars billions of dollars Region N acre-feet	Other Surface New Major Re  \$45  \$22,097  Water Manage  Manufacturing  Capital costs of Plan \$53.4  Total capital co	Water 33.8%; servoir 16.6%; \$374 \$14,798 ement Strateg ement Strateg (\$3.53.7) f water manage bets: \$232 billi	\$360 \$7,592 y Supplies 184 y Supplies 184 gement strater	\$0 \$3,127 ,326 ,326 gies recommer	\$0 \$1,095	\$4,702		
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