

APPENDIX Z
TABLES REQUIRED BY TWDB ON ALL WATER MANAGEMENT STRATEGIES

APPENDIX Z TABLES REQUIRED BY TWDB

The Texas Water Development Board Regional Planning Guidelines require specific summary tables to be included in the Regional Plans. This appendix contains these tables which are:

Table Z.1: List of Potentially Feasible Water Management Strategies, Region C

Table Z.2: Summary of Recommended Strategies, Region C WUGs and WWPs

Table Z.3: Summary of Alternate Strategies, Region C WUGs and WWPs

These tables are based on information from the Texas Water Development Board online planning database (DB12) and reflect the most current information in the database at the time of the printing of this report. Subsequent adjustments may be made to the database and an update to these tables may be made through an errata to this report. There may be slight numerical differences between the TWDB online planning database and this printed regional water plan due to rounding associated with the regional water plan preparation and online data entry. In any and all instances where numbers in the regional water plan and the online planning database do not match, the data in the online planning database (DB12) shall take precedence over the associated number in the regional water plan for the purpose of development of the State Water Plan.

Table Z.1
List of Potentially Feasible Water Management Strategies
Region C

WMS Project ID	Project Name
C70	ADDITIONAL DRY YEAR SUPPLY
C15LF	ADDITIONAL PIPELINE FROM LAKE TAWAKONI (MORE LAKE FORK SUPPLY)
C02.1TRIN	ADDITIONAL TRINITY AQUIFER - EXISTING WELLS
C03.1WB	ADDITIONAL WOODBINE AQUIFER - EXISTING WELLS
C54	BED AND BANKS PERMIT
C29	BRAZOS GROUNDWATER PROJECT TO DWU
C29.1	BRAZOS GROUNDWATER PROJECT TO NTMWD
C29.2	BRAZOS GROUNDWATER PROJECT TO TRWD
C36	COLLIN-GRAYSON MUNICIPAL ALLIANCE SYSTEM
C38	CONVEYANCE AND TREATMENT PROJECT
C37	CONVEYANCE PROJECT
C46	COOKE COUNTY PROJECT
C55	DIRECT REUSE
C19	DWU REUSE
C51	ENNIS REUSE
C42	FACILITY IMPROVEMENTS
C47	FANNIN COUNTY PROJECT
C900	FASTRILL REPLACEMENT
C01CONSI RR	GOLF COURSE CONSERVATION
C48	GRAYSON COUNTY PROJECT
C28	GULF OF MEXICO DESALINATION
C56	INDIRECT REUSE
C32	LAKE COLUMBIA TO DWU
C23.1	LAKE GEORGE PARKHOUSE NORTH FOR DWU
C23	LAKE GEORGE PARKHOUSE NORTH FOR NTMWD
C24	LAKE GEORGE PARKHOUSE SOUTH FOR NTMWD
C25	LAKE LIVINGSTON TO DWU
C25.1	LAKE LIVINGSTON TO NTMWD
C25.2	LAKE LIVINGSTON TO TRWD
C30	LAKE O THE PINES TO DWU
C30.1	LAKE O THE PINES TO NTMWD
C30.2	LAKE O THE PINES TO TRWD
C16LP	LAKE PALESTINE CONNECTION (INTEGRATED PIPELINE WITH TRWD)
C14RH	LAKE RALPH HALL
C22	LAKE TEHUACANA
C10TEX	LAKE TEXOMA - AUTHORIZED (BLEND)
C10.1TEX	LAKE TEXOMA - AUTHORIZED (DESALINATE)
C10.4TEX	LAKE TEXOMA - INTERIM PURCHASE FROM GTUA
C10.2TEX	LAKE TEXOMA - NOT AUTHORIZED (BLEND)
C10.3TEX	LAKE TEXOMA - NOT AUTHORIZED (DESALINATE)
C33	LAKE TEXOMA TO DWU (BLEND)
C13LBC	LOWER BOIS D ARC CREEK RESERVOIR
C72	MAIN STEM PS (ADDITIONAL EAST FORK) NTMWD
C71	MAIN STEM TRINITY PUMP STATION (LAKE RAY HUBBARD INDIRECT REUSE - DWU)

Table Z.1
List of Potentially Feasible Water Management Strategies
Region C

WMS Project ID	Project Name
C01CONSMFG	MANUFACTURING CONSERVATION
C08MN	MARVIN NICHOLS 1A RESERVOIR
C08.1MN	MARVIN NICHOLS 1A RESERVOIR WITH DWU
C01CONSBAS	MUNICIPAL CONSERVATION-BASIC
C01CONSEXP	MUNICIPAL CONSERVATION-EXPANDED
C04CW	NEW WELLS - CARRIZO WILCOX AQUIFER
C05OTH	NEW WELLS - OTHER AQUIFER
C02TRIN	NEW WELLS - TRINITY AQUIFER
C03WB	NEW WELLS - WOODBINE AQUIFER
C34	NTMWD INTERIM PURCHASE FROM DWU
C20	NTMWD WILSON CREEK REUSE
C12.1OK	OKLAHOMA WATER TO DWU
C59	OKLAHOMA WATER TO IRVING
C12.2OK	OKLAHOMA WATER TO NTMWD
C12OK	OKLAHOMA WATER TO NTMWD, TRWD, UTRWD
C12.3OK	OKLAHOMA WATER TO TRWD
C12.4OK	OKLAHOMA WATER TO UTRWD AND IRVING
C02.3TRIN	OVERDRAFT TRINITY AQUIFER - EXISTING WELLS
C02.2TRIN	OVERDRAFT TRINITY AQUIFER - NEW WELLS
C03.3WB	OVERDRAFT WOODBINE AQUIFER - EXISTING WELLS
C03.2WB	OVERDRAFT WOODBINE AQUIFER - NEW WELLS
C50	PURCHASE FROM WATER PROVIDER
C60	REALLOCATION OF FLOOD STORAGE
C58	RED RIVER DIVERSION
C100	REDISTRIBUTION OF SUPPLIES
C27	ROBERTS COUNTY PROJECT TO DWU
C27.1	ROBERTS COUNTY PROJECT TO NTMWD
C27.2	ROBERTS COUNTY PROJECT TO TRWD
C26	SAM RAYBURN TO DWU
C26.1	SAM RAYBURN TO NTMWD
C26.2	SAM RAYBURN TO TRWD
C57	SUBORDINATION AGREEMENT
C06SUPWELL	SUPPLEMENTAL WELLS
C07TB	TOLEDO BEND PROJECT (500,000)
C07.2TB	TOLEDO BEND PROJECT (700,000)
C21.1	TRA DALLAS COUNTY REUSE
C21.5	TRA DENTON CREEK WWTP REUSE
C21.2	TRA ELLIS COUNTY REUSE
C21.3	TRA FREESTONE COUNTY REUSE
C21.4	TRA KAUFMAN COUNTY REUSE
C21	TRA LAS COLINAS REUSE
C40	TRA TARRANT COUNTY PROJECT
C11	TRWD THIRD PIPELINE AND REUSE
C53.1	WATER TREATMENT PLANT - EXPANSION

Table Z.1
List of Potentially Feasible Water Management Strategies
Region C

WMS Project ID	Project Name
C53	WATER TREATMENT PLANT - NEW
C01CONWWP	WHOLESALE WATER PROVIDER CUSTOMER CONSERVATION
C9.4WP	WRIGHT PATMAN - REALLOCATION OF FLOOD POOL (112K)
C9.5WP	WRIGHT PATMAN - REALLOCATION OF FLOOD POOL DWU (180K)
C9.6WP	WRIGHT PATMAN - REALLOCATION OF FLOOD POOL NTMWD (180K)
C9.7WP	WRIGHT PATMAN - REALLOCATION OF FLOOD POOL TRWD (180K)
C9.1WP	WRIGHT PATMAN - TEXARKANA SALE TO DWU
C9.2WP	WRIGHT PATMAN - TEXARKANA SALE TO NTMWD
C9.3WP	WRIGHT PATMAN - TEXARKANA SALE TO TRWD
C09WP	WRIGHT PATMAN SYSTEM OPERATION

**Table Z.2
Summary of Recommended Strategies
Region C WUGs and WWPs**

Strategy Name	Capital Cost	2010 Annual Costs (\$/AF)	SS2010	SS2020	SS2030	SS2040	SS2050	SS2060	2010 Annual Costs (\$/AF)
TRA ELLIS COUNTY REUSE	\$10,384,000	\$0	0	0	0	0	0	2,200	\$505
TRA FREESTONE COUNTY REUSE	\$17,266,000	\$0	0	0	0	0	6,760	6,760	\$323
TRA KAUFMAN COUNTY REUSE	\$9,760,000	\$0	0	2,000	2,000	2,000	2,000	2,000	\$96
TRA LAS COLINAS REUSE	\$14,530,000	\$0	0	7,000	7,000	7,000	7,000	7,000	\$134
TRA TARRANT COUNTY PROJECT**	\$59,008,000	\$0	0	1,627	7,841	12,949	17,108	20,949	\$239
TRWD THIRD PIPELINE AND REUSE	\$914,424,000	\$0	0	105,500	105,500	105,500	105,500	105,500	\$263
WATER TREATMENT PLANT - EXPANSION	\$3,948,023,000	\$0	0	2,723	3,069	9,007	9,272	9,343	\$0
WATER TREATMENT PLANT - NEW	\$595,147,400	\$0	0	191	912	1,201	1,565	1,732	\$0
WHOLESALE WATER PROVIDER CUSTOMER CONSERVATION*	\$0	\$0	60,620	145,754	213,347	273,900	339,148	414,244	\$0
WRIGHT PATMAN - REALLOCATION OF FLOOD POOL (112K)	\$896,478,000	\$0	0	0	0	112,100	112,100	112,100	\$0

* Wholesale water provider customer conservation is the compilation of the conservation of water saved by customers. It does not represent additional water saved.

** This does not represent new water supply. Quantity is shown as "0" in DB12.

*** Costs and supply amounts are only reported for WWPs located in Region C.

**Table Z.3
Summary of Alternate Strategies
Region C WUGs and WVPs**

Alternate Strategy	Capital Cost	2010 Annual						2060 Annual	
		Costs (\$/AF)	SS2010	SS2020	SS2030	SS2040	SS2050	SS2060	Cost (\$/AF)
BRAZOS GROUNDWATER PROJECT TO DWU	\$801,451,000	\$0	0	0	0	100,000	100,000	100,000	\$1,222
BRAZOS GROUNDWATER PROJECT TO NTMWD	\$913,344,000	\$0	0	0	0	100,000	100,000	100,000	\$1,417
LAKE COLUMBIA TO DWU	\$179,945,000	\$0	0	0	35,800	35,800	35,800	35,800	\$169
LAKE GEORGE PARKHOUSE NORTH FOR DWU	\$521,281,000	\$0	0	0	0	112,000	112,000	112,000	\$459
LAKE GEORGE PARKHOUSE NORTH FOR NTMWD	\$516,585,000	\$0	0	0	0	118,960	118,960	118,960	\$427
LAKE GEORGE PARKHOUSE NORTH FOR UTRWD	\$151,988,000	\$0	0	0	0	0	35,000	35,000	\$459
LAKE GEORGE PARKHOUSE SOUTH FOR UTRWD	\$208,364,000	\$1	0	0	0	0	35,000	35,000	\$590
LAKE GEORGE PARKHOUSE SOUTH FOR NTMWD	\$645,810,000	\$0	0	0	0	108,480	108,480	108,480	\$557
LAKE GEORGE PARKHOUSE SOUTH FOR DWU	\$692,921,000	\$0	0	0	0	115,260	115,260	115,260	\$567
LAKE LIVINGSTON TO DWU	\$1,855,538,000	\$0	0	0	0	0	200,000	200,000	\$981
LAKE LIVINGSTON TO NTMWD	\$2,115,111,000	\$0	0	0	0	0	200,000	200,000	\$1,101
LAKE LIVINGSTON TO TRWD	\$2,084,210,000	\$0	0	0	0	0	200,000	200,000	\$1,121
LAKE O THE PINES TO DWU	\$541,534,000	\$0	0	0	0	89,600	89,600	89,600	\$704
LAKE O THE PINES TO NTMWD	\$402,431,000	\$0	0	87,900	87,900	87,900	87,900	87,900	\$244
LAKE TEHUACANA	\$746,345,000	\$0	0	0	0	56,800	56,800	56,800	\$1,118
LAKE TEXOMA - AUTHORIZED (DESALINATE)	\$796,532,000	\$0	0	0	105,000	105,000	105,000	105,000	\$443
LAKE TEXOMA - NOT AUTHORIZED (BLEND)	\$531,378,300	\$0	0	0	0	113,000	113,000	113,000	\$446
LAKE TEXOMA - NOT AUTHORIZED (DESALINATE)	\$925,918,000	\$0	0	0	0	105,000	105,000	105,000	\$1,098
LAKE TEXOMA TO DWU (BLEND)	\$56,334,000	\$0	0	0	20,000	20,000	20,000	20,000	\$101
MARVIN NICHOLS 1A RESERVOIR WITH DWU	\$634,154,000	\$0	0	0	95,931	95,931	95,931	95,931	\$179
NECHES RUN-OF-RIVER FOR DWU	\$1,980,278,000	\$0	0	0	0	0	0	112,100	\$1,437
NTMWD INTERIM PURCHASE FROM DWU	\$1,777,000	\$0	0	11,200	11,200	0	0	0	\$0
OKLAHOMA WATER TO DWU	\$343,934,000	\$0	0	0	0	0	0	50,000	\$701
ROBERTS COUNTY PROJECT TO DWU	\$2,435,534,000	\$0	0	0	0	0	200,000	200,000	\$1,108
ROBERTS COUNTY PROJECT TO NTMWD	\$2,434,529,000	\$0	0	0	0	0	200,000	200,000	\$1,127
ACCELERATED TOLEDO BEND (500,000)	\$1,246,595,000	\$0	0	0	0	0	0	200,000	\$849
TOLEDO BEND PROJECT (700,000) - DWU	\$1,433,774,000	\$0	0	0	0	0	200,000	200,000	\$815
TOLEDO BEND PROJECT (700,000) - UTRWD	\$297,543,000	\$0	0	0	0	0	48,000	48,000	\$762
WRIGHT PATMAN - REALLOCATION OF FLOOD POOL NTMWD (180K)	\$905,929,000	\$0	0	0	0	180,000	180,000	180,000	\$544
WRIGHT PATMAN - REALLOCATION OF FLOOD POOL TRWD (180K)	\$1,694,140,000	\$0	0	0	0	180,000	180,000	180,000	\$955
WRIGHT PATMAN - TEXARKANA SALE TO NTMWD	\$684,966,000	\$0	0	0	0	100,000	100,000	100,000	\$811
WRIGHT PATMAN - TEXARKANA SALE TO TRWD	\$1,081,475,000	\$0	0	0	0	100,000	100,000	100,000	\$1,167
WRIGHT PATMAN SYSTEM OPERATION									
UTRWD	\$890,872,000	\$0	0	0	0	38,000	38,000	38,000	\$808
NTMWD	\$781,741,000	\$0	0	0	0	130,000	130,000	130,000	\$648
TRWD	\$1,282,327,000	\$0	0	0	0	130,000	130,000	130,000	\$1,066
Water Treatment Expansion - Navarro Mills	\$19,669,000	\$0	0	0	0				
CONVEYANCE PROJECT									
- Athens MUA purchase from DWU	\$15,343,000	\$0	0	0	0	4,000	4,000	4,000	\$391
- Athens MUA purchase from TRWD	\$33,000,000	\$0	0	0	0	4,480	4,480	4,480	\$1,056
- Walnut Creek connection to Bridgeport	\$48,972,000	\$0	0	0	0	6,726	6,726	6,726	\$1,206
- Muenster Cooke County Project	\$3,253,833	\$0	0	0	200	200	200	200	\$929
REUSE									
- Athens MUA	\$20,075,000	\$0	0	0	0	1,938	1,938	1,938	\$922
INFRASTRUCTURE IMPROVEMENTS		\$0	0	0	0				
- Athens MUA - More Lake Athens	\$7,409,000	\$0	0	0	0	840	840	840	\$916