



MEMORANDUM TO FILE

FROM: Tom Gooch, P.E. and Stephanie Griffin, E.I.T.

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PROJECT: NTD-98535, Region C Senate Bill One Water Plan

SUBJECT: TWDB Requested Breakdown of Additional Supplies by Source – North Texas MWD

The Texas Water Development Board (TWDB) needs the future additional water supplies for North Texas MWD to be broken down by source. This information is to be used in-house by the TWDB and will not be part of the *Region C Water Plan* report. We have assumed that all of NTMWD's additional future supplies will be brought to Lake Lavon for treatment and distribution. Thus, all NTMWD additional supplies will have the same percentage breakdown of sources. Table 1 lists the supplies available to NTMWD throughout the planning period. Table 2 lists sources of additional supply for NTMWD customers. The percentage of additional supply available from each source is shown in Table 2A.

The breakdowns shown in this memorandum are best estimates based on currently available information. North Texas MWD's existing water rights do not specify what portions of NTMWD's service area are to be served by which supply source. In meeting customer demands NTMWD has historically exercised a great deal of operational flexibility, as allowed under its existing water rights. The attached tables represent one possible scenario for meeting projected demands. Actual operation will depend on reservoir contents, the cost of pumping, facilities in or out of service, water quality, and many other factors and, because of NTMWD's operational flexibility, could vary significantly from the values shown in the attached tables. NTMWD is in no way constrained to the operation assumed in this memorandum.

Table 1
North Texas Municipal Water District Recommended Water Management Strategies

Source	Supply by Source and Demand in Acre-Feet per Year					
	2000	2010	2020	2030	2040	2050
<i>Lake Lavon</i>	<i>103,900</i>	<i>102,200</i>	<i>100,600</i>	<i>98,800</i>	<i>97,000</i>	<i>95,200</i>
<i>Lake Texoma</i>	<i>77,300</i>	<i>77,300</i>	<i>77,300</i>	<i>77,300</i>	<i>77,300</i>	<i>77,300</i>
<i>Lake Chapman</i>	<i>53,600</i>	<i>53,200</i>	<i>52,800</i>	<i>52,400</i>	<i>52,000</i>	<i>51,600</i>
<i>Current Reuse</i>	<i>35,925</i>	<i>35,925</i>	<i>35,925</i>	<i>35,925</i>	<i>35,925</i>	<i>35,925</i>
Future Additional Reuse		17,936	26,904	35,872	35,872	35,872
Additional Lake Texoma		10,000	10,000	10,000	10,000	10,000
Oklahoma Water		50,000	50,000	50,000	50,000	50,000
Lower Bois d'Arc Creek Lake			98,000	98,000	98,000	98,000
Marvin Nichols I				81,650	81,650	163,300
Total Connected Supply	270,725	346,561	451,529	539,947	537,747	617,197
Estimated Demand	234,884	316,092	387,346	448,164	512,509	560,043
Surplus (Shortage)	35,841	30,469	64,183	91,783	25,238	57,154

Notes: (a) *Water supplies in italics are already available and connected.*
 (b) Other options for NTMWD include the development of substantial additional Lake Texoma supplies and extending the Lake Texoma pipeline to Lake Lavon.

Table 2
Breakdown of Additional NTMWD Supplies

Name of Specific Source	Year 2000 Value of Total Supply from Strategy	Year 2010 Value of Total Supply from Strategy	Year 2020 Value of Total Supply from Strategy	Year 2030 Value of Total Supply from Strategy	Year 2040 Value of Total Supply from Strategy	Year 2050 Value of Total Supply from Strategy
Additional Reuse	0	17,936	26,904	35,872	35,872	35,872
Additional Lake Texoma	0	10,000	10,000	10,000	10,000	10,000
Oklahoma water	0	50,000	50,000	50,000	50,000	50,000
Lower Bois d'Arc Creek Lake	0	0	98,000	98,000	98,000	98,000
Marvin Nichols I (Phase I)	0	0	0	81,650	81,650	81,650
Marvin Nichols I (Phase II)	0	0	0	0	0	81,650
Total	0	77,936	184,904	275,522	275,522	357,172

Table 2A
Percentage Breakdown of Additional NTMWD Supplies

Name of Specific Source	Year 2000 Value of Total Supply from Strategy	Year 2010 Value of Total Supply from Strategy	Year 2020 Value of Total Supply from Strategy	Year 2030 Value of Total Supply from Strategy	Year 2040 Value of Total Supply from Strategy	Year 2050 Value of Total Supply from Strategy
Additional Reuse	0.0%	23.0%	14.6%	13.0%	13.0%	10.0%
Additional Lake						
Texoma	0.0%	12.8%	5.4%	3.6%	3.6%	2.8%
Oklahoma water	0.0%	64.2%	27.0%	18.1%	18.1%	14.0%
Lower Bois d'Arc Creek Lake	0.0%	0.0%	53.0%	35.7%	35.7%	27.4%
Marvin Nichols I (Phase I)	0.0%	0.0%	0.0%	29.6%	29.6%	22.9%
Marvin Nichols I (Phase II)	0.0%	0.0%	0.0%	0.0%	0.0%	22.9%
Total	0.0%	100.0%	100.0%	100.0%	100.0%	100.0%