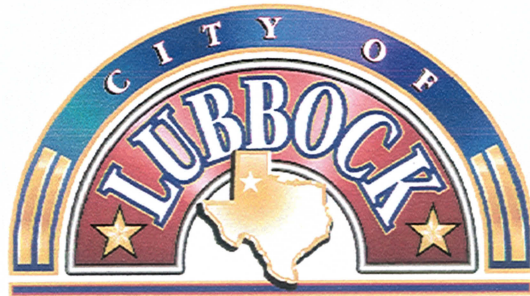


Section 2 – Strategic Water Plan

a. Strategic Water Planning Statement



Lubbock Water Utilities
June 15, 2007

Strategic Water Planning Statement

A Water Planning Statement was first recommended by the Lubbock Water Advisory Commission (LWAC) and approved by the City Council in the fall of 2005. An update and name change to the "Strategic Water Planning Statement" was recommended by the Lubbock Water Advisory Commission and approved by the City Council in the spring of 2007. The Lubbock Water Advisory Commission recommends that this statement be included, as updated from time to time, as part of the City of Lubbock Strategic Water Supply Plan. This statement serves as a guide for the development of water supply plans for the City of Lubbock and for area and regional water supply planning efforts.

A. Introduction

Water supplies will be developed and infrastructure constructed in order to insure and provide **100 years of water supply** for the Citizens of Lubbock. Lubbock should strive to acquire and develop sustainable water sources that can be achieved in the shortest time frame and in the most cost efficient manner. As additional engineering and financial information is available, this water planning statement will be amended to reflect project feasibility and priorities.

Water supply planning considers a number of significant factors, issues, assumptions and projections including: (1) population growth, (2) conservation efforts, (3) per capita water use, (4) total annual water use, (5) peak day use, and (6) water supply alternatives. The City must have sufficient water supplies developed in advance to provide enough water for both the total annual supply and for the peak day demand. Planning efforts will address both the annual use and peak day use for the City of Lubbock.

Population growth is a major water supply planning factor. The City will consider low, medium (or most likely), and high population growth scenarios in its water supply planning efforts enable planning efforts to adapt to actual changes in population.

Water conservation is also a significant part of water supply planning. Steps to encourage greater conservation have and will continue to be taken. Decreases in water use that result from conservation will be documented and then included as part of the plan to project future water supply needs. In the City's Water Conservation Plan, goals have been established to use water more efficiently and to reduce per capita use.

Water planning takes time. Major water infrastructure like pipelines can take 6 to 10 years to plan, design, permit and construct. Reservoir or lake projects can take 20 to 30 years for the same process, in part, due to the length of time required for both state water right permits and federal permits for construction. For this reason, water planning must be completed well in advance of the project in order to ensure the project is completed on time.

B. Immediate Plan (current projects)

Water Conservation must play a significant role in the City's long term water supply plan. The Water Conservation Plan (Water Use Management Plan) was revised at the direction of the LWAC in order to be more customer-friendly, and the City Council approved the Plan by ordinance on July 10, 2006. A block rate structure, referred to as the Average Winter Consumption Plan (AWC), was recommended by the LWAC and then adopted by the City Council on February 22, 2007 to encourage greater water conservation. Educational efforts must continue to teach and encourage all customers to conserve water. Conservation is a cost-effective alternative that can extend the useful life of existing water supplies and infrastructure. The City's Water Conservation Plan has established a goal to reduce total per capita water use by 15% by the year 2020 and this goal follows the 2004 recommendations of the Texas Water Development Board's Water Conservation Implementation Task Force.

The use of **local groundwater** is being developed for park irrigation and this augments the City's total water supply as well as decreases peak daily demand. Using groundwater for irrigation of parks, playgrounds, golf courses and other facilities is recommended as a cost-effective water supply alternative. A total of 17% of 79 City Park and open space locations will be converted over to groundwater with the completion of Phase I and II in 2007. Subsequent phases will follow until the project is complete with phase three beginning in the 2007-08 fiscal year. Where feasible, all park and open space facilities will be converted over to groundwater for irrigation.

The **Bailey County well field** infrastructure and transmission line will be maintained to provide a reliable annual and peaking source of water. The amount of water drawn each year will target about 10,000 acre feet or less in order to extend the useful life of the well field to 2050. The City recognizes that pumping the well field at a higher rate will lessen the life of the well field and could damage the underground water bearing formations and well infrastructure.

C. Short Term Plan (six months to five years)

Short Term Projects

The City will take the steps necessary to **secure rights and permits** for the transportation and use of developed waters that may be discharged into the North Fork and/or the South Fork of the Double Mountain Fork of the Brazos River. This will include reclaimed wastewater, storm water and groundwater sources. As necessary, agreements will be pursued with the Brazos River Authority and other water right holders in order to secure future water supply alternatives.

Improvements to the Southeast Water Reclamation Plant (SEWRP) will be completed to treat the water to a level that the City can meet current and future stream discharge standards, including nutrient removal, in an effort to improve the quality of the water for reuse and to eliminate environmental concerns.

Phase I will complete the upgrade for Plant #4 and will also complete some basic improvements to Plant #3 with construction to begin in the 2007-2008 fiscal year. These improvements enable Plant #4 to provide up to 18 mgd of capacity with stream discharge and nutrient removal capability, and will allow Plant #3 to meet stream discharge quality most of the time. Phase II is proposed in 2010 for the solids handling equipment. Phase III is proposed in the year 2012 to complete the upgrade of Plant #3 to the nutrient removal level, with a capacity for 13 mgd.

The reclaimed water will be reused or recycled for municipal, industrial (power plant), agricultural, commercial and other beneficial purposes. Contracts and agreements for reuse will have a term that is compatible with the City's long term water supply needs. The City will complete engineering efforts on water quantity and quality to determine the best locations to discharge, store and reuse the reclaimed water. The City now discharges into the North Fork, and alternative locations in the North Fork and South Fork will be evaluated and considered.

The long term practice to dispose of treated wastewater effluent by irrigation is no longer a goal for the City. Wastewater effluent is a valuable resource, and as the level of wastewater treatment rises, the effluent may be developed into a future water supply source. The City will develop a plan for transitioning from the alternative of disposing of wastewater effluent at land application sites to the alternative of reuse or recycling wastewater effluent for use as a water supply source. During this transition period, the land application sites will continue to be managed in a manner that minimizes environmental issues. The costs of land application to the City will be reduced as part of this plan.

The City of Lubbock has and will continue to participate in the water supply projects of the **Canadian River Municipal Water Authority (CRMWA)**. CRMWA has been an important source of water for Lubbock for over 50 years. CRMWA has depended on Lake Meredith to provide water for Lubbock and other member cities during that 50 year

period. In 2002, CRMWA completed the first Roberts County well field improvements to offset the serious impact of drought and other factors on water supplies from Lake Meredith.

Between 2005 and 2006, Lubbock participated with CRMWA as the Authority issued about \$100 million for the purchase of groundwater rights and for the development of well field infrastructure. With well field construction scheduled for completion in 2009, and with holdings of over 300,000 acres of water rights, CRMWA will be able to ensure delivery of 26,000 acre-feet of water to Lubbock annually from groundwater sources for the next 100 years or more. The remaining deliveries will depend upon the availability of water from Lake Meredith.

Short Term Planning

Water supply planning is essential in order to make final decisions on the sequence for developing water supply alternatives. The costs and benefits associated with each alternative need to be documented and evaluated. Three major projects need to be included in the planning process: (1) South Fork Projects - Lake Alan Henry, (2) North Fork Projects – Lake #7, Post Reservoir and Scalping Project and (3) CRMWA Projects – Second Well Field and Pipeline System. It is recommended that funding be approved for the study of these three major alternatives in order to make meaningful and timely decisions regarding project priority, timing and completion.

Lake Alan Henry on the South Fork is recommended as the next major water supply for the City of Lubbock. The Montford Dam was completed in 1993 and Lake Alan Henry began storing water. Infrastructure, including a raw water transmission line, pump stations and power sources, and a water treatment plant are necessary to bring this supply of water on line. Preliminary engineering on this project began in August of 2006 so that the project can be completed by 2012 if necessary. The Lake Alan Henry infrastructure project could cost more than \$200 million.

The Water Commission has recommended that water supplies from Lake Alan Henry need to be supplemented from some other source. The annual firm yield for Lake Alan Henry was projected to be 32,000 acre-feet in 1971. In 2007 the annual safe yield was modeled to be 19,500 acre-feet after a volumetric study by the Texas Water Development Board reduced the calculated storage capacity of the lake down by 18%.

One approach to supplement Lake Alan Henry would be to construct a water transmission line to carry recycled water to the closest **South Fork** tributary. This alternative would require about 30 miles of pipeline if existing infrastructure was approved for transportation, and about 50 miles of pipeline if a new line is required.

Another approach to supplement Lake Alan Henry would be to develop facilities on the **North Fork**. Since Lake Alan Henry captures water from the South Fork, having one or more reservoirs on the North Fork would help capture water in that tributary of the Brazos River. The necessary facilities to capture and store water on the North Fork might

include reservoirs and/or a scalping operation. A North Fork project would require and provide an opportunity for significant regional cooperation.

The **Post Reservoir** on the North Fork is one logical alternative that has the benefit of already having a state water permit. **Canyon Lake #7** on the North Fork is a logical alternative for storage since its proposed location is just southeast of the City. Having a storage facility close to Lubbock could help the City meet peak day demands if the Bailey County Well Field ceases to be a viable alternative. Lake #7, as a storage facility, could be filled by natural flows and/or by water from other sources. The City has a contract to model the flows and water availability for the alternatives under consideration that should be completed in 2007. These facilities could capture and store for use permitted flows, developed storm flows, developed reclaimed wastewater flows, developed groundwater flows, and any other potential flows that might be available, while maintaining environmental flows in the stream.

Infrastructure for Lake Alan Henry and a Post Reservoir may be developed in phases and should be designed so that development and cost reflect water supply needs. The pump stations and water treatment facility can be developed with a modular design. The water transmission line may also be constructed in phases.

The Post Reservoir project could be necessary within the next 25 years, and could cost about \$60 million to construct. The Lake Alan Henry water transmission line will pass directly by the Post Reservoir site, and can draw water from both sources. Lake #7 may be necessary for peaking purposes within the next 50 years.

The City will evaluate the costs, benefits and feasibility of developing both North Fork and South Fork alternatives. Issues such as permitting, land and mineral rights, environmental and archeological considerations, capital and operational costs, water yield, etc., will be considered to determine the feasibility and desirability of the projects.

Planning for CRMWA member cities is recommended. CRMWA should complete their long term water supply plan in the summer of 2007. This plan will identify the needs of member cities and identify the timing for future projects. The CRMWA plan should be developed in cooperation with other member cities.

The CRMWA II project may be recommended as part of this planning process. CRMWA II involves the construction of a second water transmission line, the purchase of additional groundwater rights that would be dedicated to a CRMWA II project, and the development of well field infrastructure. The line would extend from an area in or near Roberts County to the City of Lubbock and would benefit Lubbock and other CRMWA member cities.

CRMWA II would be beneficial for annual supplies and peak day needs, and it would be especially beneficial during times of drought. The project might be developed in phases, with a first phase from Roberts County to Amarillo, and a second phase from Amarillo to Lubbock.

Phase one may help maximize the use of the existing CRMWA transmission line capacity from Amarillo to Lubbock by providing a full allotment through additional well water when Lake Meredith is low due to drought. A second phase might take the line to Plainview. A third phase would complete the line to Lubbock. This project may be necessary within the next 50 to 60 years and could cost Lubbock between \$400 and \$600 million for groundwater rights, well field infrastructure, and water transmission line.

Initial planning and pilot projects for **brackish ground water** are recommended. Brackish water may be able to supplement existing sources and make use of existing infrastructure. Use of wind energy may help defray the costs of pumping and desalinization.

D. Long Term Plan (5-100 years)

The development and **construction** of Lake Alan Henry infrastructure, North Fork reservoirs or scalping operation, and the CRMWA II project are recommended to meet long term water supply needs.

Construction should take place only when the necessary **trigger points** are met, based upon population growth, the impact of conservation efforts, and actual water use. A critical path will be developed to ensure adequate time for construction. Lake Alan Henry infrastructure is now targeted for 2012. The Post Reservoir may be necessary by about 2030, and CRMWA II by about 2050.

The City of Lubbock will support CRMWA in its efforts to study recharge in the Roberts County area and to have an ongoing groundwater right purchase plan in order to replace water being used. This system will enable the cities that use this groundwater to help pay to replenish that water supply.

E. Summary

Conservation and the identified major water supply alternatives can provide water for the City of Lubbock for the **next 100 years** and beyond. Based upon moderate and aggressive population growth projections, Lubbock could serve a population of between 300,000 and 500,000 within the next 100 years.

Successful conservation efforts can defer the need for the major water supply projects by as much as 20 years. A slower population growth rate will also significantly defer the need for major water supply projects.

A **detailed analysis of major water supply alternatives** is necessary in the short term to identify the costs and benefits of each alternative and to make a recommendation on the order of implementation. City staff, working closely with the Water Commission and the

City Council, **will update a water supply plan annually** in order to more accurately project the timing for additional water supply projects. Engineering information and funding availability may change the sequence and priority of projects. Funding for water planning should be carefully planned and included in the annual budget.

The City should develop and provide the **Citizens of Lubbock** with information on water supply plans, alternatives, issues, supply alternatives, and project costs.

Section 2 – Strategic Water Plan

b. Council Presentation



Strategic Water Plan Presentation

Joint Meeting of City Council and
Lubbock Water Advisory Commission

City of Lubbock

April 12, 2007

Source of Lubbock's Water – CRMWA

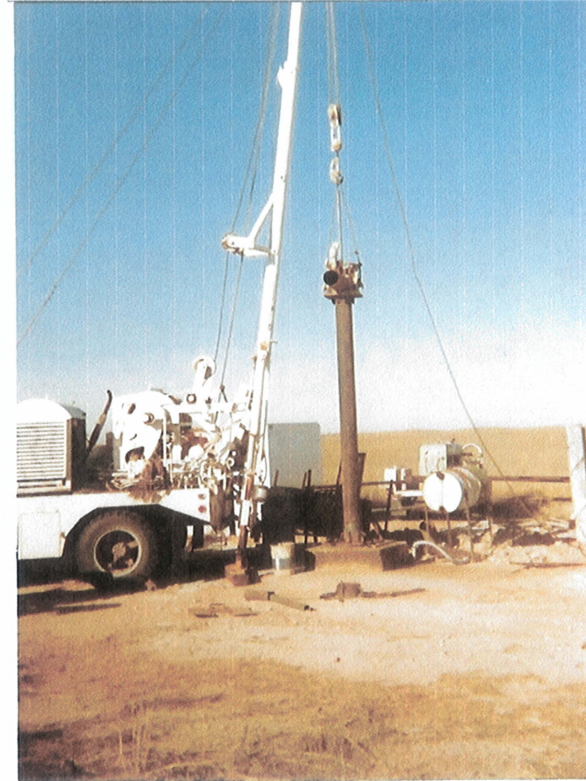
- The Canadian River Municipal Water Authority (CRMWA), has been Lubbock's primary water source for over 50 years.
- Lake Meredith has been CRMWA's primary source of water for over 50 years.
- Drought, brush and New Mexico dams on the Canadian River have dropped water in the reservoir to about 7% of capacity.
- Lake Meredith's yield has dropped from 103,000 AF annually down to ??? Maybe by half or more.
- CRMWA developed the 40,000 acre Williams (Roberts County) Well Field to offset the lake's loss of water supply.
- CRMWA now owns over 300,000 acres of water rights in Roberts and several adjacent counties.



- Pipeline capacity limit delivery from the well field. Once fully developed in a few years, Lubbock's well field allocation will be about 26,000 acre feet annually.
- With the 300,000 acres of water rights, and with allocations being limited by the current pipeline capacity, the groundwater will last CRMWA member cities over 100 years.

Source of Lubbock's Water – Bailey County Well Field

- The Bailey County Well Field (BCWF) has provided water for Lubbock for over 50 years.
- The City has about 82,000 acres of groundwater in the BCWF.
- The projected life is 40 years if it is pumped at not more than 10,000 acre feet annually, and if additional wells are added as the water level continues to drop.
- Bailey County provides 25% of the annual supply and 50% of the peak day demand. This supply may only last another 40 years or less.
- The City is now working on several projects to keep this source operational, including additional wells, electrical system improvements, and water transmission line testing.

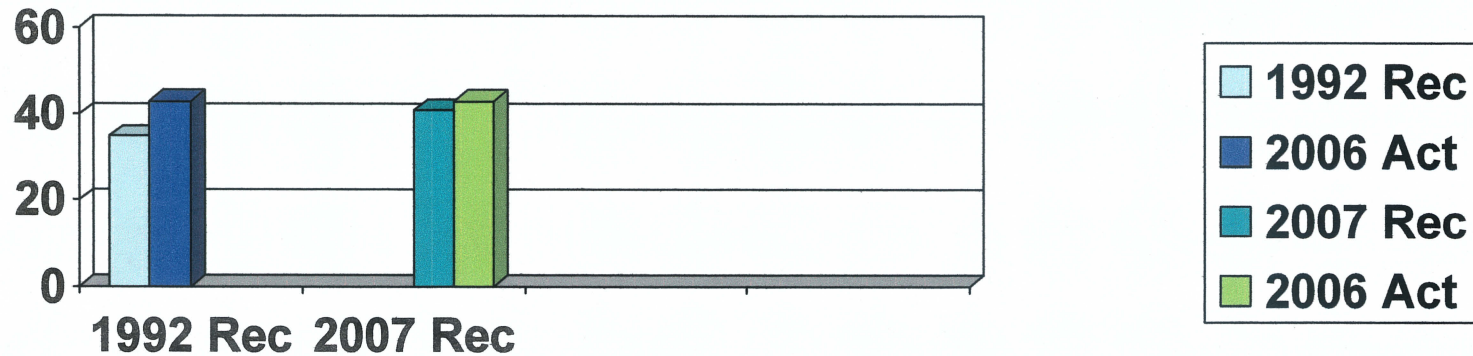


Source of Water Supply – Park Well Water

- The City is developing well water for park irrigation.
- The wells will help both annual supply and peak day issues.
- Larger parks with strong ground water are being developed first.
- Phase I & II for 18 parks will be complete in 2007. Phase III will be proposed for 2008.

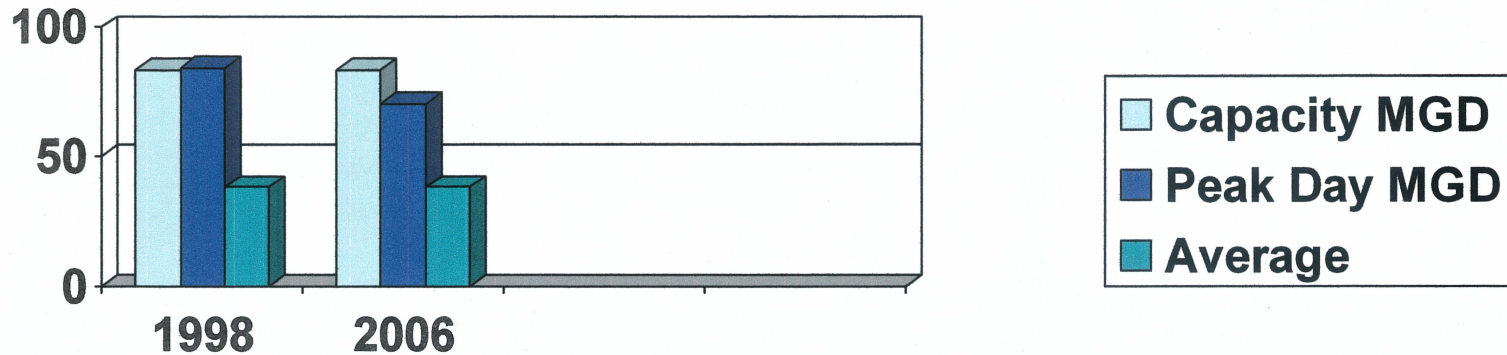


Annual Supply



- Lubbock currently uses over 40,000 AF annually, or 14 billion gallons. 2006 use was almost 43,000 AF.
- Based upon the actual CRMWA allocation for 2007 of 31,499 acre-feet, and the 1992 Groundwater Management Study to use 3,400 acre feet from the BCWF, Lubbock has an annual capacity of 34,899 acre-feet.
- Based upon the actual CRMWA allocation for 2007 and the 2007 Groundwater Availability Study recommendations to not use more than 10,000 AF annually in order for the well field to last another 50 years, the City has an annual capacity of 41,499 acre feet, which is still short of actual use in 2006.
- BCWF is now used as the buffer, which could shorten the life of the well field.
- Lubbock is behind in capacity planning based upon both the 1992 Study and the 2006 study with CRMWA allocations now being low due to small amounts of water in Lake Meredith.

Peak Day Demand



- Lubbock uses on average 38 million gallons a day (MGD). For planning purposes, the average is doubled to 76 MGD. Capacity of the system is 83 MGD. Including emergency raw water storage as part of the planning for capacity can extend this amount.
- Winter is low at about 22 MGD and a summer use has hit 84 MGD in 1998.
- Conservation has helped lower that peak day use. In 2006, the peak day was 70 MGD even with increases in population.
- Lubbock has exceeded its capacity already. With conservation, we may have given the City a buffer of 7 MGD capacity or about 10%.

Problems

1. Lubbock is at capacity for annual supply while CRMWA allocations are low and while BCWF is conserved. Project additional water needs as early as 2012.
2. Lubbock only has a small margin of capacity for peak day use due to conservation, and the City exceeded peak day capacity in 1998.
3. When the BCWF ceases to be a viable source, Lubbock will lose almost half of the existing peak day capacity.
4. There is a need for regional water planning and cooperative efforts.

Solutions

1. Park Irrigation from well water.
2. Lake Alan Henry (South Fork) for annual supply.
3. Post Reservoir (North Fork) for annual supply, making use of developed water (storm water and reclaimed water).
4. Lake #7 in the Canyon Lake system (North Fork) as a storage facility for peak days, making use of developed water and stored Lake Alan Henry water if necessary.
5. Make use of City's developed water (storm water and recycled water) by discharge into the North Fork or South Fork or both.
6. CRMWA II for future annual supply and peak day.
7. Aquifer storage (Bailey County or other) for peak day.
8. Dockum brackish ground water.

The Question

- Which alternative?

or

- Which alternative first?
- With limited alternatives, all of them will be part of the long range plan.

The 2nd Question

- Which is the best alternative?
 - Capital costs?
 - Operational costs?
 - Water supply availability?
 - Water quality?
 - Water permit issues?
 - Project feasibility?
 - Environmental questions?
 - Archeological questions?
 - Land and mineral questions?



Lake Alan Henry

Construct infrastructure to bring water to Lubbock

- **Benefits/Positives**

- Montford Dam has already been constructed and Lake Alan Henry is full with 94,808 acre feet of water.
- No permitting for the Lake is required.
- Permit allows up to 35,000 acre feet annually to be used.
- Plan to complete preliminary engineering, right-of-way acquisition, final design, and infrastructure construction by 2012.

- **Costs/Negatives**

- Lake Alan Henry yield has dropped from an initial estimate of 32,000 AF in 1971 to 19,000 AF in 2007.
- Additional drop in yield anticipated due to a study by TWDB which shows an 18% reduction in volume.
- Requires pumping of water uphill about 1,000 ft in elevation. This lift is comparable with the lift for CRMWA groundwater from Roberts County.
- Use will impact recreational activities.
- Project cost, including transmission line, pump stations, water treatment facility, right-of-way and engineering estimated at \$200 million (comment estimate by engineers).

Supplement Lake Alan Henry

Making Use of Developed Water



1. Recycled Water

- City now produces about 18 MGD of treated wastewater effluent.
- Estimate 30 MGD between 2030 and 2035.
- City has plans to upgrade the SEWRP to stream quality discharge standards for discharge into the North Fork.
- Land application disposal is costly and creates environmental concerns.

2. Storm Water

- City continues to develop storm water system to eliminate flooding.
- The storm water system transports more water to the North Fork.
- Developed storm water flows estimated at 11,000 acre feet annually.

North Fork Option

Post Reservoir to supplement Lake Alan Henry



- **Benefits/Positives**

- Adds to total permitted water capacity for storage and diversion with Lake Alan Henry at 94,808 AF plus Post Reservoir at 38,420 AF for a total of 133,228 AF.
- Regional cooperation is a major theme of this project.
- Makes use of all developed water, including storm and reclaimed water, and natural flows.
- Allows Lake Alan Henry water to remain separate in storage from developed water.
- Smaller line required from Lake Alan Henry to Post Reservoir, larger line or eventually two lines from Post to Lubbock. Could save \$20 million.
- Has a state water right permit for the dam and diversion with a 1970 priority date for the permit.
- Few owners of land related to the project.

- **Costs/Negatives**

- Water quality modeling and considerations required.
- Negotiate with White River Municipal Water District for water.
- Requires a federal 404 permit for construction.
- Water right permit will need some modifications.
- Property purchase and dam construction cost estimated of \$40 million (2006 Region O Plan estimate plus 33%).



South Fork Tributary Option

Reclaimed water directly to the South Fork to supplement Lake Alan Henry

- **Benefits/Positives**

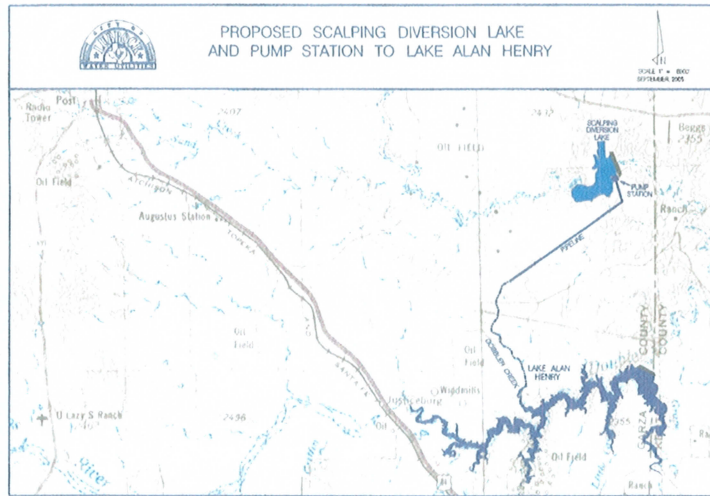
- Makes use of Lake Alan Henry Permit of 35,000 AF of diversion when the last yield projection was 22,500 AF.
- Simple system.
- Help maintain a higher level of water in Lake Alan Henry for recreational purposes.
- Does not require the amendment of the Lake Alan Henry water right permit.

- **Costs/Negatives**

- Requires a wastewater effluent line – 25 to 30 miles, at \$1 million per mile, for 9 MGD capacity to South Fork tributary.

- **(Costs/Negatives continued)**

- Requires a wastewater line of 40 to 45 miles to increase the capacity over 9 MGD per day at \$1 million per mile.
- Requires larger pipeline for about 20 miles from Lake Alan Henry up to Post that may not be necessary if the Post Reservoir is developed.
- Does not enable Lubbock to benefit from natural flows and 11,000 AF annually of developed storm water flows in the North Fork.
- May enhance possibility of golden algae in Lake Alan Henry by increasing the level of chlorides.
- Does not add to total storage capacity.
- Possible cost impact - \$40-\$70 million depending on options selected (staff estimate).



Scalping Project Option

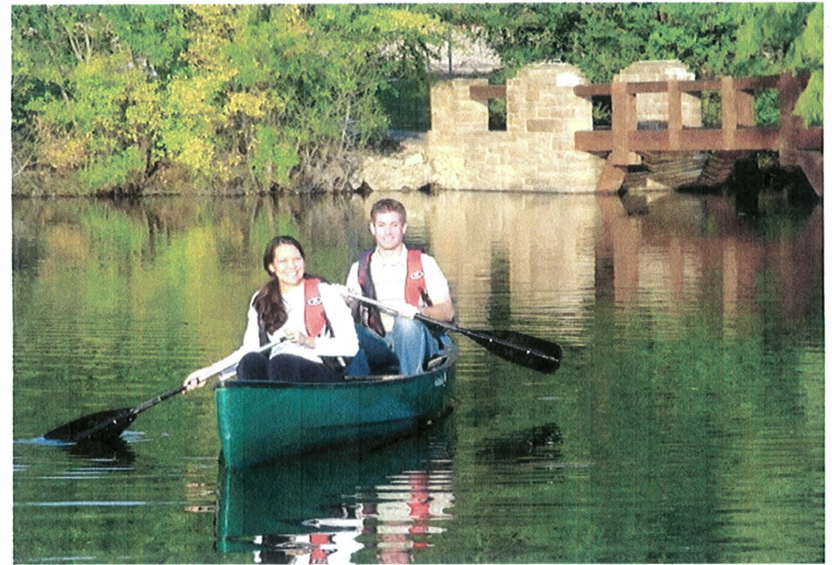
Supplement Lake Alan Henry directly from the North Fork

- **Benefits/Positives**
- Captures flow in the river without the cost of a dam.
- Makes use of most North Fork Flows including developed water.
- Minimal impact on property owners in the area.

- **Costs/Negatives**
- Requires a pipeline from the project to Lake Alan Henry.
- Does not capture major storm flows unless large pipeline and pump infrastructure is constructed at great expense.
- No storage capacity. Only captures flow.
- Subject to many senior water rights.
- May enhance possibility of golden algae in Lake Alan Henry by increasing the level of chlorides and by the mixing of water that has been reported to have golden algae and to have caused fish kills.
- Costs about \$75 million near Lake Alan Henry (2006 Region O Plan cost estimate plus 33%).

Peak Day Capacity - Canyon Lake #7

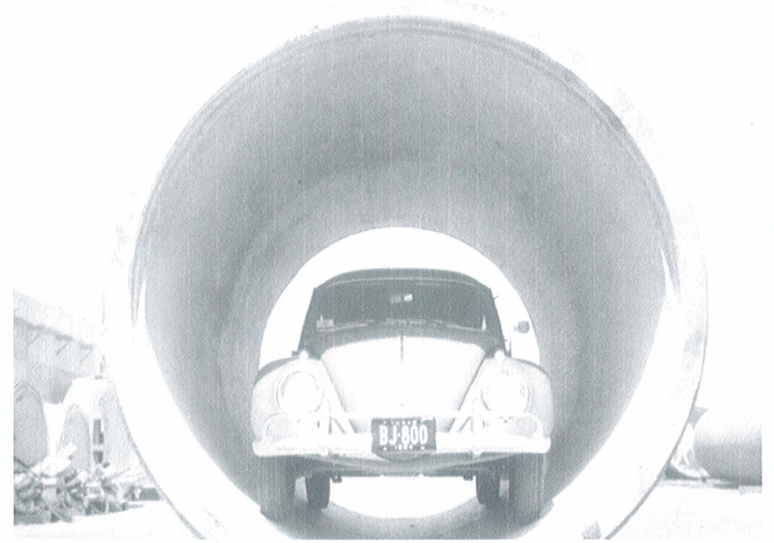
Long term peak day capacity on the
North Fork near Lubbock



- **Benefits/Positive**
- Adds storage close to Lubbock of 20,708 AF.
- Help meet peak day demand while minimizing pipeline and pumping costs.
- Replace Bailey County Well Field peak day capacity in 40 to 50 years.
- Utilize both storm water and about 5 MGD flow of reclaimed water.
- Adds additional recreational lake close to the City of Lubbock.
- **Costs/Negative**
- Limits discharge of wastewater at the South Ease Water Reclamation Plant.
- Land costs will be high due to proximity to the City of Lubbock
- Costs about \$50 million for dam, property, pump stations and pipelines (staff modified Region O estimate to remove Lake #8 projected costs).

Future Supply - CRMWA

Second pipeline and
groundwater infrastructure



- **Benefits/Positives**
- Quality water
- Not impacted by drought.
- A separate system means treatment costs could be minimal like the Bailey County Well Field.

- **Costs/Negatives**
- Distance increases cost at about \$2 million per mile for a large pipeline.
- Requires pumping of water uphill with about 900 feet of elevation. Comparable with Lake Alan Henry.
- Cost estimated between \$500 and \$600 million for water transmission line, well field infrastructure, and water rights (staff estimate).

Future Supply - Dockum Aquifer Brackish (salty) Groundwater



- **Benefits/Positive**
 - Dockum Aquifer covers a broad area.
 - May be able to make use of existing infrastructure.
 - Desalinization technology is improving.
 - Wind energy might help reduce operational costs.
- **Costs/Negative**
 - Desalinization cost is high.
 - Dockum formation does not have high gallon per minute yields in many areas.
 - Disposal of the brine is expensive and problematical.



Wastewater Treatment Plans

Recycle Water Resources

SEWRP Improvements

1. Phase I – 2008

- Eliminate Plant #2
- Expand and upgrade Plant #4 to stream quality discharge plus nutrient removal.
- Upgrade Plant #3 to stream quality discharge.
- Head works screen and other plant improvements.

2. Phase II – 2010

- Upgrade solids processing

3. Phase III – 2012

- Upgrade Plant #3 to nutrient removal.

4. Next Phase – Plant Expansion

Discharge Plan Alternatives

1. Immediate Plan – Next 30 Years

- Discharge up to 9 MGD at current location SE of Ransom Canyon adjacent to FM 400.
- Discharge up to 15 MGD at the SEWRP.
- Discharge up to 4 MGD in Canyon Lake System.
- Total discharge capacity – 28 MGD.

2. Intermediate Plan – After 30 Years

- Add discharge into Lake Alan Henry up to 9 MGD.
- Use existing infrastructure to Hancock LAS plus 20+ miles of pipe.
- Total discharge capacity – 37 MGD

3. Long Term Plan – After 50 Years or More

- Construct Lake #7.
- Add 15 miles of pipeline for 2nd discharge point at FM400 of 9 MGD for a total of 18 MGD at that point.
- Cease discharge at SEWRP.
- Continue discharge in Canyon Lakes at 4 MGD and at Lake Alan Henry tributary at 9 MGD.
- Total discharge capacity – 31 MGD.

Recommendations

1. The **Strategic Water Planning Statement** provides a guide for water supply planning efforts and will have a significant impact on water supply projects. Recommend approval of the statement.
2. The **Strategic Water Plan** provides valuable information that has been gathered and discussed by the Lubbock Water Advisory Commission and City Staff. Approval will provide a guide for planning, permitting, engineering and project development. Recommend approval of the plan.
3. The **Lake Alan Henry** is recommended as the next water supply for Lubbock. Recommend that necessary planning, engineering and construction be completed for the new supply by 2012.
4. For the long term, **Lake Alan Henry needs to be supplemented**. The Letter of Intent with the White River Municipal Water District allows the City to evaluate one of the significant options while doing its do diligence with all options. Recommend the Letter of Intent for approval.
5. The City needs to perform **due diligence on options** to supplement Lake Alan Henry. Recommend the City take steps to evaluate the alternatives. Recommend that the City take appropriate steps now to move these projects forward.
6. The City will need to **offset the loss of the peak day capacity** of the Bailey County Well Field which could happen between 2040 to 2050. Recommend due diligence for Canyon Lake #7 as part of the plan and appropriate steps now to move this project forward.
7. Additional water supply capacity from **CRMWA** may not be a likely option until 2040 or 2050 when other CRMWA member cities have a need. Recommend support of continued planning efforts with CRMWA for future water supply needs.