

# United States Senate

## Committee on Environment and Public Works

### Field Hearing

Tulsa, Oklahoma  
July 26, 2004

The citizens of Norman, Oklahoma, realize the importance of water and its role in the continuation of a successful community. The role of water, both potable and non-potable, amounts to our view of the future. The City of Norman continues to plan and address issues faced with adequate supplies of water. Planning for the future resulted in Norman's identification of extended water and wastewater needs that exemplify the situations faced by municipalities around this nation.

Following is a brief review of the water and wastewater planning occurring in Norman:

#### Strategic Water Supply Plan

In 1999 the City of Norman initiated the development of our Strategic Water Supply Plan. This plan provided a comprehensive overview of Norman's water resources, projected water

demands, and identified needed long term steps to meet resource projections. In Figure 1, it is observed that by 2040 Norman will need water supply resources capable of meeting an annual average demand totaling 30 million gallons of treatable water per day. At this time, the citizens of Norman consume an annual average water demand totaling over 11 million gallons per day. The Strategic Water Supply Plan identified steps necessary to achieve this long-term water supply shortfall.

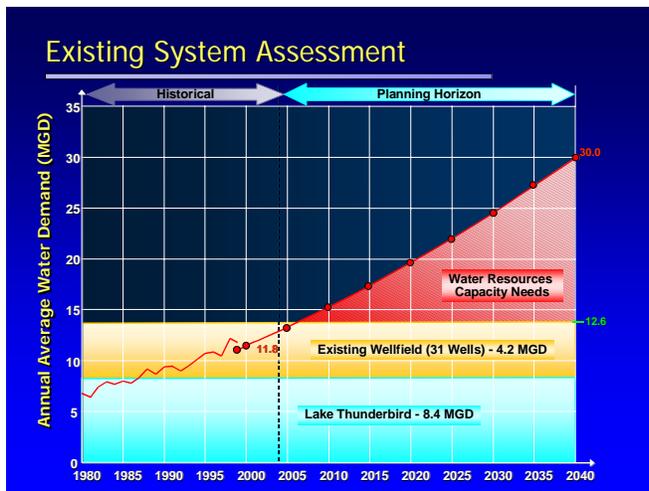


Figure 1 - Annual Average Water Demand Projection

Establishing projections of long term resource needs allowed for the associated projection of peak day water demand capabilities. In Norman, the peak day demand may be as much as 2.0 times the annual average supply needs. This increase in consumption rates is moderately low when compared to other cities our size and larger. The reduced peaking rate is reflective of our community's desire to use water resources wisely. Although, even with conservation being planned in our future, projections show that by 2040

Norman will need the ability to treat and deliver as much as 60 million gallons of water per day. Figure 2 reflects the projection of peak day water needs.

In the past, Norman has not been able to meet the experienced demands whereby requiring the implementation of water rationing measures. These actions did not fare well with the citizens in general.

In 1999, the City of Norman constructed a waterline connecting our system to that owned and operated by the Oklahoma City Water Utility Trust Authority. This connection provides an emergency supply only and does not operate on a day to day basis. This line plays a vital role in the City of Norman’s Strategic Water Supply Plan, but is not considered the solution to our water needs due to the high cost of the supply source.

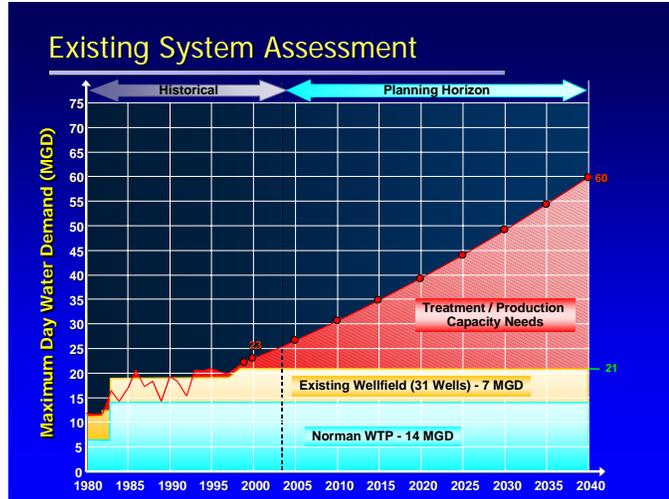


Figure 2 - Peak Day Water Demand Projection

The recommended solution to Norman’s water needs, as identified in the Strategic Water Supply Plan, includes an additional 30 water wells, construction of a terminal reservoir in east Norman, increasing water withdrawals from Lake Thunderbird and the purchase of raw water from the Oklahoma City Water Utility Trust Authority. Associated with this eventual expansion of

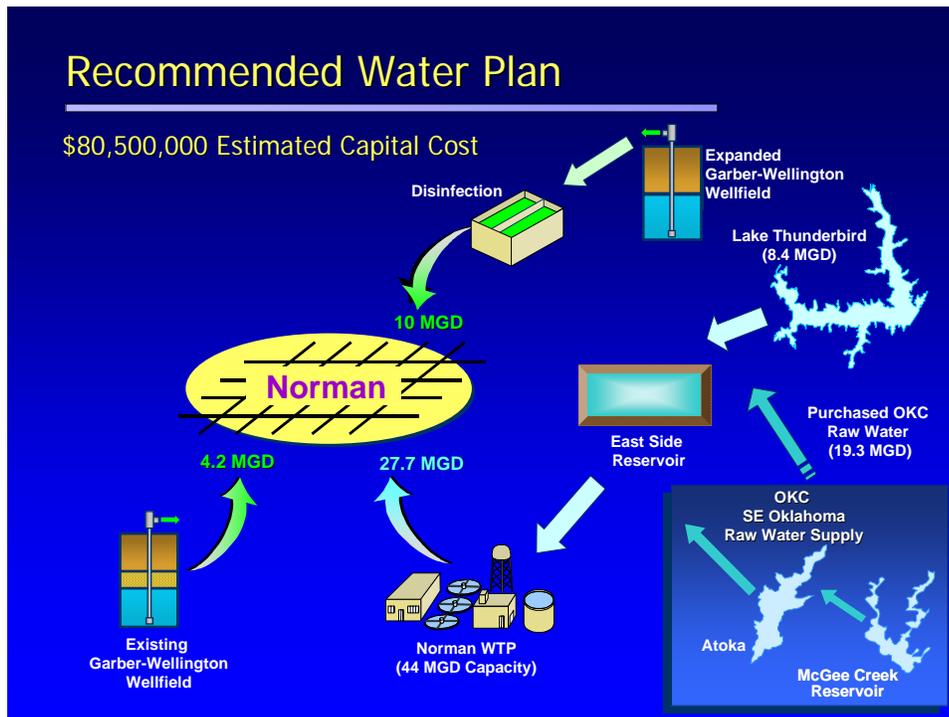


Figure 3 - Strategic Water Supply Plan Recommendation

Norman’s water treatment plant from 14 to 44 million gallons per day capacity. The capital cost of this option totals over \$80.5 million. This does not include water distribution line improvements or the impact of the Arsenic Rule.

### Arsenic Rule Impacts

Completion of the Strategic Water Supply plan occurred prior to the Arsenic Rule’s enactment. Improvements identified in this report are absent of any impact associated with the Arsenic Rule. Upon the signing of the Arsenic Rule into law, the City of Norman initiated an Arsenic Study to determine the impacts expected from the new allowable limits.



Figure 4 - Arsenic Rule Impacts

The additional cost to the citizens of Norman, in order to be compliant with the Arsenic Rule, was estimated to be \$9 million.

The waters from the wells now deemed unfit for drinking have been in service since prior to World War II. These wells have provided adequate drinking water supplies with no compliance issues until the ratification of the Arsenic Rule. The sudden shift from suitable to un-suitable has solicited fear in many of our citizens. Since being placed on the nation’s “Need to Know Danger Zone” by *Scientific America* calls have been received ranging from “Should I bathe my newborn daughter in bottled water?” to “Is the high Arsenic levels causing my 15-year old son to be so unresponsive to his father and I?”. Both of these quotes, from actual conversations, reflect the range of citizen concern over the announcement that our once safe water is no longer suitable. It is commonly asked why the water is now bad and all we have to say is the rule was changed after 50 plus years of operation.

In Oklahoma there are 28 public water supplies that will be non-compliant when the Arsenic Rule goes into effect on January 1, 2006. Norman is the largest water supplier in the state to be impacted by this rule, but we are not alone. As a result of the Arsenic Rule and other water regulations coming into effect, the Oklahoma Municipal League formed the Oklahoma Municipal Utility Providers group to focus on water issues and address technical issues through their Technical Advisory Committee. This group of cities represents both large and small water suppliers and together they are working for solutions to water problems faced throughout the state. With the inclusion of the Arsenic Rule, the Oklahoma Department of Environmental Quality has estimated that over 75% of Oklahoma's water suppliers will be out of compliance with one of the many rules coming into effect, all in the name of protecting the public. The Arsenic Rule impacts Norman the most, but other problems exist across the state.

### Wastewater Master Plan

In 1999 the City of Norman initiated the development of a Wastewater Master Plan to identify the improvements necessary to accommodate the community direction established in the Norman 2020 Land Use and Transportation Plan. The Wastewater Master Plan looked at both sewer line and treatment needs expected as Norman advances into the planned future. These needs resulted in the recommendation that Norman build a new wastewater treatment plant to take advantage of the natural break in terrain existing in the northern region of town. This decision has been very contentious with certain community groups, but has been voted upon by the public twice and each time been supported by the majority.

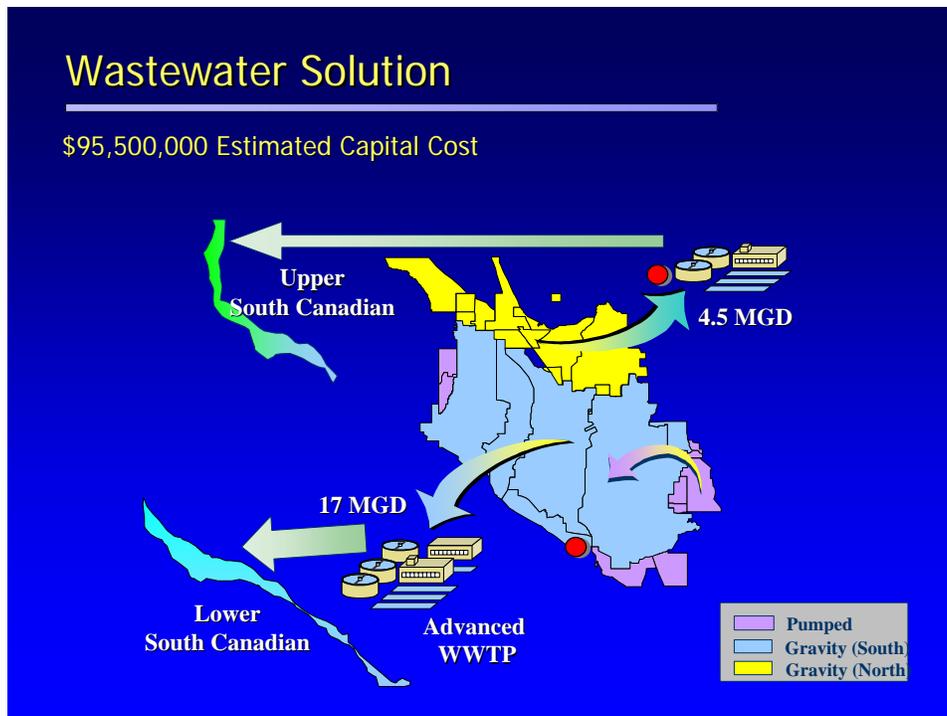


Figure 5 - Wastewater Master Plan Recommendations

The Wastewater Master Plan identifies sewer line and treatment needs and a work plan has been developed to address the long-term needs. The total cost of these planned improvements equals \$95,500,000. Funding for these needs originates from two sources: 5-year ½% Sales Tax and Excise Tax on all new construction using the sewer system. The Excise Tax, referred to some as an Impact Fee, was the first such established fee in the State of Oklahoma. Challenged in court, the Excise Tax has succeeded in providing a means for growth to pay its own way in Norman.

One of the first steps associated with the new treatment plant in north Norman is to establish the levels by which the wastewater has to be treated. The process of completing a Total Maximum Daily Load (TMDL) study of the receiving stream has begun. Combined efforts of professional engineers from CH2M Hill and the University of Oklahoma are working together in establishing the level of treatment necessary prior to release into the South Canadian River. This effort will last approximately 18 months following a strenuous review to ensure that the stream's health is maintained for the benefit of the public.

### **Summary**

Today, Norman's population is over 104,000 persons. Over 88,000 persons of the total citizenry receive water and sewer service. The needs identified between water and wastewater total \$185,000,000. Funding for wastewater needs are partially established through voter approved sources. No funding is available to meet water supply needs or to become compliant with the Arsenic Rule.

### **References**

The complete Strategic Water Supply Plan document is available on the City of Norman web site at: [http://www.ci.norman.ok.us/utilities/water\\_treatment/2040WaterPlan/default.htm](http://www.ci.norman.ok.us/utilities/water_treatment/2040WaterPlan/default.htm) a printed copy of the executive summary is attached for the record.

The complete Arsenic Report document is available on the City of Norman web site at: [http://www.ci.norman.ok.us/utilities/water\\_treatment/arsenic\\_study.htm](http://www.ci.norman.ok.us/utilities/water_treatment/arsenic_study.htm) a printed copy of the executive summary is attached for the record.

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