

SPARTA

Ground Water Commission

Ruston Conference, December 15, 2008

WHERE WE NEED TO GO

WHERE WE ARE NOW

WHERE WE HAVE BEEN

WHERE WE NEED TO GO

Some Challenges for the Sparta Region

- To progress from pilot programs and studies to full operations, including costly ground-to-surface water conversion projects;
- To provide for longterm programs to monitor and prevent degradation of Sparta area water resources;
- To educate to build the public and industry resolve needed to finance and otherwise support water conservation programs;
- To provide for effective local authority and staff to implement and coordinate these tasks.

Challenges for the Sparta Commission

The Sparta Aquifer will always be a limited supply of the region's highly desirable and, in most cases, least expensive, potable water, so it will always require ongoing research and planning, and effective, comprehensive public communication to assure that its yield is sustainable and of greatest public benefit. Water policy literature, and just plain common sense, tells us that some of this effort is best accomplished at the state level, but the actual users of the water must also be collectively and effectively involved.

Immediate challenges are:

1) State, Regional, and Bi-state Coordination of Efforts

Nov. 2007 minutes: "If there are to be regional water resources boards as provided for in Act 49 of the 2003 Louisiana legislature, the Sparta should be a separate region and the current Sparta Commission, who are nominated by the region's political bodies and industries, should be the regional board's members." At the Sparta Commission's November, 2008 meeting, members chose to consider this matter more closely with LDNR when LDNR takes up the matter. Resources (Challenge 2 below) will provide for more effective coordination of efforts at all levels.

2) Need for authority to address the challenges for the region

The Commission urgently asks legislators to apply the model of the Capital Area Groundwater Conservation District*, or enact some other measure, to create a mechanism to properly fund the Sparta Commission so that our region will have an executive director with office to research, plan, educate, and bring entities together to work out solutions to the Sparta problem.

Both the successful Capital Area Groundwater District Commission and the Union County, Arkansas efforts:

- Have funding and administrative authority;
- Have a full-time professional administrator, a secretary, and an office;
- Are dedicated to researching issues, developing optimal solutions, and generating the political will to implement those solutions.

The projected cost for the Sparta Commission, based on the Capital Area model, would be approximately \$250,000 annually.

It is unreasonable to anticipate that the highly-qualified members of the Sparta Commission -- engineers, business and industry professionals, economists, police jurors and staff, water system operators, and municipality mayors -- will continue to donate countless hours, hard work, and personal resources to the important work of Sparta conservation without the means to see projects through to completion.

*The Capital Area Groundwater Conservation District was created under the provisions of Louisiana Revised Statutes 38:3071-3084 to provide for the effective administration, conservation, orderly development, and supplementation of groundwater resources within the conservation district, composed of five parishes. The district monitors groundwater usage of within the district and provides assistance, in cooperation with the United States Geological Survey, for the development of new sources of groundwater. The district is governed by a board of commissioners consisting of 15 members appointed by the governor.

WHERE WE ARE NOW

Some Louisiana Sparta Conservation Measures to Date:

- Incentives that will reduce the cost of certain equipment that decreases Sparta water withdrawals;
- Some water system upgrades that reduce leakage and planned increased funding for the same;
- Several education programs (LSU AgCenter's Sparta trailer, Trailblazer's 'Save Our Sparta,' *Ruston Daily Leader's* 'Be Smart Sparta'; Sparta Video);
- Declaration of three 'areas of groundwater concern' and reporting requirements in those areas;
- Voluntary reduction of Sparta consumption by Smurfit-Stone Container Corp.;
- \$200,000 of state funds to study a Jonesboro-Hodge area conservation approach;
- \$600,000 of state funds for a pilot for the City of West Monroe-Graphic Packaging project, which, when fully funded and operational, could save 10 million gallons a day of Sparta water;
- \$2.8 million of federal funds to study the feasibility of using D'Arbonne Lake water in Union and Lincoln parishes, for another potential 6 or more million gallons a day of Sparta water saving.

Sparta Commission Measures (January 2006 through December, 2008):

- Hold regularly scheduled meetings always with a quorum in attendance to:
 - Keep the spotlight on the Sparta problem;
 - Keep informed by following up and reporting on projects and inviting informative speakers to present at meetings;
- Maintain a website: <http://spartaaquifer.com>;
- Maintain official records at La Tech Archives Department, in hardcopy and in dedicated webpage, which links to the spartaaquifer.com website;
- Attend meetings in Ruston and Baton Rouge elsewhere to keep informed and communicate;
- Present at meetings throughout the Sparta area to inform industries, police juries, town councils, and civic groups;
- Cooperate with LSU AgCenter and Trailblazers in educating the public;
- Support the City of West Monroe-Graphic Packing Wastewater Recycling project initiative;
- Support other conservation measures, such as Sen. (then Rep.) Walsworth's legislation to give financial incentives for certain water;
- Cooperate with Union County Water Conservation Board, for example in helping organize, in 2007, the Sparta Aquifer Tenth Bi-State Reunion.
- Research administrative options, including two models:
 - Capital Area Groundwater Conservation District Commission, and
 - Union County (Ark.) Water Conservation Board and its El Dorado project;
- Seek legislation to support this goal – In 2008, Rep. Gallot introduced an initiative to study how to support the Sparta Commission; the initiative passed in the House but failed in the Senate;
- Secure funding for this goal from Commission's nominating bodies – All major industrial groups, all but one police jury, and all but one municipal government contributed in 2008 to partially fund a professional position for two years while legislation is developed providing a mechanism for recurring funding.

WHERE WE HAVE BEEN

SPARTA PROBLEMS, APPROACHES, & SPARTA COMMISSION THROUGH DECEMBER, 2006

THE PROBLEM

Confined between clay-rich formations, Sparta sands are an excellent source of water. Water enters (recharges) the Sparta primarily from outcrop areas in the western aspect of the Sparta region. Industry and municipalities began withdrawing ground water from the Sparta aquifer in the early 1900's. Prior to that time, water levels were well above the top of the Sparta Sand. By the 1940's the rate of withdrawal was exceeding the aquifer's natural recharge rate, and substantial declines in water levels began to be documented.

"Cones of depression" have formed beneath major pumping centers (in Louisiana, Hodge, Ruston, and Monroe areas). Wells have decreased yields or have gone dry in some areas. Often in the same areas, the overdraft is causing upwelling of salt water. Excessive dewatering can lead to irreversible compaction of aquifer soil, reducing the aquifer's ability to be recharged.

Approximately 52 million gallons per day is the maximum amount of water that can be withdrawn from the area of the Sparta within Louisiana without causing water level declines, according to USGS' optimization modeling. Approximately, 70 million gallons per day were being withdrawn in 2006.

Among Sources: 'The Sparta Aquifer: A Sustainable Water Resource' by Paul W. McKee and Phillip D. Hays; Dept. of Interior, U.S. Geological Survey Fact Sheet 111-02 Nov. 2004 <http://pubs.usgs.gov/fs/fs-111-02>

SPARTA GROUNDWATER CONSERVATION DISTRICT AND ITS GOVERNING BOARD

In 1999, Louisiana Revised Statutes 38:§3087.131-137 established the Sparta Groundwater Conservation District Commission, "Sparta Commission." Representatives of industries, larger municipalities, and major Sparta using parishes – Bienville, Claiborne, Jackson, Lincoln, Morehouse, Ouachita, Union, Webster, and Winn – serve 3 year terms; representatives of Bossier, Caddo, Caldwell, LaSalle, Natchitoches, Richland, and Sabine serve a one year rotating term of office. The governor appoints, after seeking nominations from appropriate governing bodies and industries in the Sparta area.

The Sparta Commission's purpose, according to its creating statutes, is to study ways to put Sparta water "to the highest beneficial use" in terms of public welfare. The statutes note that "the continued uncontrolled use of groundwater from Sparta and other aquifers may create critical problems;" and they charge the Sparta Commission with studying "how to provide for the efficient administration, conservation, and orderly development of groundwater resources" in the Sparta area.

SPARTA AQUIFER ISSUES FROM 2001-2006

In 2001, Act 446 of the Louisiana legislature authorized, among other provisions, creation of 'critical groundwater areas.' Procedures were put in place for parties to apply for the designation.

In 2002, the Sparta Commission became the first applicant for 'critical groundwater area' designation. The commission sought the designation for most of the Sparta region, based on studies that showed that the region meets scientifically-defined 'critical area' criteria used in Arkansas' praised Sparta conservation effort. Public hearings were held throughout the Sparta area.

In 2003, Act 49 (Ground Water Resources Act) replaced Act 446. It authorized the Commissioner of Conservation to manage the state's groundwater resources and to regulate well drilling in specific ways. It established within the Office of Conservation the Ground Water Resources Division to control resources where sustainability is threatened. It also defined 'critical ground water area' and authorized the Commissioner of Conservation to determine those areas.

In 2003, a study by Meyer, Meyer, LaCroix and Hixon, Inc., commissioned by the Sparta Commission, showed that the Sparta region meets the state criteria for a 'critical groundwater area' designation.

In 2004, the Commissioner of Conservation issued a draft order declaring Monroe-West Monroe, parts of Lincoln Parish, and Jonesboro-Hodge 'critical groundwater areas,' rejecting the Sparta Commission's request for designation of a wider region. Monthly pumpage reporting (no restrictions on withdrawals) was ordered for 'critical area' wells. After some debate, the Sparta Commission endorsed the draft order.

In April, 2005, the Commissioner of Conservation's order was finalized. However, 2005 legislation was passed requiring that 'critical groundwater areas' be redesignated 'areas of groundwater concern' and authorizing the Commissioner of Conservation to designate 'critical areas' (none as of December, 2008).

In 2006, the Louisiana Ground Water Resources Commission met on July 31 and the Sparta Aquifer Conservation District met on August 29. The following update information was presented:

- USGS tests show *well water level rise along areas of the Arkansas-Louisiana border because of Ark. efforts, but well water levels throughout most of the Sparta within Louisiana continue to decline.*
- Following the Commissioner of Conservation's recent orders, *most non-domestic well owners in 'critical areas' are now reporting water usage;*
- the *LSU AgCenter is leading public education initiatives, aided by the Ruston Daily Leader's 'Be Smart Sparta' campaign;*
- the following *surface water alternative projects are underway or contemplated* in the three designated 'areas of groundwater concern':
 - 1) the City of West Monroe- Graphic Packaging project to treat wastewater as process water;
 - 2) a Ruston/Farmerville Study of the feasibility of piping water from Lake D'Arbonne;
 - 3) a proposal for a feasibility study of lake construction to supply a surface water to Jonesboro-Hodge industry.
- the Louisiana Rural Water Association, as well as Representative Downs and others in the Sparta area, are *promoting plugging leaks of Sparta water*
- The *Sparta Commission plans to:*
 - 1) invite reports at meetings;
 - 2) support worthy efforts;
 - 3) seek funding for water level and water quality monitoring studies by the United States Department of the Interior Geological Survey (USGS) and other scientific authorities;
 - 4) provide a public forum for expression of Sparta concerns;
 - 5) represent Sparta interests on state commissions and to policymakers.

SPARTA COMMISSION LONG TERM PLANNING: JANUARY, 2007

Mission of the Sparta Commission -- In order of priority, 1) Stabilize water levels, 2) Restore the aquifer to its pre-withdrawals state, 3) Plan for aquifer sustainability in anticipation of population and economic growth.

Guiding Principle – To be effective, the Sparta Commission should be organized and working in unison

Objectives:

1) **Educate** -- commission members, the media, civic groups, government decision makers, and the public

- Sparta Commission Handbooks;
- Meetings:
 - 2nd Thurs. each month at 3 pm, with speakers approved in advance by Sparta Commission
 - Arrange meetings three months in advance if possible
 - Announce meetings two weeks in advance:
 - Secretary to contact members, representatives of USGS, DNR, LSU AgCenter, legislators, media, interested others
 - Guest Speaker and Arrangements – Sparta Representative of host parish to be responsible
 - Public Relations in host parish – Sparta Representative of parish to coordinate with Secretary
 - Focus on areas of general agreement and priority interest;
- Personally invite legislators or their designees to meetings and invite their comments;
- Lend Sparta Commission's endorsement to educational initiatives after review of educational materials by the PR/Education Committee and final approval by the Sparta Commission;
- Support Commission-endorsed education programs; encourage media to present educational material.

2) **Study**

- Ask Ben McGee to submit a proposal for funding of the ongoing USGS Sparta Water Quality Study (that study and a Real-Time Water Levels study are now supported by LDNR);
- Ask Dr. Johns of LSU to submit a proposal for a Sparta Water Levels modeling program;
- Ask Dr. Nipper to provide supporting information for a potential Sparta-dedicated LSU AgCenter salaried position;
- Seek Funding for Commission-approved study projects;
- Schedule Speakers from Successful Aquifer Protection/Water Management Programs, such as the Capital Area Ground Water Management District and Arkansas's Sparta Conservation efforts;
- Keep abreast of matters related to Sparta water quality and the primary recharge area, e.g. water quality trends over time and applications for well and pipeline permits, when applications address water quality;
- Seek public input at every meeting.

3) **Advocate**

- For funding of Commission-endorsed water conservation projects, such as the West Monroe - Graphic Packaging project; e.g., send letters of support and contact legislators upon request of project directors;
- For Commission-endorsed measures to protect water quality, esp. in the primary recharge area.

4) **Represent Sparta Interests**

- Consider seeking designation of the Sparta Commission as one of the state's regional water resources advisory boards [advisory to the Commissioner of Conservation];
- Involve legislators in working toward Sparta Aquifer conservation objectives, including strengthening the Sparta Commission's ability to accomplish objectives;
- Louisiana Groundwater Resources Commission meeting is March 19 in Baton Rouge, 1 pm

5) **Develop objectives and a plan** with timeline for accomplishing them to present to the Sparta Commission