

County of San Luis Obispo



TO: Board of Supervisors

FROM: Public Works
Ray Dienzo, Water Resources Engineer
Mark Hutchinson, Deputy Director of Public Works

VIA: Wade Horton, Director of Public Works

DATE: 7/14/2015

SUBJECT: Presentation on the Updated Basin Plan for the Los Osos Groundwater Basin and Implementing Agreements. District 2.

RECOMMENDATION

It is recommended that the Board receive a presentation on the Updated Basin Plan for the Los Osos Groundwater Basin and implementing agreements from staff and the other members of the Working Group established under the Interlocutory Stipulated Judgement, including the Los Osos Community Services District, Golden State Water Company and S&T Mutual Water Company.

DISCUSSION

Background

On February 13, 2004, the Los Osos Community Services District (LOCSD) filed a Complaint in San Luis Obispo County Superior Court for Declaratory and Injunctive Relief and Adjudication of Water Rights (Complaint) against Southern California Water Company (now Golden State Water Company) (GSWC), S&T Mutual Water Company (S&T), the County and Sea Pines Golf Course (*Los Osos Community Services District v. Southern California Water Company, et al.*, CV 040126 (Action)). According to the Complaint, LOCSD brought the Action for the purposes of protecting the water resources of the Los Osos Groundwater Basin (Basin), protecting its own rights and interests with respect to the Basin and to facilitate efforts to cooperatively manage the Basin. The parties to the Action entered into a Stipulation of Parties as to a Standstill Agreement, which was approved by the Court on May 25, 2004 and stayed all pleadings in the Action to allow the parties to hold settlement discussions.

On August 5, 2008, the Court approved an Interlocutory Stipulated Judgment (ISJ) between LOCSD, GSWC, S&T and the County (Sea Pines Golf Course was dismissed from the Action on or about December 19, 2006). The ISJ provides that the parties will form a Working Group to undertake technical studies of the Basin's water resources and to adopt a Basin management plan that will serve as a physical solution for the management of Basin water resources. The Working Group completed a public review draft of the Basin Plan for the Los Osos Groundwater Basin in August 2013 (Initial Draft Basin Plan). The LOCSD hosted a special meeting to present the Initial Draft Basin

Plan to the public, and the Working Group received and considered written public comments. After conclusion of the public comment period, the Working Group undertook a peer review of the Initial Draft Basin Plan, a creek discharge feasibility study and seawater monitoring events. As discussed in more detail below, this Work was incorporated into the Updated Basin Plan for the Los Groundwater Basin released in January 2015 (Basin Plan), as deemed appropriate by the Working Group.

Basin Plan for the Los Osos Groundwater Basin

The Basin Plan is organized into two parts. Part I contains four chapters (Chapters 2-5). Chapter 2 (Introduction to the Basin Plan) discusses the procedural history of the Action, the parties to the Action and the immediate and continuing goals of the Basin Plan. Immediate goals include halting, or to the extent possible, reversing seawater intrusion and providing sustainable water supplies for existing development overlying the Basin. Chapter 3 (The Los Osos Community) discusses the County land use plan and land use categories for the area covered by the Basin Plan (Basin Plan Area) as well as historical and projected population growth. The distribution of land uses within the Basin Plan Area is as follows: residential (50%), open space (27%), agriculture (18%), commercial (3%) and community facilities (2%). Chapter 4 (Use of Basin Groundwater Resources) discusses historical production within the Basin Plan Area, including relative reliance on the upper, lower and alluvial aquifers. Some production figures are based on metered data (purveyors) while others are based on estimates (private domestic, community facility and agricultural uses). From 2008 through 2013, the relative usage of Basin water resources is estimated as follows: purveyors (61%), agriculture (27%), private domestic (7%) and community facilities (5%). Chapter 5 (Description of the Basin) discusses historical water resource studies and the development of the current Basin model (Model). The Model was first developed in 2003 and is maintained and operated by Cleath-Harris Geologists. The Model includes a characterization of Basin structure, boundary conditions, aquifer geometry and physical parameters and components of inflow and outflow and is used to evaluate seawater intrusion and the sustainable yield. In 2010, Stetson Engineers peer reviewed the Model and concluded that the Model is appropriate for evaluation of the average groundwater budget, extent of seawater intrusion and for use in evaluating the relative effects of development and changes in Basin management. Chapter 5 also provides a detailed explanation of the two principal challenges to the Basin, namely nitrate impacts in the first water and upper aquifer due to discharge of municipal wastewater to septic tanks and seawater intrusion in the lower aquifer.

Part II of the Basin Plan contains eleven chapters (Chapters 6-16). Chapter 6 (Developing a Strategy for the Basin) discusses the manner in which the Basin Plan addresses nitrate impacts and seawater intrusion, including the development of a Nitrate Metric (based on average measure of nitrate concentrations in five wells in the upper aquifer), a Water Level Metric (measures freshwater levels in five wells in the lower aquifer), a Chloride Level Metric (based on weighted average of chloride concentration in four wells in the lower aquifer) and a Basin Yield Metric (compares the total amount of groundwater production in a given year with the maximum sustainable yield under current conditions). Chapter 5 also identifies targets for each of the metrics: Nitrate Metric (10 mg/l), Water Level Metric (8 msl), Chloride Level Metric (100 mg/l) and Basin Yield Metric (80). Chapters 7 through 13 describe various potential programs to address nitrate impacts and seawater intrusion:

Groundwater Monitoring Program (Chapter 7):

The Groundwater Monitoring Program is a program to complete and consolidate data collection on groundwater resources in the Basin, beginning in 2014. Information collected under the Program includes groundwater level, quality and production data. Although the Program is intended to be the primary groundwater monitoring program for the Basin, there will be overlap with the California Statewide Groundwater Elevation Monitoring Program, the State Water Resources Control Board

Recycled Water Policy and the Recycled Water Management Plan for the Los Osos Wastewater Plant (LOWWP). There are a total of seventy three wells in the Program, including thirty seven monitoring wells, fifteen municipal wells and twenty one private wells (Program Wells). The Program Wells are divided into three separate monitoring networks, namely the First Water Monitoring Network (28 wells), the Upper Aquifer Monitoring Network (15 wells) and the Lower Aquifer Monitoring Network (30 wells). With respect to groundwater production monitoring, the Basin Plan identifies two potential ways to measure and collect production data from private wells: private well owners could voluntarily measure and report their groundwater production or the County could adopt an ordinance requiring registration of groundwater wells and monitoring and reporting of groundwater production.

Urban Water Use Efficiency Program (Chapter 8):

The Urban Water Use Efficiency Program extends the conservation program adopted by the County in accordance with the Coastal Development Permit (CDP) conditions of approval for the LOWWP to the entire Basin Plan Area and incorporates the requirements placed on new development by County ordinance. Water efficiency measures include residential measures (e.g. subsidized community retrofit and retrofit on resale ordinance), commercial and institutional measures (e.g. subsidized community retrofit and institutional building retrofit), education and outreach measures (e.g. residential water survey and public information program) and new development measures. The goal of the Program is to limit urban water use to 1,450 acre feet per year (AFY) at current population (14,600) and to 2,100 AFY at buildout (19,850). The County has primary implementation responsibility through 2018 and the purveyors have primary implementation responsibility from 2019 through 2035.

Water Reinvestment Program (Chapter 9):

The Water Reinvestment Program sets forth the manner in which water that has been used by urban residents and businesses will be reinvested into the hydrologic cycle. The Program is divided into an Urban Water Reinvestment Program and an Agricultural Water Reinvestment Program. The Urban Water Reinvestment Program is intended to beneficially use all recycled water produced by the LOWWP at existing population. The proposed uses of recycled water under the Urban Water Reinvestment Program are as follows: Broderson Leach Fields (448 AFY), Bayridge Estates Leach Fields (33 AFY), Urban Reuse (63 AFY), Sea Pines Golf Course (40 AFY), Los Osos Valley Memorial Park (50 AFY) and Agricultural reuse (146 AFY) (for a total of 780 AFY). The Agricultural Water Reinvestment Program is intended to use all marginal recycled water produced at buildout (340 AFY). The County has initiated outreach to the agricultural growers in Los Osos and will continue to do so in order to implement the Program. The Basin Plan provides that the County will deliver recycled water on a strict priority basis to: (1) properties within the Basin that will offset existing pumping of the Basin by using recycled water and (2) properties within the Basin that will use recycled water in addition to existing pumping of the Basin.

Basin Infrastructure Program (Chapter 10):

The Basin Infrastructure Program involves the construction of new groundwater production, conveyance and treatment infrastructure in the Basin that will allow the transfer of groundwater production from the lower aquifer to the upper aquifer and the shift of groundwater production within the lower aquifer away from the western area to the central and eastern areas. The Basin Infrastructure Program is divided into four parts, designated as Programs A through D. Program A and B would transfer groundwater production from the lower aquifer to the upper aquifer and Programs C and D would shift production within the lower aquifer from the western area to the central and eastern areas, respectively.

Program A Elements

The Program A elements which are generally unconnected and located throughout the purveyors' service areas in the western and central areas include:

- Water Systems Interconnection between LOCSD and GSWC – new, expanded interconnection between the two systems (funded and designed – construction expected by the end of 2015)
- Upper Aquifer Well – new LOCSD well to extract groundwater from the upper aquifer in the central area (water will be blended with lower aquifer water) (LOCSD adopted mitigated negative declaration in May 2015 and is pursuing a coastal development permit)
- South Bay Nitrate Removal – LOCSD installation of small package nitrate removal plant for the South Bay Upper Aquifer Well (completed)
- Palisades Well Modifications – block withdrawal of Zone E groundwater from LOCSD well (completed)
- Blending Project – pipeline between GSWC Lower Aquifer Rosina and Upper Aquifer Skyline Wells and inline static mixer (completed)
- Water Meters – installation of meters on all S&T service connections (completed)

Program B Elements

Like Program A, the Program B elements are located in the urban core of the western and central areas and include:

- LOCSD Wells – two new LOCSD upper aquifer wells
- GSWC Wells – one new GSWC upper aquifer well and one new lower aquifer well in the central area
- Community Nitrate Removal Facility – new shared facility to remove nitrates from new upper aquifer wells

Program C Elements

The Program C elements are located on the eastern side of the central area and include:

- Expansion Well No. 1 – GSWC well located in the vicinity of the Sunny Oaks Mobile Home Park and 2,400 feet of pipe
- Expansion Well No. 2 – GSWC well located along the eastern edge of the GSWC service area and 1,300 acre feet of pipe (also included in Program B)
- Expansion Well No. 3 – LOCSD well located east of the LOCSD service area and 5,000 feet of pipe
- S&T and GSWC Interconnection – new interconnection between S&T and GSWC systems

Program D Elements (only implemented after Programs A, B and C)

The Program D elements are located in the eastern area and include:

- Construction of three new wells east of the Los Osos Valley Creek and three new pipelines to connect the wells to the existing main owned by GSWC

Supplemental Water Program (Chapter 11):

The Supplemental Water Program includes rainwater harvesting, stormwater capture and greywater reuse. The Basin Plan does not recommend implementation of these measures, because they generate very small amounts of water. The Supplemental Water Program also includes desalination.

The Basin Plan does not recommend implementation of this measure due to its significant expense (\$16,750,000 for 250 AFY and \$40,250,000 for 750 AFY) and permitting difficulties.

Imported Water Program (Chapter 12):

The Imported Water Program includes importation of State Water Project water and Nacimiento Project water. The Basin Plan does not recommend implementation of importation from either source due to political, institutional, legal, financial, environmental and engineering challenges.

Wellhead Protection Program (Chapter 13):

Wellhead protection refers to the process of managing the activities within a delineated source area or protection zone to prevent drinking water source contamination. The Wellhead Protection Program is abbreviated, because wellhead protection is already included in several management and regulatory processes. By way of example, the LOWWP will provide wellhead protection by removing most of the current septic-related nitrogen and microbiological mass loading to the Basin.

Chapter 14 of the Basin Plan (Solutions for the Basin) describes various combinations of the above-described programs and analyzes each combination to determine whether it would achieve Basin Plan goals. The Basin Plan recommends immediate implementation of the following programs (to support current population):

- Groundwater Monitoring Program (\$650,000)¹
- Urban Water Use Efficiency Program (\$5,500,000)
- Urban Water Reinvestment Program (\$18,290,000)
- Basin Infrastructure Program A (\$2,835,000)
- Basin Infrastructure Program C (\$6,540,000)

The Basin Plan recommends future implementation of the following programs to support additional development:

- Basin Infrastructure Program B (\$17,250,000)
- Either Basin Infrastructure Program D (4,200,000) or the Agricultural Water Reinvestment Program (\$2,120,000)

Chapter 15 (Funding) allocates the cost of the above-described programs and applies two principles for equitable allocation. First, all water-using properties should pay for the cost of achieving a sustainable Basin under current conditions, because all such properties contributed to the overall decline in Basin conditions. Second, properties that may be developed in the future should pay for the costs of achieving and maintaining a sustainable Basin in light of future water demand associated with the development of those properties. The estimated cost of achieving a sustainable Basin under current conditions is \$33,815,000 (Current Condition Cost) and the estimated cost at buildout is an additional \$23,570,000 (Additional Development Cost). The Basin Plan recommends that the majority of the Current Condition Cost (\$30,980,000) be financed through a special tax or assessment on all developed (water-using) properties (potentially through the establishment of a Community Facilities District (CFD)). The Basin Plan recommends that the Additional Development Cost be financed through a special tax or assessment on undeveloped parcels.

¹ All costs identified herein are the estimated costs of each program individually. There is some overlap between certain programs, so the cost of a combination of programs is not necessarily the sum of the individual program costs. It should also be noted that certain program costs are not new, but would reimburse the LOWWP for benefits conferred on water users in the Basin. The estimated costs include the life cycle costs of each program over a thirty year span, including capital and operations costs, where appropriate.

Lastly, Chapter 16 (Implementation of the Basin Plan) sets forth the actions that the parties will undertake pursuant to the Basin Plan, along with timelines for those actions.

As briefly discussed above, after releasing and receiving comments on the Initial Draft Basin Plan, the Working Group commissioned a peer review of the Basin Plan. The Working Group retained the services of Mr. Gus Yates, PG, CHG (Todd Groundwater) to review the accuracy of the technical information, the reasonableness of assumptions and conclusions and the overall adequacy of the measures recommended in the Basin Plan to address the long-term problems of nitrate impacts and seawater intrusion. Mr. Yates completed a draft peer review identifying questions related to potential weaknesses and inadequacies (e.g. complete water balance needs to be calculated for each sub-region and the Nitrate Metric and Chloride Metric should involve a larger number of wells). At a subsequent meeting between Mr. Yates and Mr. Spencer Harris (Cleath-Harris Geologists), a substantial amount of additional information was provided to Mr. Yates that addressed the majority of his initial concerns. In response to remaining concerns, the Working Group made certain modifications to the Basin Plan (e.g. inclusion of a recharge map). In addition to completing the peer review, the Working Group further explored the potential benefits of discharging recycled water to Los Osos Creek during the dry season and determined as follows:

- In terms of Basin yield, a dry season recycled water discharge in Los Osos Creek is generally less efficient compared to discharges at the Broderson effluent disposal site, urban reuse and agricultural irrigation on existing irrigated crops.
- A dry season creek discharge would increase Basin yield if recycled water is shifted from the irrigation of new crops, where existing Basin pumping is not currently supporting agriculture.

Lastly, as part of the Groundwater Monitoring Program, Cleath-Harris Geologists performed lower aquifer groundwater monitoring in October 2014 and April 2015. Based on the October 2014 monitoring event results, seawater intrusion in Zones D and E is continuing to advance inland, although the leading edge of seawater intrusion in Zone E along the preferential pathway is interpreted to have slowed or stalled at Palisades Avenue. Based on the groundwater levels and increasing chloride concentrations at the chloride metric wells observed in April 2015, continued inland advance of seawater intrusion in Zone D and Zone E is inferred.

Stipulated Judgment

The Basin Plan will be submitted to the Superior Court for approval as part of a Stipulated Judgment between the parties. The Stipulated Judgment has not yet been finalized and the description below is intended to provide a general summary of the draft document.

Similar to the Basin Plan, the Stipulated Judgment begins with general background information, including information related to the parties and the procedural history of the Action as well as information about the hydrogeology of the Basin. The Stipulated Judgment explains why and how the Basin Plan Area boundaries differ from the boundaries of the Los Osos Valley Groundwater Basin as identified by the Department of Water Resources Bulletin 118, Basin Number 3-8. The Sustainable Groundwater Management Act of 2014 provides as follows with respect to the Basin: “The Los Osos Groundwater Basin at issue in Los Osos Community Services District v. Southern California Water Company [Golden State Water Company], et al. (San Luis Obispo County Superior Court Case No. CV 040126) shall be treated as an adjudicated basin pursuant to this section if the superior court issues a final judgment, order or decree” (Water Code § 10720.8(e)).

The Stipulated Judgment also contains an extensive discussion of groundwater rights, including a general description of overlying and appropriative rights and facts establishing that each of the purveyors' appropriative rights have ripened into prescriptive rights. The Stipulated Judgment does not quantify individual groundwater rights but allocates groundwater use through the creation of Water Entitlement Pools as a part of the physical solution for the Basin: the Purveyor Pool that consists of the purveyors (59.58%); the Agricultural Pool that consists of groundwater production by all persons or entities that produce water from the Basin for purposes of irrigation of crops on a commercial scale (31.25%); the Community Pool that consists of all groundwater production by Sea Pines Golf Course and the Los Osos Valley Memorial Park (2.92%) and the Private Domestic Pool that consists of groundwater production by all persons who produce water from the Basin for private domestic or incidental irrigation use (6.25%). Prior to the start of each year, the Basin Management Committee (discussed below) will establish the Sustainable Yield_x and divide it among the Pools in accordance with the above allocations (the allocations are based on actual or estimated production from 2008 through 2013). The County is not included within any pool because it is a de minimis user. Absent court intervention or further action by the parties, groundwater use for non-parties will remain unaffected. As another aspect of the physical solution, the purveyors agree that each purveyor must reduce Basin groundwater use to a maximum of fifty gallons per capita per day for interior use.

The Stipulated Judgment establishes a Basin Management Committee (BMC) to implement and enforce the Stipulated Judgment and the Basin Plan. The members of the BMC are LOCSD, GSWC, S&T and the County. During such time as the Joint Powers Authority (JPA) Agreement (discussed below) is in place, the JPA shall serve as the BMC. The Stipulated Judgment authorizes the BMC to exercise a number of powers, including the power to undertake actions to obtain the funds necessary to implement the Stipulated Judgment. The BMC is a Brown Act body and voting is weighted as follows: LOCSD (38%), GSWC (38%), County (20%) and S&T (4%). Under a number of circumstances (e.g. when authorizing or implementing any material change to the Basin Plan), the BMC may act only with unanimous approval of its directors.

The Stipulated Judgment concludes with a number of general provisions, including provisions granting the court continuing jurisdiction, identifying a Community Facilities District as the intended financing mechanism and the effect of disapproval of the Basin Plan by the California Public Utilities Commission.

Joint Exercise of Powers Agreement

The Joint Exercise of Powers Agreement (JPA Agreement) has not yet been finalized and the below is intended to provide a general summary of the draft document.

The JPA Agreement is between the County, the LOCSD, S&T and Golden State Mutual Water Company (voting is weighted in the manner described above). Before entering into the JPA Agreement, GSWC intends to establish a mutual water company whose sole shareholder is GSWC and whose intended beneficiaries are the customers of GSWC. The purpose of the JPA Agreement is to create an entity to finance and otherwise implement the Basin Plan and the Stipulated Judgment through, without limitation, the creation of a CFD.

Pursuant to the Mello-Roos Community Facilities Act of 1982 (Government Code §§ 53311 et seq.) (Act), a CFD has the legal authority to levy and collect a special tax and to use that revenue to finance specified facilities and services, and to borrow money (by issuing bonds or other debt) to assist with financing the facilities (Government Code § 53325.3). The special tax is levied on real property. The Act does not direct how the special tax is to be applied, except that it may not be ad

valorem (a flat, per parcel tax can be used or some other taxing method can be designed that conforms to the community's sense of fairness for the particular project). If at least twelve persons have been registered to vote within the proposed district, then the qualified electors are registered voters (two-thirds affirmative vote of the qualified electors is required) (Government Code §§ 53326, 53328). The range of facilities that may be financed through a CFD is very broad and includes the purchase, construction, expansion, improvement or rehabilitation of real or other tangible property with an expected useful life of five years or longer which the local agency is authorized by law to construct, own, operate or to which it may contribute revenue (Government Code § 53313.5). By contrast, the services that may be financed are quite limited (the only authorized water-related service is flood and storm protection services) (Government Code § 53313). For a typical CFD, the formation process includes three separate related proceedings: form the CFD and authorize the special tax; authorize bonded indebtedness for the CFD and establish the Constitutional Article XIII B "Appropriations Limit" for the CFD. The first two proceedings involve public hearings and elections requiring a two-thirds vote and the third involves an election requiring a majority vote (it is common for both hearings to be held at the same time and all three ballot questions to be combined into a single ballot measure). The Working Group anticipates that the formation process will take approximately nine months to one year from the date on which the JPA Agreement is approved.

The parties intend that the CFD will incorporate the entire Basin Plan Area and that it will provide a mechanism to spread Basin Plan implementation costs, including the costs to construct the LOWWP, to everyone in the community that benefits from a managed and available water supply.

The JPA agreement outlines similar powers to those contained within the Stipulated Judgment as well as similar provisions related to the nature of the BMC.

Notice to Non-Parties

The Parties have prepared a notice to send to all owners of property within the Basin Plan Area but outside of purveyor service areas and all identifiable owners of property within purveyor service areas on which a private well is located notifying them of the Superior Court hearing date (August 14, 2015) and providing them with a brief description and links to the Basin Plan, Stipulated Judgment and JPA Agreement. The notice will be sent as soon as the Stipulated Judgment and JPA Agreement are finalized.

OTHER AGENCY INVOLVEMENT/IMPACT

County Counsel is providing legal guidance on all aspects of the County's participation in the ISJ Working Group and has reviewed this report.

Other local agencies involved include Golden State Water Company, Los Osos Community Services District, and S&T Mutual Water Company.

FINANCIAL CONSIDERATIONS

The County of San Luis Obispo has a 20% cost share in the ISJ efforts which are paid through the LOWWP budget. Future costs incurred will be budgeted through the SLO County Flood Control and Water Conservation District reserve funds.

RESULTS

This presentation and update will increase awareness of the issues that the Basin is facing and help direct policies to preserve the vital water resources for the community of Los Osos. This leads to a well-governed community.

File: Los Osos WWP 300448.00.7.04

Reference: 15JUL14-BB-1

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ATTACHMENTS

1. Updated Basin Plan for the Los Osos Groundwater Basin, January 2015
2. Letter from the Sierra Club and Los Osos Sustainability Group dated June 11, 2015
3. Technical Response to the Sierra Club and Los Osos Sustainability Group Letter by Cleath-Harris Geologists, Inc. dated July 2, 2015