Water Resources Advisory Committee

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June 20, 2012

Honorable James Patterson
Chairperson, Board of Supervisors
County of San Luis Obispo
976 Osos Street, Room 200
San Luis Obispo, CA 93408

Subject: WRAC Report on Draft Revisions to the Resource Management System (RMS) for Water Supply, Water Systems, and Wastewater

Dear Chairperson Patterson:

County Planning and Building Department Staff provided the Water Resource Advisory Committee (WRAC) with draft revisions to the Resource Management System (RMS), particularly the water supply, water systems, and wastewater sections. On April 4, 2012, the WRAC formed an ad hoc subcommittee whose purpose was to review and comment on draft language for those sections of the RMS. Attached are comments for the Planning and Building Department Staff to consider before the revisions are taken to the September 13, 2012 Planning Commission meeting.

Subcommittee members included Member Winn (Nipomo CSD), Member Luft (Environmental at-Large), Alternate Member Walters (Development at-Large), Alternate Member Larson (City of Paso Robles), Alternate Member Hendrickson (Atascadero Mutual Water Company), and Member Garfinkel (District 2). Member Winn served as chair to the ad hoc subcommittee. The subcommittee met on May 14, 2012, and subsequently developed a subcommittee report.

On June 6, 2012, the WRAC reviewed and revised the ad hoc subcommittee's report and unanimously voted to submit the attached revised RMS language to you for further consideration.

Respectfully,

MICHAEL WINN
Chairperson, Water Resources Advisory Committee

cc: SLO County Board of Supervisors
SLO County Planning Commission
James Caruso, County Department of Planning and Building

Attachments: Recommended Revisions to Draft RMS Language for Water Supply, Water Systems, and Wastewater

Purpose of the Committee:

To advise the County Board of Supervisors concerning all policy decisions relating to the water resources of the SLO County Flood Control & Water Conservation District. To recommend to the Board specific water resource programs. To recommend methods of financing water resource programs.

Excerpts from WRAC Bylaws dated 3/2/2011

Key to Revised RMS Water Supply Section

Plain Text = Original RMS Section Language
Underlined Text = Initial Revisions per Planning Department
Bold Text = WRAC Subcommittee Recommended Revisions

WATER SUPPLY

Policy Issues

Water resources have long been a widespread concern in the county. Like many areas of California, rainfall is sparse through most of the year and average rainfall varies widely depending on location and elevation. Our water supply is dependent on this varying amount of rainfall each year. The county's water supply can be divided into three broad sources:

1. Local groundwater basins (e.g. Los Osos, **Santa Maria,** Paso Robles);
2. Local surface water storage **and associated distribution facilities** (Lopez Lake; Whale Rock reservoir**, Santa Margarita Lake, Lake Nacimiento**)**; and**
3. State Water Project**.**

The most basic policy issues in the County General Plan regarding **county** water resources are:

1. Efficient use of our existing water supplies;
2. **Identifying** new water resources **that can** be developed;
3. **Maintaining** groundwater for agricultural purposes **per AGP11**; **and**
4. **Improving h**ow water is distributed.

The C**onservation and Open Space Element of the County General Plan (COSE)** guides what new water resources should be developed. A "loading order" of sorts emphasizes water efficiencies over development of new water supplies.

The policies in the **COSE** state:

a. **D**evelopment of new water supplies should focus on efficient use of our existing resources.
b. **U**se of reclaimed water, interagency cooperative projects, desalination of contaminated groundwater supplies, and groundwater recharge projects should be considered prior to using imported sources of water or seawater desalination, or dams and on-stream reservoirs.
c. Water from surface water projects (e.g. Lopez Lake, **Santa Margarita Lake,** Lake Nacimiento) will only be used to serve development within urban and village reserve lines and will not be used to serve development in rural areas.

In order to realize the success of strategic growth, adequate services such as water and wastewater need to be available in the urban areas where development is encouraged.

In support of the basic policy issues above and in order for continued development in the unincorporated area to be consistent with these policies, Chapter 1 of the Framework for Planning describes strategic growth **and fully describes all eleven principles of planning features**:

> Strategic growth is a compact, efficient and environmentally sensitive pattern of development that provides people with additional travel, housing and employment choices. It focuses future growth away from rural areas and limited resources, closer to existing and planned job centers and public facilities where sustainable resources are available.

The General Plan acknowledges that groundwater is vital to the continued success of the agricultural sector. **A p**olic**y** in the Agriculture Element of the General Plan state**s:**

> AGP11: Agricultural Water Supplies.
> a. Maintain water resources for production agriculture, both in quality and quantity, so as to prevent the loss of agriculture due to competition for water with urban and suburban development.

The policies mentioned above work cooperatively to:

1. Maintain groundwater for agriculture;
2. Ensure water service is available to the urbanized areas of the county; **and**
3. **Support efficient use of** water **resources.**

Water supplies in the county often are not **geographically** located in areas of water demand**, and** water **delivery systems** are not completely **interconnected**. **E**xcess water in one part of the county often cannot reach geographic areas where it is needed**, without water transfers or system upgrades.**

Besides water conservation, management of the location, density and rate of development can minimize the increased use of **groundwater** and provide lead time for developing supplemental sources. **L**and use controls are often ineffective water management tools by themselves **because they only impact new development.**

The county's three primary groundwater basins that provide water to urban, rural and agricultural users are all designated Level of Severity III (Los Osos, **Santa Maria (only the portion termed the Nipomo Mesa Water Conservation Area),** and Paso Robles). The **r**esource **c**apacity **s**tudies prepared for these LOS designations show multiple users of each basin such as urban, rural and agriculture. Because the County lacks the regulatory authority to directly regulate the use of water, other tools must be identified and used to address water supply issues. The response to the LOS designation has been similar in each basin: 1) **I**nstitute land use controls that allow continued urban development **without increasing water demand**; **and** 2) development of an overall management plan to address the water problem over the long term.

While it is important to carefully analyze the water problems and potential solution paths through the preparation of a resource capacity study, this process can take a long time to complete. In the meantime, water supply and demand can become more unbalanced leading to groundwater basin overdraft or growing system reliability issues. The **r**esource **c**apacity **s**tudy process can address this problem by looking at a series of standard solutions that are used in other areas of the county.

Water Supply Criteria

Water Resources

A Level of Severity **(LOS)** III exists when water demand projected **over seven (7)** years (or other lead time determined by a **R**esource **C**apacity **S**tudy) equals or exceeds the estimated dependable supply. A Level III also exists if the time required to correct the problem is longer than the time available before the dependable supply is reached.

Required Actions:

1. Either cease issuing building permits in the affected area or establish a program of water offsets that requires a measurable and sustainable minimum of 2:1 water reduction in the affected area as a condition of issuing a permit;

2. Require replacement with low flow fixtures on sale or remodel of properties;

3. Institute a vigorous and verifiable water conservation program; and

4. Begin implementation of action plan.

L**OS** II for a water resource occurs when water demand projected over ten **(10)** years (or other lead time determined by a **R**esource **C**apacity **S**tudy) equals or exceeds the estimated dependable supply.

Required Actions:

1. Require replacement with **low flow fixtures on sale or remodel of properties;**

2. Institute a vigorous and verifiable water conservation program; and

3. Develop a written plan for actions to be implemented to address the situation.

L**OS** I is reached for a water resource when increasing water demand projected over **fifteen (15)** years equals or exceeds the estimated dependable supply. Level I provides two years for preparation of **R**esource **C**apacity **S**tudies and evaluation of alternative courses of action.

Additional Actions:

1. Institute a vigorous and verifiable water conservation program.

Resource Capacity Study: A **R**esource **C**apacity **S**tudy should: 1) Inventory existing water resources available to the agency operating the system **and/or within the groundwater basin boundaries**; 2) document existing demand for water by all area user-groups; and 3) explore conservation measures that could reasonably be imposed by the water agency **or applicable regulatory authority**.

Three water supply studies have been conducted since 2008: Los Osos, Nipomo Mesa and Paso Robles groundwater basin. Los Osos **is in the process of court-ordered adjudication,** and Nipomo Mesa **Management Area has been** adjudicat**ed**. The adjudications have resulted in cooperative groundwater management plans and **discussion of** importing supplemental water. The County lacks authority to regulate extractions from groundwater basins so instead uses its land use and building permit authorities to address new development's demand for water.

Water Systems

Level **of Severity (LOS)** III exists for a water supply system when water demand equals available capacity; in this case when a water distribution system is functioning at design capacity, or will be functioning at capacity before improvements can be made. The capacity of a water system is the design capacity of its component parts: storage, pipelines, pumping stations and treatment plants.

Required Actions:

1. Either cease issuing building permits in the affected area or establish a program of water offsets that requires a measurable and sustainable minimum of 2:1 water reduction in the affected area as a condition of issuing a permit;

2. Require replacement with low flow fixtures on sale or remodel of properties;

3. Institute a vigorous and verifiable water conservation program; and

4. Begin implementation of action plan.

L**OS** II for a water system occurs at the beginning of the five-year lead time (or other lead time determined by a **r**esource **c**apacity **s**tudy) needed to design, fund and construct system improvements necessary to avoid a Level III problem.

Required Actions:

1. Require replacement with low flow fixtures on sale or remodel of properties;

2. Institute a vigorous and verifiable water conservation program; and

3. Develop a written plan for actions to be implemented to address the situation.

L**OS** I occurs when the system is projected to be operating at **the design capacity within seven years**. Two years would then be available for preparation of **r**esource **c**apacity **s**tudies and evaluation of alternatives.

Additional Actions:

1. Institute a vigorous and verifiable water conservation program.

Key to Revised RMS Wastewater Section

Plain Text = Original RMS Section Language
Underlined Text = Initial Revisions per Planning Department
Underlined/Italicized Text = Initial Revisions per RWQCB
Bold Text = WRAC Subcommittee Recommended Revisions

WASTEWATER TREATMENT AND DISPOSAL

Policy Issues

Wastewater treatment and disposal can affect such resources and services as water quality, community development and groundwater recharge. The county's urban areas rely chiefly on wastewater treatment plants that in many cases recharge groundwater basins with treated effluent. The rural areas of the county (and a very limited number of urban and village areas) rely on septic tank and leach field disposal methods. Similar to wastewater treatment plants, leach fields can also recharge groundwater basins. These benefits of wastewater service need to be maintained when new or expanded wastewater treatment facilities are planned.

Expanded wastewater service can have two divergent effects on water supply. Wastewater treatment, collection and disposal facilities can affect both quality and quantity of groundwater. Treated wastewater effluent can be used in lieu of potable water sources for outdoor landscaping, **limited interior use,** agriculture, and groundwater recharge. The lack of site or density appropriate wastewater treatment can have negative groundwater quality effects (e.g. nitrates).

A second group of concerns relating to wastewater treatment and disposal involve both growth inducement into areas not planned for higher densities and lack of wastewater facilities that allow for strategic growth in our expanded urban areas**.** It is important to consider that growth potential can be created if sewers are *constructed* where none formerly existed. Decisions to *construct* major sewer *trunk* lines *and/*or treatment facilities can have substantial impacts on **the** land traversed by new *sewer* lines or in proximity to a treatment plant. The growth-inducing effects of such improvements must be considered in ongoing planning efforts to enable **thoughtful** land use policy decisions about the potential long-range effects of facility improvements. The extension of sewers into heretofore unsewered areas should occur only in urban spheres of influence and in a manner consistent with Strategic Growth Principles of the Framework for Planning.

However, as our urban areas are expected to handle a majority of our unincorporated population growth, installation and maintenance of wastewater facilities (including collection and disposal) is a vital link in the county's infrastructure.

The County does not have authority over wastewater treatment and disposal facilities (except in isolated cases). Therefore, it is important for the County to closely review wastewater project proposals by other agencies. Review and coordination enables the county to anticipate and accommodate or mitigate the effects of such projects. Such review is possible through a cooperative approach with the Regional Water Quality Control Board (RWQCB).

The RWQCB issues permits for wastewater treatment and disposal facilities. *These* permits are referred to as Waste Discharge Requirements (WDRs). These permits have standard requirements that state:

"…required technical report shall be prepared with public participation and reviewed, approved and jointly submitted by all planning and building departments having jurisdiction in the area served by the waste**water** collection, treatment, or disposal facilities."

The required report includes:

a) the best estimate of when the monthly average daily dry weather flow rate will equal or exceed design capacity; and,
b) a schedule for studies, design, and other steps needed to provide additional capacity for waste**water** treatment and/or disposal facilities before the waste flow rate equals the *present design* capacity.

Wastewater Disposal Level of Severity Criteria

Treatment Plant

Level of Severity III occurs when peak daily flow equals or exceeds the capacity of a sewage system for treatment and/or disposal facilities. The County will support RWQCB actions that seek to expand plant capacities and to lower **L**evels **O**f **S**everity. **When necessary, t**he County will also use appropriate growth management practices to ensure continued availability of services for projects consistent with the general plan (e.g. strategic growth and affordable housing projects).

Required Actions:

1. Either cease issuing building permits in the affected area or establish a program of water offsets that requires a measurable and sustainable minimum of 2:1 water reduction in the affected area as a condition of issuing a permit;

2. Require replacement with low flow fixtures on sale or remodel of properties; and

3. Institute a vigorous and verifiable water conservation program.

Level II exists if the RWQCB determines the monthly average daily flow will or may reach design capacity of waste treatment and/or disposal facilities within two (2) years. The County will discuss progress on necessary plant expansions with the service provider and/or the RWQCB. The purpose of the discussions is to ensure the continued availability of wastewater service for development projects that are consistent with general plan policies including strategic growth and affordable housing projects.

Required Actions:

1. Require replacement with low flow fixtures on sale or remodel of properties, and

2. Institute a vigorous and verifiable water conservation program.

Level I exists when the service provider or the RWQCB determines monthly average daily flow will or may reach design capacity of waste treatment and/or disposal facilities within four (4) years. Level I mirrors the time frame used by the RWQCB to track necessary plant upgrades.

Required Actions:

1. **Institute a vigorous and verifiable water conservation program.**

Resource Capacity Study: A Resource Capacity Study is prepared by the department of Planning and Building with the assistance of the service provider and the RWQCB. The RCS shall: inventory annual flows into the sewage treatment plan; identify any additional capacity consistent with anticipated growth projections that may be available for new connections without creating water quality problems; determine potential effects of water consumption reductions on long-term plant capacity; estimate timing of plant expansion.

Wastewater Collection System

Level III is reached when peak flows fill any component of a collection system to 100% capacity. A **wastewater** collection system includes facilities that collect and deliver sewage to a treatment plant for *treatment* and disposal (sewer pipelines, lift stations, etc.).

Level II exists when a system is operating at 75% capacity; when the five-year projected peak flow (or other flow/time period) equals system capacity; or when the inventory of developable land in a community would, if developed, generate enough sewage to exceed system capacity.

A Level I concern exists when two year projected flows equal 75% of the system capacity. *A t*wo year *period is recommended for the* prepar*ation of* resource capacity study.

Septic Tank Systems

Level III exists when failures reach 25% of the area's septic systems and the **C**ounty Health Department and RWQCB find that public health is endangered. At that point, if documentation required by state law suggests a moratorium on further use or expansion of individual disposal systems is required, the necessary five-year period is begun for evaluation of alternatives to septic systems, and for the design, funding and construction of public sewage facilities if that is the alternative selected. Other alternatives could be to initiate a community septic system maintenance program, or install a collection and disposal system to existing on-site treatment tanks.

Level II exists when failures reach 15% when monitoring indicates that conditions will reach or exceed acceptable levels for public health within five years (the time needed to design, fund and construct a public sewer system), based upon current growth rates or programs should be developed to monitor and correct the problem.

Level I for a septic tank area exists when failures occur in 5% of systems in an area, or other number sufficient for the Health Department to identify a potential public health problem.

Resource Capacity Study: Inventory the extent of existing septic tank leaching field failures and impacts on surface and groundwater; locations where additional septic tanks may be approved (if any) and standards for such approval; and need for alternative methods of sewage disposal, including community or package sewer treatment systems.

In areas with septic systems, identifying specific severity levels becomes more difficult. The Regional Water Quality Control Board (RWQCB) has primary responsibility for protecting groundwater resources and surface water bodies from wastewater pollution. The *RWQCB*'s "Water Quality Control Plan" notes that septic systems are sometimes seen as an interim sewage disposal in urbanizing areas, but must often function for years before a community sewer system becomes available. The **C**ounty Health Department works closely with the RWQCB in determining where potential septic problem areas may exist *(i.e., increased septic system density, poor soils, high groundwater)*. The Health Department and RWQCB use the following criteria to identify septic system failures:

1. Evidence of **wastewater**, or waters of sewage origin on the ground surface;
2. Plumbing fixtures that drain improperly because of a problem in individual subsurface disposal systems;
3. Frequent pumping of subsurface sewage systems for reasons other than normally scheduled maintenance;
4. Persistent odors traceable to any individual subsurface sewage system(s);
5. Pollution of wells or underlying **groundwater**;

6. Restricted use of plumbing fixtures to prevent occurrence of criteria one through five above.

* Includes septic tank systems or small aerobic systems with subsurface disposal. Typical disposal systems include leach fields, seepage pits, or evapotranspiration mounds.

Because of the difficulty of identifying causes for system failures, an area pattern must become apparent before a threat to public health is assumed. The RWQCB has suggested that reasonable failure thresholds for defining the alert levels would occur in 10% increments, beginning at 5% of the systems in a given area.

In areas where soil percolation characteristics particularly favor the use of septic disposal fields, other problems can arise, including degradation of groundwater by *increased* nitrate *loading*. That condition is of particular concern where septic systems are used over a groundwater basin serving as a community's water supply. In rapidly developing areas where adequate data are unavailable, the RWQCB Basin Plan recommends that monitoring of surface and **groundwater** be initiated to determine whether such problems are developing. Such a program would constitute a Level I **R**esource **C**apacity **S**tudy.