



Water Resource Excerpts CAC Workbook, Public Facilities and Services, Air Quality, and Noise April 9, 2007

I. EXISTING GENERAL PLAN POLICIES, PAGE 10

WATER RESOURCES

Water quality can be impacted by land use decisions and development in two principal ways. First, water quality degradation can occur from pollutants originating from "point sources" such as industrial or urban wastes concentrated at specific locations. Past efforts to control water pollution have generally focused on point sources which are regulated through State and Federal agencies. Second, water pollution can occur from "non-point sources" of which surface runoff is a principal contributor.

Specific Policies

From the Resource Conservation and Open Space Plan pages 42 and 43:

1. Projects designed to import or redistribute the fresh water in the Marsh for salinity control should be planned carefully so that the expected benefits are realized. Furthermore, any proposed import project should be studied to determine if the project would adversely affect the Marsh by encouraging urban and industrial growth in the Marsh area. No import project should be constructed if the adverse environmental impacts of growth on the Marsh would outweigh the possible beneficial impacts of salinity control.
2. To prevent crop damage in some areas, the withdrawal of groundwater from the underground aquifers surrounding the Marsh may be desirable. Withdrawal should not be so extensive as to allow the salt water of the Marsh to intrude into fresh water aquifers, or to disrupt the natural subsurface flow of groundwater into the Marsh,
3. Disruption or impediments to runoff and stream flow in the Suisun Marsh watershed should not be permitted if it would result in adverse effects on the quality of water entering the Marsh. Riparian vegetation in the immediate Suisun Marsh watershed should be preserved, and stream modification permitted only if it is necessary to ensure the protection of life and existing structures from floods. Only the minimum amount of modification necessary should be allowed in such cases.
4. The development of industrial facilities adjacent to or upstream from the Marsh should be planned to eliminate significant adverse environmental impacts on the water quality of the Suisun Marsh. Activities that could significantly alter the temperature, salinity or turbidity of the water should be prohibited. Industrial facilities that will increase the potential for spills of toxic and hazardous materials should not be permitted unless it is established that spills of such materials will not represent a significant threat to the Marsh.

5. Any development in the Suisun Marsh watershed or secondary management area proposed for areas that have poor soil conditions for construction or that are seismically active, should be controlled to prevent or minimize earth disturbance, erosion, water pollution, and hazards to public safety. Local runoff, erosion, and sediment control ordinances should be established in the immediate Suisun Marsh watershed to protect the Marsh from these potential adverse effects.
6. Riparian vegetation in the immediate Suisun Marsh watershed should be preserved due to its importance in the maintenance of water quality and its value as Marsh-related wildlife habitat. Stream modification should only be permitted if it is proved necessary to ensure the protection of life and existing structures from floods and only the minimum amount of modification necessary should be allowed.

Agriculture Water Service

Specific Policies

From the Land Use and Circulation Element page 50:

1. The County shall support efforts by irrigation districts and others, where appropriate, to expand the County's intensive agricultural areas.
2. The County shall promote proper management and efficient use of its agricultural water resources.

Domestic Water Service

Specific Policies

From the Land Use and Circulation Element page 50:

1. Domestic water for rural development shall be provided principally through on-site individual wells. When individual well systems in an area of the unincorporated County become marginal or inadequate for serving domestic uses, public water service may be permitted in conformance with the General Plan.
2. Public water service shall be provided and managed through a public agency. If lands proposed for water service are not within the boundaries of an existing public water agency, the Board of Supervisors shall, as a condition of development, designate a public agency to provide and manage the water service. Water facilities shall be designed to provide water service only to the developed areas and those designated for potential development. Such facilities shall be designed to prevent any growth inducing impacts on adjoining designated agricultural and open space lands.

From Land Use and Circulation Element page 78:

1. Rural residential development in areas without public water systems shall occur on minimum building sites of 5 acres or larger.
2. Rural residential development in areas with public water systems shall occur on minimum building sites of 2.5 acres or larger.

Water Quality

From Resource Conservation and Open Space Plan pages 42 to 43- The following policies represent the County's intent in preserving water quality of the Suisun Marsh:

1. Projects designed to import or redistribute the fresh water in the Marsh for salinity control should be planned carefully so that the expected benefits are realized. Furthermore, any proposed import project should be studied to determine if the project would adversely affect the Marsh by encouraging urban and industrial growth in the Marsh area. No import project should be constructed if the adverse environmental impacts of growth on the Marsh would outweigh the possible beneficial impacts of salinity control.
2. To prevent crop damage in some areas, the withdrawal of groundwater from the underground aquifers surrounding the Marsh may be desirable. Withdrawal should not be so extensive as to allow the salt water of the Marsh to intrude into fresh water aquifers, or to disrupt the natural subsurface flow of groundwater into the Marsh.
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II. GAPS ANALYSIS, PAGE 15

Water Resources Recommendations

1. The current General Plan policies contain a brief discussion about water service. Coordinate with local water agencies to assess the need for water service in the County and incorporate

policies to support the provision of water service in areas that have marginal or inadequate water supplies.

CAC Comments

Are there other gaps to the County’s water resources policies that should be addressed?

III. GENERAL PLAN ISSUES FOR CAC DISCUSSION, PAGE 22

WATER RESOURCES

Issue 10-1: Protecting Endangered Species and Habitats (This issue was included in the Conservation Work Book)

Endangered species occur in waterways and near water supply intakes, which may affect operations of these facilities. The delta smelt spawns in the Barker Slough pumping plant intake to the North Bay Aqueduct (NBA) In order to protect larval delta smelt, the USFWS has imposed pumping restrictions on the NBA when larval delta smelt are present. To date, the restrictions have not yet impacted NBA water supplies. Any water supply shortages which were the result of pumping limitations were made up later in the year. However, as NBA water use increases, pumping restrictions could affect NBA water supplies, resulting in uncertainty regarding full utilization of the NBA in the future.

The Putah Creek Accord provides flows that benefit anadromous fish (e.g., salmon and steelhead). The Lower Putah Creek Coordinating Committee desires to improve the habitat in Putah Creek to attract more salmon and steelhead. Steelhead are listed as a threatened species under the Endangered Species Act. The Accord provides for SCWA to request federal assurances that improvements to steelhead habitat and additional flows will not result in a demand for more water releases from the Solano Project. Releases from the Solano Project for the steelhead habitat could result in limitations on water supplies available for member agencies. SCWA has worked with National Oceanic and Atmospheric Administration (NOAA Fisheries) to provide a means to allow measures to improve the steelhead populations in the Creek, in conjunction with assurances to SCWA about the need for future increased Creek flows.

Issue 10-2: Ensuring Reliable Future Water Supplies

Environmental enhancement, habitat protection, and water supply operating restrictions resulting from endangered or threatened species may result in decreases in the total amount of water supplies available. Limitations to water supply can affect water supply reliability, which in turn will affect the ability to support future population growth in Solano County cities and unincorporated areas.

State Water Project (SWP) supplies are limited in dry years, resulting in concern regarding dry year water supply reliability. SWP contracts specify that all SWP contractors be reduced proportionally when there is a water shortage. The SWP is making some efforts to increase water supply, but realistically can only make marginal improvements due to the high costs of water projects and tough environmental constraints. Most SWP contractors are developing their own projects to augment SWP supplies, such as local surface water storage facilities and groundwater banks. In recent years the SWP has modified its operating rules to encourage innovative local projects to stretch SWP water supplies, such as those measures included in the “Monterey Amendments” to the SWP contracts. In dry years the SWP and/or the State Water Contractors (an organization of contract holders with the SWP) sometimes organize purchase pools to obtain water supplies from outside the SWP to distribute to participants in the purchase pools.

Many of the methods used to increase SWP supply are tied to statewide water issues. The California Bay Delta Authority (CALFED) is implementing plans to enhance ecosystem restoration, increase water supply, promote efficient water use, improve water quality and improve Delta levees. One of the main tenants of the Authority is to seek improvements simultaneously in all of the facets of Authority programs. The Authority has been hampered in implementing its program due to lower than expected levels of federal funding. Most measures to improve SWP water supply are tied to the Authority’s overall program. The controversial nature of water issues in California makes it difficult to implement projects that benefit SWP water supplies.

SCWA, the primary water purveyor within the County, actively participates in planning to ensure reliable water supplies are available to meet customers’ needs and that water supplies will be available to meet the growing current and future needs of the County. The SCWA recently developed an IRWMP that identifies and prioritizes all the water resource-related actions for the Solano agencies, and prioritizes SCWA actions so that financial and staffing resources are allocated in a manner that best meets SCWA’s needs. SCWA prepares an UWMP every five years, consistent with the requirements set forth in the Water Code.

Furthermore, approval of specific plans and large scale development projects located within the County will continue to require preparation of a Water Supply Assessment pursuant to the California Water Code to analyze the ability of water supplies to meet the needs of the project, in the context of existing and planned future water demands.

Issue 10-3: Improving Water Quality

Poor NBA water quality is an issue currently being addressed in Solano County. Best management land use practices are being implemented in the Barker Slough watershed, primarily to reduce erosion from livestock grazing. These measures are expected to reduce turbidity in the winter runoff season. Alternative water treatment methods to deal with high organic carbon are also being studied. A feasibility study of an alternate intake to the NBA that is located away from Delta smelt habitat at a point on or near the Sacramento River which has better water quality has been completed. Once additional treatment studies are completed, the cost and effectiveness of treatment and source control can be compared to the costs of an alternate intake to better determine what options are most feasible to improve water quality at the NBA.

Issue 10-4: Modernizing the Solano Project

The Solano Project is now more than 40 years old. SCWA expends an increasing amount of resources on Project maintenance, rehabilitation, and improvement. Due to the need for better water measurement and water management, SCWA and SID staff has been improving both water measurement and water management procedures for the Solano Project.

Issue 10-5: Improving Water Demand Estimates

Currently, SCWA projects future water demands in its UWMP based on population estimates provided by the California Department of Finance (SCWA 2005b). SCWA could utilize more closely the County's and cities' General Plans, which have more accurate population projections. By updating the UWMP with population projections provided by each city and the County, projected water demands could be more accurate. Improved accuracy of water demand estimates could lead to improved water supply planning.

Potential General Plan Approaches

- Support efforts of SCWA and related agencies to protect endangered species and the valuable habitat that supports such species. (This was included in the Conservation Workbook.
- Incorporate provisions requiring development projects to prepare Water Supply Assessments pursuant to the California Water Code.
- Support improvement of water measurement and water management procedures for the Solano Project.
- Assist SCWA in improving the accuracy of water demand estimates.

Should the County pursue the approaches listed above within the General Plan update?
