3C Model General Plan Language

GENERAL PLAN AMENDMENTS

I. THE MODEL ELEMENT

A. Urban Runoff Water Quality

1. Introduction

Nationwide there are many major sources of water pollution. Pollution that originates from a specific, discrete location, referred to as a "point" source, includes: effluent from municipal wastewater treatment plants; regulated industrial wastewater discharges; hazardous wastes and materials from spills, mishandling, and industrial accidents;effluent from inadequately functioning septic systems; and illegal dumping activities.

There are also pollutants contained in urban stormwater runoff, referred to as "non-point" source pollution, due to the diffuse origins of such pollutants. These include metals, organic wastes, pesticides, and a variety of other pollutants. Other types of pollutants include those which result from disinfection of drinking water and the intrusion of salt water from the ocean into nearby groundwater aquifers. The Water Quality and Watershed Management element is designed to protect receiving waters from those pollutants referred to as "non-point" source.

In both urban and rural areas of the state, substances are deposited on the surface of the land which are carried into the area's drainage system by stormwater runoff. However, given the much more extensive amount of impervious surface area within urbanized areas, non-point source pollution is often an urban area pollution problem. Although it is a much less obvious source of pollution, it can be a significant contributor of pollutants to receiving waters throughout the state.

2. Urban Runoff Pollution Control

GOAL: Protection and enhancement of local urban creeks, lakes, wetlands, and beaches is a city goal. Policies and programs should reflect this goal by providing ways to prevent water pollution before it occurs. Achievement of this goal will result in maintaining and enhancing the quality of life valued by residents and visitors.

Policies & Programs

The intent of this general plan is to provide policies and programs that will protect receiving waters from pollutants discharged to the storm drain system. The following policies and programs address non-point source pollution issues and their "solutions."

a. Public Education

Policy 1 Coordinate with other agencies in the watershed area to develop public education programs that will get the most exposure for the money spent.

Program 1a Encourage local schools, business and neighborhood associations to become educated in urban runoff issues using the available resources of the City and other involved agencies.
Program 1b Establish a business education program to provide information and incentives to local businesses for the implementation of "Best Management Practices" for pollution prevention and control.

b. Public Outreach
Policy 2 Coordinate with existing public outreach programs and create programs to involve the community in addressing urban runoff pollution problems and raising awareness of how individuals' activities contribute to urban runoff pollution.
Program 2a: Establish a storm drain stenciling program and/or coordinate with an existing program to label catch basins with warning signs (No Dumping-Flows to Bay/Creek/River/Lake).
Program 2b: Establish a local pollution sampling and monitoring program including citizens monitoring and/or coordinate with existing regional programs.
Program 2c: Encourage public input on development and implementation of urban runoff pollution control and programs by meeting with or sending copies of proposed plans to neighborhood and business association representatives.

c. Illicit Discharge Detection and Elimination
Policy 3: Encourage measures to promote proper disposal of pollutants to the sanitary sewer or hazardous waste facilities rather than to the storm drainage system.
Program 3a: Establish and promote used oil recycling and/or hazardous waste recycling facilities and drop-off locations.
Program 3b: Review plans for new development and redevelopment for connections to storm drain system. Inspectors should field check for such connections when performing building inspections.
Program 3c: Establish a city program for following up on complaints of illegal discharges to the storm drain and creeks.

d. Construction Site Storm Water Discharge Control
Policy 4: Encourage contractors to comply with accepted storm water pollution prevention planning practices for all projects subject to erosion potential.
Program 4a: Institute routine inspection practices and training for Building Inspectors and Public Works Inspectors to check for proper erosion control methods and housekeeping practices during construction.
Program 4b: Enforce requirements for contractors to provide Storm Water Pollution Prevention Plans, grading and housekeeping plans including erosion control measures as necessary.
Program 4c: Enforce erosion control ordinances.

e. Post-Construction Controls for Development and Redevelopment

Policy 5: Establish requirements for installation and maintenance of storm water structural controls to reduce peak discharges and to maximize pollutant removal from runoff.

Program 5a: Establish discharge limits and/or maintenance requirements to be included in site plan review covenants, conditions, and restrictions(CC&R's) for private development, and requirements for City projects. These requirements should be included by Public Works and Community Development Departments responsible for project management.

Program 5b: Where feasible, encourage establishment or re-establishment of vegetated wetland areas, which can effectively serve as natural water pollutant removal filtration systems. Other vegetated areas (eg. buffer strips) can also effectively remove pollutants from runoff, and their establishment should also be encouraged.

f. Good Housekeeping Practices for Municipal Operations

Policy 6: Establish and coordinate good housekeeping procedures for all City Departments to assure that water quality objectives are not threatened by in-house operations and an example is established for the community.

Program 6a: Incorporate water quality objectives into existing regular safety inspections. Institute additional inspections as necessary.

Program 6b: Establish Best Management Practices to be followed by City Departments and hold training sessions on a regular basis to ensure that employees are familiar with those practices.

Program 6c: Educate City employees on sources and impacts of pollutants in urban runoff and actions that can be taken to reduce these sources.

Program 6d: Ensure that contractors used by City are aware of and implement urban runoff control programs.

LIST OF RECOMMENDED AMENDMENTS TO EXISTING ELEMENTS

Background Statements

Surface Runoff

The U.S. Environmental Protection Agency has identified urban surface runoff as a significant cause of water pollution in the United States. Surface runoff water may contain a variety of pollutants including: paints, varnishes and solvents; oil and other automotive fluids; non-hazardous liquid and solid wastes and yard wastes; refuse, rubbish, garbage, litter, or other discarded or abandoned objects, articles, and accumulations so that same may cause or contribute to pollution; floatables; pesticides, herbicides, and fertilizers; hazardous substances and wastes; sewage, fecal coliform and pathogens; dissolved and particulate metals; animal wastes; wastes and residues that result from constructing a building or structure (including but not limited to sediments, slurries, and concrete rinsates); and noxious or offensive matter of any kind. These pollutants are typically generated from a variety of diffuse sources present throughout the urban environment, and are referred to herein as "nonpoint" source pollution.

Common pollutants contained in urban runoff generally include:

- tire wear material;
- metals such as copper, chromium, lead, cadmium and other toxics produced by combustion, leakages, metal plating, vehicle wear, and weathered paint;
- motor fuels, lubricants, and other fluids which are inadvertently spilled or leak from vehicles, or which are purposely dumped into the ground or into the storm drainage system;
- pesticides, herbicides, and fertilizers applied to agricultural crops, landscaping, and roadsides;
- biological contaminants from litter, organic matter, and animal wastes; and
- detergents and solvents used to clean urban surfaces.

Some of these pollutants are introduced to the drainage system by individuals who are uninformed of their effects on the environment. One of the most notorious examples is that of individuals who dump used motor oil into storm drains or onto the ground. Few are aware that one quart of used motor oil is capable of contaminating 250,000 gallons of water, or that substances disposed of into the stormwater drainage system are not treated before entering receiving waters. Other substances are introduced as the result of intentional efforts to avoid the costs of legal disposal and conformance with water quality regulations. The "Illegal Dumping Elimination Program" is one component of the overall Nonpoint Source Pollution Control Program intended to help reduce such activities.

The variety of sources and concentrations of pollutants, as well as the variability of runoff, make the "end-of-pipe" treatment methods, which are often used to address industrial discharges, impractical and ineffective alternatives for non-point source pollution control. Although not without its own difficulties, the most effective means of reducing non-point source pollution are those which prevent pollutants from being introduced into, or prevent their conveyance through, the storm drainage system to receiving waters. Prevention is the key to a successful urban runoff

program with treatment of non-point source pollution used only if prevention fails to meet the goals of the Clean Water Act.

Comprehensive Watershed Management Planning

Increasingly, the governmental entities responsible for water supply will rely upon comprehensive watershed management planning in order to ensure that the quality of the waters entering local reservoirs and rivers recharging groundwater are of the highest quality. These plans involve the cooperation and coordination of many jurisdictions having land use authority and regulatory powers within the watershed or drainage area. Subjects of major concern include retention of ground cover and vegetation, timber harvesting, development impacts, land use, grading and earth moving, grazing practices, and other activities which affect urban runoff, primarily in the rural areas of the watershed.

Strategies, Policies, and Implementation

A comprehensive approach to managing water quality should include the following basic strategies, in addition to ongoing point source regulation:

Strategy #1: Reduce Non-Point Source Pollution
Strategy #2: Restore Wetlands, Riparian Areas, and Other Habitats that Improve Water Quality
Strategy #3: Prepare and Implement Comprehensive Watershed Management Plans

These strategies reflect a comprehensive approach to safeguard water resources, improve water quality, and protect the health of species dependent on them, including humans.

Insertions

Urban Runoff

Urban runoff from [municipality] is discharged into local creeks which empty into [local receiving water]. Both state and federal authorities have identified urban runoff as a major source of pollution adversely affecting the beneficial uses of waters statewide. Some of those impaired beneficial uses are recreation, commercial and sport fishing, estuarine habitat, and the preservation of rare and endangered species. [The state has issued a National Pollutant Discharge Elimination System (NPDES) Permit to [municipality] for which a municipal storm water management program must be developed and implemented.]

It is extremely difficult and expensive to control the composition of urban runoff discharges through conventional wastewater treatment technologies. Therefore, it is critical that [municipality] implement measures to identify and control the sources of pollutants before they are actually discharged into the storm drain system. In order to control the nonpoint sources of pollutants, [municipality] has reviewed the types of land uses and practices which have the potential to discharge pollutants into the storm drain system. In doing so, [municipality] has identified several key areas to control and reduce potential pollutants in urban runoff including: industrial and commercial discharges, new development and redevelopment, construction activities, illegal dumping, illicit connections to storm drains, public information and participation, and public agency activities.

General Plan Elements

A. Land Use

Apply the following watershed protection activities to all new development and redevelopment proposals during the planning, project review, and permitting processes:

• Avoid conversion of areas particularly susceptible to erosion and sediment loss (e.g., steep slopes) and/or establish development guidance that identifies these areas and protects them from erosion and sediment loss. It is a general policy to limit grading permits or allow grading in those areas susceptible to erosion from October through April.

• In order to prevent undue erosion of creek banks, [municipality] should seek to retain creek channels in their natural state. Regulate development near water courses to reduce erosion and pollution and to provide open natural areas.

• Preserve or restore areas that provide water quality benefits and/or are necessary to maintain riparian and aquatic biota.

• Promote site development that limits impact on and protects the natural integrity of topography, drainage systems, and water bodies.

• Promote integration of storm water quality protection into construction and post-construction activities at all development sites. Evaluate the ability of a land parcel to detain excess storm water runoff and require incorporation of appropriate controls, for example, through use of detention facilities. As part of site approval or as a condition of tentative maps, require permanent storm water pollution control measures or systems and an ongoing maintenance program, as necessary.

B. Circulation

• Work to reduce transportation related sources of water pollution, particularly in storm water runoff. Any means by which vehicle-miles-traveled are reduced benefits congestion and reduces air and water pollution.

• Recognize and publicize the relationship between air pollution and water pollution in the deposition onto streets and other surfaces of airborne contaminants, including metals and fine particulate matter (PM10).

C. Housing

• Housing policies and programs stated in the General Plan should be consistent with water quality preservation goals stated within the conservation element.

D. Conservation

• Comprehensive watershed management plans should be developed and implemented for drainage basins in [municipality]. In order to do this, close coordination should take place among the County, the cities, and the various special districts whose decisions and activities affect the county's and cities' watersheds and other natural resources.

• [Municipality] shall implement urban runoff pollution control measures and programs to attempt to reduce and control the discharge of pollutants into the municipality's storm drains and local creeks to the maximum extent practicable.

• Reduce the quantity of runoff and discharge of pollutants to the maximum extent practicable by integrating surface runoff controls into new development and redevelopment land use decisions.

• [Municipality] should support, and contribute to, the acquisition of areas of open space that have water quality significance by City and County Parks, State Parks, and other agencies and non-profit organizations for permanent preservation.
• Work with other local government agencies on land use issues county-wide in order to maintain a watershed-based approach to land use, flood control, and nonpoint source pollution prevention.
• Hazard and resource areas with the following characteristics shall be considered unsuited for urban development: flood potential; wetlands; riparian corridors; and areas generally above 25% slope.
• Land uses which pose a major threat to water quality, including commercial and industrial uses such as automobile dismantlers, transportation and vehicle storage facilities, waste transfer disposal facilities, light industries, and other uses that have a significant potential for pollution, shall not be located within the vicinity of streams, reservoirs, or percolation facilities or where pollutants could easily come in contact with flood waters, high groundwater, flowing streams, or reservoirs. Such uses shall be required to reduce any threat of pollution to an insignificant level as a condition of approval.
• Particulate matter pollution shall be minimized through control over new and redevelopment (including erosion and sediment controls on grading, quarrying, vegetation removal, construction and demolition), industrial processes, parking lots, and other activities which pose such a threat to water quality.

E. Open Space

• Open space policies and programs should be consistent with those water quality policies and programs set forth in the conservation element. Open space areas should be managed with erosion control and pollution prevention measures in the forefront.

F. Safety

• Water quality protection measures set forth throughout the General Plan are the result of United States Environmental Protection Agency legislation under the Clean Water Act. The intent of these measures is to protect the health and safety of humans as well as to protect the beneficial uses of receiving waters.

G. Noise

• Not applicable to water quality.