

APPENDIX A:

Working Group Progress Reports

May 2000

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Riparian and Wetland Restoration

Working Group Progress Report May 2000

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Problem statement:

Reducing sources of creek and ocean water pollution is essential to protect the health of the public and the natural environment. The biological and physical activity associated with healthy riparian zones and wetlands can substantially improve the quality of even badly contaminated water. Development in the south coast area has degraded substantial areas of riparian zones and wetlands and reduced the ability of these systems to attenuate existing sources of contamination. According to the US Environmental Protection Agency, the Regional Water Quality Control Board, the California Coastal Commission and other experts, wetlands, riparian zones and buffers are important tools for improving water quality of creeks and beaches, particularly during low and moderate flows.

As suggested in the results of water quality studies sponsored by Project Clean Water and other agencies, stream sedimentation is a reservoir for bacteria and other pollutants that are then released when sediment is stirred up by creek flushing and tidal action. The physical, chemical and biological processes of wetland and riparian zones filter, break down, trap, and assimilate various pollutants, including nutrients, metals, and fecal materials. Degraded riparian zones have less ability to entrain sediment during high flows, and do not stabilize banks effectively; so to the extent that restoration of riparian zones helps stabilize sediment, bacterial loading during high flows may be reduced as well. In addition to protecting and improving water quality, constructed wetlands and restored riparian corridors also offer ancillary benefits including enhanced groundwater recharge, stream bank stabilization, reduced runoff rates, recreational opportunities and open space, urban green space, aesthetic beauty, research opportunities, fisheries enhancement and wildlife habitat.

Goals/recommendations (from April 1999):

1. Establish and support with staff resources an on-going Wetland & Riparian Restoration Working Group (RWG) to identify restoration opportunities within the County, including partnerships with other jurisdictions (cities), community groups and private individuals.
2. Allocate funds and direct the County Parks Department to hire or contract with a natural resource manager/biologist to develop creek and wetland restoration, and wetland creation plans for the County's publicly owned open spaces, greenbelts and parks.
3. Host regular creek and wetland restoration workshops to educate potential private and public restoration project sponsors and to develop a pamphlet containing guidelines on what and when permits may be needed, (include example restoration project descriptions, planting techniques, etc. for public distribution).
4. Direct County staff, where feasible, to use and require native riparian and wetland plants derived from local stock and to encourage nurseries to make these plants more available to the public for restoration efforts.
5. Establish a Grant Team consisting of County personnel and the RWG to seek and obtain funding to implement specific wetland and riparian restoration projects.
6. Evaluate new development projects that require mitigation of impacts to wetlands or riparian zones as potential sources of support (e.g. land, money) for specific restoration projects. Update standard conditions of approval to require biofiltration of runoff from new development where feasible.

Progress to date/current efforts:

The numbered items below are keyed to the recommendations above

1. **Wetland & Riparian Restoration Working Group:** This group continues to meet on a monthly basis. The group was reorganized and many new members were added in fall 1999. Representatives include County and City staff, representatives of State Parks and the US Fish & Wildlife Service, and members of South Coast Watershed Alliance.
2. **Hire biologist to develop restoration plans:** This was considered by the County Parks Dept., but it was decided that the Parks Dept. will continue to hire a consultant on a case by case basis. However, the City of Santa Barbara has hired a biologist at the Associate Parks Planner level for this purpose.
3. **Host regular creek and wetland restoration workshops:** The County hosted a Riparian Restoration Workshop in October 1999, presented by Ann Riley of the Waterways Restoration Institute. Planning for a second, more in-depth, two day workshop is currently underway. This workshop is scheduled for June 2000. The RWG also hosted a presentation by Gretchen Coffman, a UCLA graduate student, who is researching the effect of restored riparian buffer zones on agricultural runoff.
4. **When feasible, use and require native riparian and wetland plants derived from local stock:** The County and City already utilize locally derived stock in restoration projects where feasible. The RWG is also exploring ways to support the recently developed Growing Solutions, a local non-profit that grows native riparian plants for restoration projects.

5. **Establish a grant team to seek funding for restoration projects:** In December 1999, the RWG, in conjunction with the Southern California Wetlands Recovery Project (SCWRP), presented a grant proposal to the US EPA for a hydrogeomorphic (HGM) assessment of South Coast streams, and three demonstration restoration projects. This grant was funded by the EPA for \$250,000 in March 2000, and work on the HGM assessment is underway. The HGM assessment will result in a guidebook that can be used to evaluate and prioritize potential restoration projects in South Coast watersheds. The grant “team” consists of designated staff from Water Resources, Planning & Development, and Parks Department, working in conjunction with members of the RWG. The County, City, and other RWG members also participate in the grant proposal writing efforts of SCWRP. The RWG has also created a list of potential projects, and tracks various grant funding cycles in an attempt to find funds for appropriate projects. The HGM assessment developed as part of the EPA grant will help prioritize previously identified restoration projects.
6. **Develop a restoration “mitigation bank” and update standard conditions of approval to require biofilters:** Currently, the County relies on existing Army Corps (404 permits) and Fish & Game (streambank alteration agreements) requirements to provide for mitigation of wetland impacts by new development. Development of such an arrangement is complex but can still be researched by this group. However, other options, such as stronger protection of wetlands in county development policies and ordinances, may be preferable.

As part of Project Clean Water policy analysis, County Planning & Development staff are considering the best way to apply biofiltration requirements to new development. Currently, when it is deemed appropriate, biofilters are required, but it is not part of the standard conditions of approval. P&D staff are researching appropriate technology and applicability, and will establish development standards to determine for which types of projects these standards will be most appropriate.

Future recommendations:

Recommendations for future work include ongoing efforts, and additional projects mentioned in the first working group report (4/99). Currently, major efforts of the group are focussed on implementation of the EPA grant project. Working group members are serving in an advisory capacity to the HGM consultant, and will also be involved in the subsequent restoration projects implemented as the second phase of the grant project.

Recommendations for future work include:

- Sponsorship of a second wetland restoration workshop, scheduled for June 28 & 29, 2000.
- Develop a proposal for research on the impact of agricultural practices on riparian water quality for the County’s Barron Ranch. The working group received a presentation from Solid Waste staff on the Barron Ranch, and staff indicated a willingness to cooperate on this project. The working group would pursue grant funding for such a project.
- Develop a “property owners guide” for riparian restoration. This document could include information such as the types of permits needed to initiate restoration projects along creeks or wetlands, the types of plants and planting techniques that should be used in specific projects, and assistance with identifying outside funding sources if needed. This project could also potentially be funded through grants.

- Continue to meet regularly, and to participate in the Southern California Wetlands Recovery Project to pursue cooperative funding opportunities and projects.
- Direct County Public Works to develop plans for roadside bio-swales to intercept and filter road run off, and to work with RWG on grading and engineering needs associated with restoration projects.
- Develop new standard mitigation requiring that runoff from new development be directed above ground through permeable swales, bio-filters, etc., to filter urban runoff.
- Develop new stronger mandatory setback standards for creek side development.
- Explore the potential for demonstration pilot projects (general sites, where applicable, are listed in parenthesis) from the following list:
 - Agricultural Bio-Filter & Riparian Restoration (Carpinteria Creek)
 - Urban Bio-Filter (Earl Warren Showgrounds; Arroyo Burro Creek Channel north of Highway 101; Laguna Channel/Waterfront Area)
 - Urban Riparian Restoration (Mission, Sycamore, Laguna and Arroyo Burro Creeks)
 - Roadside Bio-Swale (Highway 101; Las Positas Road, between Norman Firestone Road and Hollister Avenue at the City Airport)
 - Riparian Understory Restoration (Museum of Natural History/Mission Creek)
 - Homeowner Backyard Riparian Restoration & Streambank Stabilization (Arroyo Burro Creek tributary; Mission Creek)
 - Flood Control Mitigation Bank (Carpinteria Creek site north of Highway 101; Lake Los Carneros County Park)
 - Modification of the bottom of Concrete Lined Creeks (Mission, Arroyo Burro, and Las Positas Creeks)
 - Work with the Goleta Slough Management Committee and the Airport to support the Airport's pilot study on restoration of tidal action to the Goleta Slough and make recommendations on research questions to be included in the study.

Domesticated Animal Waste Control

Working Group Progress Report May 2000

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Problem Statement:

Fecal coliform bacterial contamination in creeks and the ocean is an indicator that human pathogens may be present, and has been responsible for closing numerous local beaches to water contact recreational activities during recent years. This form of pollution has many sources, including feces from domesticated animals. Of particular concern, and the focus of this report, is the contribution to the problem by pets, horses and livestock operations. Methods to reduce the quantity of domesticated animal feces entering local creeks and the ocean are needed to reduce the number of beach closures.

In watersheds where grazing occurs (e.g. Jalama, Cieneguitas, Eagle Canyon,) large amounts of grazing animal fecal material, particularly that of cattle, have been observed by working group members. Sampling by the RWCQB in 1993 identified bacteria that shows a correlation to cattle and horses in south coast creeks. Improper disposal of horse manure as well as horse manure deposition at locations where trails cross creeks have been noted. Creek walks conducted as part of Project Clean Water (PCW) have identified locations where pet wastes have been disposed of in and near creeks. Locations where people do not clean up after their pets have also been identified near creeks and at beaches. Thus, domesticated animal waste is very likely contributing to the problem of water pollution and beach advisories.

Recommendations: (April 1999)

Pets

The working group recommends the improvement of signage and monitoring for proper disposal of pet waste in each County and City park and open space, including Jalama Beach Park. In addition, the installation of mutt mitt dispensers at all parks and open spaces used by dog owners should be undertaken. The County and City should adopt, modify and / or better enforce ordinances that require cleaning up after all pets.

A targeted, annual educational campaign should be initiated for pet owners to inform them of the impacts of pet waste on beach closures and pollution. Educational materials should be mailed / distributed to pet owners to instruct them of the proper, legal disposal methods for pet waste (sewer systems and landfills,) and to notify them of any legal obligations they have with regard to cleaning up after their pets. A routine creek inspection program should be initiated, part of which would include monitoring for illegal disposal of pet waste, as well as a tracking system, warnings, and fines for repeat violators. Parks and open spaces should also be regularly monitored by existing Parks Department staff trained and empowered to enforce pet waste clean up regulations.

Grazing Animals

Because DNA sampling is currently the most accurate way to estimate the percentage of bacteria from different animal species (pets, grazing animals, etc.), the group recommends DNA sampling in a number of creeks. We also recommend the testing of bacterial levels in sediments, and DNA testing of sediment bacteria, because contaminated sediment re-suspension may be a contributing factor to bacterial water pollution. In creeks where such testing determines that more than 5% of the bacteria is originating from livestock animals, the group recommends that the County encourage implementation of BMP's (through educational programs, additional incentives and/or General Plan and LCP Policy changes). Such BMP's include fencing, filter strips, range planting, stream improvement, vegetative buffer strips, wetlands restoration and prescribed grazing, all of which are recommended by the Natural Resources Conservation District (NRCD). The NRCD has numerous cost share programs available to assist in the protection of riparian and wetland areas and to implement BMPs to protect and improve water quality, including the Wetland Reserve Program, Wildlife Habitat Incentives Program and Environmental Quality Incentives Program.

The County's Local Coastal Program Policy 9-16(a) prohibits grazing in coastal wetlands. However, the County's Coastal Zoning Ordinance (Section 35-97.9) which implements the LCP contains an exception for grazing in the Santa Maria River mouth. The County should consider deleting this exception if bacterial counts near the mouth of the river prove high. Additionally, the County should consider incorporating policy language similar to LCP Policy 9-16(a) into the General Plan to protect the filtering capabilities of wetlands countywide. Enforcement of these policies and the CZO is strongly recommended.

Horses

To address the possible contribution to water pollution by equestrian activities, the group recommends DNA testing to determine the approximate percentage of contribution in specified watersheds where problems are suspected. If greater than 5% of the bacteria is from horse waste, then we suggest the installation of trail signs regarding horse manure and the establishment of a voluntary program by equestrians to clean up after their animals near creeks, such as along trails, and monitoring for success. If unsuccessful, then a mandatory

clean up program should be initiated by the cities, County and Forest Service. A targeted education program for horse owners addressing facility siting and waste disposal is another recommendation that may reduce beach closures and water pollution.

General

While not strictly related to animal waste, the role of water temperature may affect the persistence of fecal coliform bacteria and other pathogens. Therefore, we suggest that the County conduct technical analysis of the role of water temperatures in bacterial pollution. In addition, as stated above, testing streambed and estuary sediments for bacteria is also recommended as a way to determine if sediment re-suspension during storms may contribute significantly to bacterial water pollution.

Progress to Date:

Targeted Information Campaign: PCW has produced brochures targeting dog and horse owners to educate them on the potential impacts and proper disposal of animal waste. These have been distributed at public information events, personal contact, and through relevant businesses (i.e. pet stores, feed stores, commercial stables, etc.)

Mutt Mitts: County and City Parks departments have installed new mutt mitt dispensers and informational signs at locations that pet owners frequently use. County Parks documented the distribution of over 88,000 mutt mitts in the past year.

DNA study: County Environmental Health conducted a DNA study in the Rincon watershed to determine the source of fecal coliform. Due in part to this study, the Rincon Homeowners Association is voluntarily moving forward to hook into the Carpinteria Sanitary District. The study showed that about 26% of the bacteria found came from domestic animals.

CreekWatchers Beach Patrol: The Beach Patrol distributes information about protecting water quality (including information on proper pet waste disposal) to visitors at the beaches.

Jalama Beach: The County Parks Department and PCW staff are currently researching the source of high bacterial counts at Jalama County Beach Park. The goal is to determine if domesticated animals are the primary source, and implement appropriate solutions.

Waste Management: PCW staff are researching various horse waste composting and disposal options. This information will be used to develop locally specific BMPs for manure management.

Enforcement: County Solid Waste Division and Environmental Health Services are working to clarify enforcement responsibilities for handling complaints about manure piles/disposal.

Current Status of Efforts:

This group had been inactive for several months, but began meeting again in April 2000. New members have been added, including Solid Waste staff, Parks Dept. staff, Animal Services staff, veterinarians, and representatives of homeowners associations and stables.

Future Recommendations:

- The Working Group should be reconvened. [Group reconvened in May 2000]
- The Working Group should be chaired by PCW Staff and expanded to include the City, pet groups, equestrian interests, additional water quality interests, and livestock/grazing interests.

- The Working Group must refine initial cost estimates for recommendations that have not yet been implemented, and develop a list of additional recommendations.
- The Working Group should prioritize its recommendations to first implement those that appear most feasible and those that would offer the most pollution reduction potential.
- Explore the potential for a pet waste management ordinance.

Infrastructure Cleaning and Maintenance

Working Group Progress Report

May 2000

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Brian Trautwein, Env. Defense Center

Rick Wheeler, County Parks Dept.

Problem Statement:

Improper or lack of cleaning and maintenance of infrastructure (roads, road yards, maintenance shops, parking lots, storm drains, etc.) leads to the accumulation and subsequent discharge of pollutants into the creeks and ocean (e.g. oils and gasoline, trash, heavy metals, bacteria, etc.) These are liberated during periods of rainfall or during certain maintenance activities that relieve obstructions to prevent flooding. Water quality benefits through proper infrastructure maintenance have been effectively demonstrated by Phase I National Pollution Discharge Elimination System (NPDES) permitted jurisdictions and research throughout the State of California. Consistent, regular servicing of publically-owned infrastructure is one of the recommended "best management practices" (BMPs) under the "Good Housekeeping for Municipal Operations" as specified in the Phase 2 NPDES program.

Volunteer creek clean up efforts, although admirable and effective in limited applications are becoming less frequent and less effective due to a number of issues:

- Liability associated with volunteers being exposed to injury and possible illness
- Increased awareness of potential health risks
- Growing feeling that government is responsible for these efforts.

Possible Alternatives & Solutions:

Proper cleaning and maintenance of these infrastructures, including retrofitting existing facilities with devices designed to trap and minimize pollutants, will greatly reduce the potential for pollutants to enter the storm channels and creeks.

A number of solutions are possible, such as:

- Regularly scheduled cleaning of all drop inlets for storm sewers
- Regularly scheduled sweeping or cleaning of public streets, public parking lots (especially County and City administrative facility lots) and other impervious areas within the urbanized area to collect and dispose of pollutants on those surfaces
- Repair of any damaged collection and dispersal structures
- Retrofitting of drop inlets with filtration devices to prevent the entry of trash, oils and other pollutants to the storm sewer system. Subsequent cleaning and maintenance of these filtration devices as necessary

- Daylighting, diverting, or retrofitting storm drain systems, where feasible, for treatment prior to discharge
- Education and ongoing training for public employees for "good housekeeping" best management practices

Progress to Date:

The following information is a continuing process that was established as part of the Board of Supervisors hearing report of April 27, 1999 that outlined a course of action for the Infrastructure Cleaning and Maintenance Working Group of the Project Clean Water Stakeholders Committee.

City Update (as of 1/13/00):

- Several of the goals that were established for the infrastructure working group have been accomplished over the last several months. Ongoing efforts by the city include seasonally cleaning of select catch basins and creeks throughout the city. City crews cleaned approximately 140 lower Mission Street catch basins and hired contractors for the cleaning of 130 additional basins, out of a total of approximately 2,000 total storm drains in the City. Storm drains and catch basins are continuously cleaned throughout the city on a weekly basis.
- City crews use a Vactor truck to clean out catch basins and storm drains along State Street and Carrillo Streets, and sweep approximately 60 city blocks per month in downtown area on a weekly basis. Although this sweeping program may not reach all areas of the streets (i.e, gutters) due to parked cars, City staff do post "no parking" signs for special sweeping of neighborhoods to remove cars on a regular basis. This sweeping program is designed to primarily remove trash and larger sediment particles.
- Human waste (fecal) clean-ups were conducted by contractors at various locations on Mission, Sycamore, and San Roque Creeks. Several illegal encampments were removed, mostly along Mission Creek and Laguna channel. The Streets Division also conducted three trash and debris cleanups at lower Sycamore Creek and one cleanup at Mission Creek/Montecito Street.
- Bids were solicited and the city is installing "Drain-Pac" filters at seven selected sites, including the City Maintenance Yard. The City Yard is waiting on proposals for the installation of an oil water separator at the Corporation Yard. Several drop inlets on State Street are also scheduled to be retrofitted with filtration devices in the upcoming months.

County Flood Control Update:

The Santa Barbara County Flood Control District, as part of their mission to prevent flooding, conducts annual maintenance activities in certain local creeks and channels. These maintenance activities include desilting and debris basin maintenance which has some added benefit to water quality by removing sediment material that may contain sorbed pollutants. The Flood Control District will continue to work with the Infrastructure Working Group to help identify opportunities where water quality benefits can be integrated with flood control practices.

County Parks Update:

- The Mutt Mitt program has proven to be quite successful and the county is currently in the process of erecting new stations and more visible signage at various county parks and trails. The parks department is soliciting sponsors to help fund individual Mutt Mitt stations.
- Grant money is being offered to any non-profit organizations that are interested in organizing creek or beach cleanups. In 1998 there were 7 groups that participated in the beach cleanup program, which dropped to 4 groups in 1999. No groups have applied for this funding to date.
- Two storm drains at Arroyo Burro Beach Park shall be retrofitted with filtration devices to remove sediment and oils and grease generated from the parking lot as part of the ongoing project to build the Arroyo Burro Watershed Resource Center at the site of the old ranger station. The selected vendor of the treatment technology will provide material for use in presenting and explaining how the treatment system operates. Providing public education on water quality awareness is part of the Center's goal.
- County Parks has continued to focus on keeping the drainages and creeks that pass through County parks and open spaces clean and litter free. The Department, through the recently developed Integrated Pest Management Plan, seeks to minimize the use of pesticides at all locations. For example, Isla Vista Park and five Isla Vista beach accesses are being maintained organically, i.e. no synthetic fertilizers or pesticides are used in their maintenance.

County Roads Update:

All of the drop inlets in the south county urbanized area have been mapped and their locations and photos are currently being entered into AutoCAD. To date, no north county locations have been mapped. Several locations have been identified in the Isla Vista/Goleta area for installation of storm drain inserts and will be evaluated as a pilot study for future installations. As part of the regular drainage maintenance activities, Road's facilities are evaluated each year in October. Those facilities that require cleaning, repairing, and maintenance, are then addressed in order of priority until the first major storms of the season occur. Drop inlet devices help to filter out trash, sediment, and other pollutants prior to entry to the storm drain collection system.

Project Clean Water Update:

Using Project Clean Water funds, the county sampled five storm events this past wet season. Four of these events involved the testing of 20 south county creeks for a wide range of contaminants (pesticides, heavy metals, oil & grease, bacteria, VOC's, etc.), while the other event consisted of testing for bacteria concentrations only. Additional funding is available for low flow sampling during the summer months and spot sampling to determine effectiveness of BMPs. For example, funding is available to collect water quality data before and after infrastructure improvements or maintenance activities are conducted. Sampling results will, over time, help define the extent and degree of water quality impairment to better target BMP practices.

Recommendations from April 29, 1999 Staff Report and Progress to Date

Recommendation (4/27/99):	Progress:
Define existing infrastructure by developing maps of storm drain inlets	All of the drop inlets in the urbanized area of the south county have been mapped and their locations and photos are currently being entered into AutoCAD.
Evaluate and improve creek cleaning and drop inlet cleanout	The City of Santa Barbara is seasonally cleaning out select catch basins and creeks. Over 270 catch basins have been cleaned and City crews continue to clean out storm drains and catch basins on a weekly basis.
Develop information package for public employees involved in handling wastes or infrastructure cleaning that can result in discharge to creeks or ocean	Although there have been discussions of the package development, no specific work products have been developed at this time.
Evaluate effectiveness of existing street sweeping of public streets, public parking lots and other hard surfaces within urbanized areas. Recommend additional sweeping or changes in practice, if appropriate.	The city is currently street sweeping approximately 60 city blocks per month. Goleta West Sanitary District sweeps their entire 5 sq. mi. district twice monthly, year-round. Evaluation of an enhanced street sweeping program in the unincorporated urban areas of the south coast will be developed by Roads during FY 00-01. Evaluation of the effectiveness of these programs will be conducted during the following fiscal year.
Evaluate options for the cleaning of private parking lots and vehicle fueling and service areas	A draft brochure has been developed for distribution that includes best management practices for parking lots and loading areas

Future Goals:

One of the long-term goals of the infrastructure working group is to facilitate the enhancement of local infrastructure in an effort to improve the water quality of our city and county creeks and beaches. Although the vast majority of the drop inlet locations in the South County have been mapped, their connections to each other and to our creeks and beaches remain unknown. Studying and possibly mapping these connections could greatly aid in our understanding of, and ability to improve local water quality. Another area that warrants future attention is the effectiveness of installing filtration devices on existing drop

inlets, especially in heavily polluted areas. New development procedures should address stormdrain systems with an emphasis on to rely on bio-filtration.

County Parks Department:

The re-paving of Goleta beach's west parking lot, if funded, will utilize concrete rather than asphalt to reduce hydrocarbon runoff and will include drainage traps to separate debris and oil from the parking lot runoff that goes into the ocean. The new Arroyo Burro Resource Center will include treatment of parking lot runoff before it enters the slough (see previous discussion).

City of Santa Barbara:

In both June and October, 2000, the City will conduct creek and channel cleanups. It is anticipated that the work, done by contract, will cost \$20,000 to \$25,000 for each cleanup site. The City intends to continue this biannual schedule as long as the problem of trash in creeks persists.

The City will continue street sweeping, performing the "clean sweeps" that target areas draining to creeks. Currently the Contractor sweeps two days per week. The City is considering adding an extra day to the Contract Sweeper in order to do more targeted sweeps in residential areas near creeks, or even State Highways that drain into City creeks. The working group recommends the City evaluate effectiveness of the sweeping program to improve water quality. This evaluation may include timing of street sweeping, frequency, and ability of the equipment to collect the bulk of material, especially fines, from the streets.

The minimum goal for annual catch basin cleaning is to clean at least as many catch basins as were cleaned the previous year, either by contract or in house. The work will be done in August – September - October. The option of buying or renting a Vactor truck for the work is being explored, with the crew being supplied by the Streets Division. Work will be planned so that the low areas and high pedestrian traffic areas are cleaned first, specifically lower Mission Creek, which will help assure that all of the most critical areas are cleaned during the month. Doing this work in house will be a new experience for the City, but over 500 catch basins should be able to be cleaned during the month.

Pending appropriate funding, pilot projects to install a storm water interceptor and catch basin filter inserts are being evaluated. The availability of a Vactor truck is integral to the proper functioning of the catch basin filters because without consistent and appropriate maintenance, the filters will not provide water quality benefits.

County Public Works Department, Roads Division:

Roads has installed two storm drain inserts for trash removal in Isla Vista and intends to install an additional insert for oil and grease/suspended solids removal at a downtown Goleta location. These installations will be monitored regularly and evaluated as treatment control BMPs for improving water quality. Results will be used to help Roads determine appropriate installations at other storm drain inlets. Roads will also evaluate street sweeping and initiate a street sweeping pilot program for the South County area.

County Public Works Department, Flood Control District:

The Flood Control EIR for maintenance activities will be updated in the following year with new information associated with the recent listing of steelhead as an endangered species, as well as new information on water quality. Other Flood Control efforts that

have an indirect link to water quality include the mitigation bank site at Lake Los Carneros, where a treatment bioswale will be installed prior to residential runoff entering the wetland area. Flood Control staff will continue to work with Project Clean Water staff to consider and incorporate opportunities for water quality improvement along with their maintenance activities. Flood Control maintenance staff will assist Project Clean Water Staff with conducting the creek walk surveys in the summer of 2000.

Recommendations

The working group proposes the following recommendations:

- In order for the County of Santa Barbara to properly manage the water quality of the storm sewer system within the unincorporated areas, detailed mapping of the entire system within the urbanized area is essential. Mapping of the storm drain system is a required component of the National Pollutant Discharge Elimination System (NPDES) Phase II regulations. The overall value of the mapping will be greatly enhanced as part of the Project Clean Water Geographic Information System (GIS). The GIS will be used to characterize actual watershed/catchment areas throughout the unincorporated areas of the County.

Careful coordination with all adjacent municipalities, special districts, the Assessor's Office, etc. will be necessary to ensure collected information and newly created mapping components are compatible throughout the County. The University of California at Santa Barbara (UCSB) has an excellent GIS program and would be a valuable resource for this effort. UCSB faculty and students will continue to be included in the coordinated development of the GIS.

- Concurrent with the above recommendation, a small, pilot project for treatment control BMPs should be performed in the unincorporated areas. Targetted areas will be based upon Project Clean Water information, such as land use, water quality during storm events, data from creek walks, and anecdotal information. Pre and post-storm event monitoring will be performed to evaluate the effectiveness of these BMPs. Based upon this information, specific recommendations regarding the additional applications of the BMP, revisions to procedures, use of contractors for ongoing maintenance, etc. can be developed. It is critical to identify responsibility for regular maintenance early-on in the design process, since improper maintenance can cause a facility to function poorly, not at all, or result adverse impacts to water quality or flooding.

Use of contractors for BMPs should be coordinated with other municipalities to explore the cost reductions associated with scale of the operations, increased efficiency of evaluation of efforts, access to areas within the municipalities, etc.

- Clean-up efforts should be included in the Project Clean Water Public Outreach information, to keep the public informed of those efforts and to solicit and maintain continued support for these activities. Targeted campaigns, directed at streetside businesses in the urbanized areas, should be developed to gain business support of programs that prevent trash and other pollutants from being discharged into the gutters and storm drains (i.e., source control BMPs). Preventing pollutants from entering the storm drains in the first place is much more cost effective and beneficial, and provides opportunities for the community to take personal actions to improve the quality of our environment.

It is recommended to include the Downtown Organization in the Infrastructure Working Group. Maintenance practices by the Downtown Organization along State Street, such as washing of sidewalks into the storm drain, may need to be reevaluated due to excess build-up of material in the catch basins, odor problems, and long-term impacts to downstream water quality in Laguna Channel and Mission Creek. Other businesses such as restaurants and shopping malls that have been identified as sources of water quality degradation may be invited to attend meetings with the working group to help develop ideas and implement improvements to their cleaning and maintenance activities in coordination with municipal operations (i.e., street sweeping).

- As indicated above, the working group is in the early phase of implementing various programs such as: street sweeping, parking lot cleaning, maintenance associated with road yards, etc. Additional research is necessary to determine existing programs, levels of service, potential problems, costs, etc. Therefore the working group recommends that these issues be evaluated and a summary report with recommendations be prepared. Specifically, departmental programs within City and County operations should be addressed first. For example, mobile cleaning of fleet vehicles, pavement cleaning, and maintenance activities that involve the application of pesticides will be used as examples for setting minimum community standards.
- Grant monies and special one time funding may be available through current Federal funding (205(j) or 319(h)). In addition, most creeks in Santa Barbara County have been identified as potential resources for the enhancement of steelhead trout habitat. Grant monies are available for these efforts and may be an additional source worth exploration. Other resources, such as donations from private and nonprofit organizations may be feasible (e.g. donation of trash dumpsters and pick-ups from private solid waste haulers).

Action Plan:

- **Mapping Storm Drain System:** This task will be carried out by the County Flood Control District and the Project Clean Water staff with support of a contractor. Budget has been allocated for this task for FY 00-01 and PCW staff will continue to develop and refine the work effort. It is estimated that it may take up to 6 months to complete the mapping.
- **Evaluate and install treatment control BMPs (i.e. drop inlet filters):** This task will be conducted by the County Roads Division, City of Santa Barbara, and Project Clean Water staff with support from contractors. Coordination with other municipalities may help reduce costs. Evaluation of the City of Santa Barbara's efforts will be used to help direct efforts. Pre- and post-evaluations should occur to verify the effectiveness of the efforts. Recommendations will be developed for future projects. Funding for this effort has been allocated during FY 00-01 by the City and County of Santa Barbara.
- **Outreach:** Efforts will be made to include the Downtown Organization in the Working Group. Other business outreach efforts are described in the Business Incentives Working Group report. Continued effort should be made in directing targeting information campaigns (such as BMP guidebooks) for businesses in urban areas to suggest ways to prevent trash and other pollutants from entering the storm drain system.
- **Implement pilot project for drop inlet maintenance, street sweeping, parking lot cleaning, creek clean-ups and improvements at municipal operations:** This task will be carried out by city and county staff involved in Project Clean Water in

conjunction with various municipal departments such as Roads, Parks, and General Services. An evaluation of current practices and their effectiveness will be prepared with recommendations for potential improvements. Recommendations will identify specific activities or examples, including costs associated with capital improvements, operation and maintenance.

Representatives from agencies that are performing street sweeping, such as the Goleta West Sanitary District, and/or parking lot clean ups such as the City of Santa Barbara Public Works Department, should be included in future meetings.

One of the first tasks will be identification of what is currently being done in the municipalities and the unincorporated areas; associated levels of service; costs; resource allocations; funding sources, etc.

- **Funding:** This is an issue for any project. Therefore, during regular research of various grant options, vigilance should be employed to recognize potential ties to this type of project. For example, the County Water Agency and Public Health Department have submitted information to local legislators for funding under the recently passed Proposition 13 addressing water quality improvement projects.

Watershed Resource Center

Working Group Progress Report May 2000

Working Group Members:

Robert Arenz, Jr., Concepcion Coast
Project

Darcy Aston, County Water Agency

Joe Carrillo, Santa Barbara SEA

Roberta Cordero, Chumash Maritime Assoc.

Karen Feeney, CEC

Coleen Lund, County Parks

Mike Marzolla, SB Coop Extension

Landon Nuestadt, SB SEA

Joel Smith, CURE

Alison Whitney, City Public Works

Keith Zandona, Surfrider

Problem Statement:

Public awareness and education is an essential step in creating support for solving community problems. A community that understands the causes of a problem and the affect it has on their families and environment will be more likely to support the solutions to this problem. An educated community is especially important if the proposed solutions may be costly or require lifestyle changes. To create meaningful and lasting changes, the community must be made aware of the problem and empowered by knowing how they can contribute to the solution.

Although beach closures became a major issue in the Santa Barbara community during the summer of 1998, many people are not aware of the sources of this problem, how bacterial and other pollution affect creeks and the ocean, and how to protect our watersheds. The Watershed Resource Center will provide a resource clearinghouse to provide watershed education to school groups, teachers, community members, and tourists.

Recommendations (April 1999):

- Solidify an agreement with the Community Environmental Council for management of the center;
- Confirm that the center conforms to the coastal zoning plan and any other zoning or city ordinance requirements, and obtain all necessary permits to remodel and occupy the building (e.g. Coastal Development Permit; building permits);
- Gain approval for the project from the Parks Commission;
- Bring other groups into the development process;
- Develop plans for the remodeling of the center;
- Develop interpretive exhibits;
- Coordinate volunteer docents;
- Publicize availability of Resource Center to the community

Progress to Date:

During the last 12 months progress has been made on the following (numbers correspond to recommendations numbers):

- On June 22, 1999, the County of Santa Barbara entered into a formal contract with the Community Environmental Council (CEC) to renovate and manage the Center. This is a five year contract with the potential for four five year extensions.
- On December 16, 1999, the Santa Barbara City Planning Commission approved a Coastal Development Permit for the operation of the South Coast Watershed Resource Center at Arroyo Burro Beach County Park.
- On September 23, 1999, the County Parks Commission approved the conversion of the former ranger residence at Arroyo Burro Beach County Park into the South Coast Watershed Resource Center.
- Significant effort has been made to coordinate with other organizations during the development of the project. The CEC has contacted and/or made presentations to the UCSB Marine Science Institute, the Santa Barbara Museum of Natural History, the Guadalupe Dunes Center, the Channel Islands Marine Sanctuary, the Douglas Family Preserve Advisory, Santa Barbara Maritime Museum, Santa Barbara Channel Keeper, Concepcion Coast Project, Santa Barbara Botanical Gardens, Santa Barbara School District, and the Goleta School District to solicit input and to coordinate programs related to the Watershed Resource Center.
- On October 12, 1999, the CEC entered into a contract with Blackbird Architects of Santa Barbara to develop plans for the remodeling of the Center. Members of the Working Group met numerous times over the last year to discuss what form the remodeling effort should take. After much debate, the Group decided that, rather than adding square footage to the existing building, the Center design should rely on the existing, natural features of the site as the key method for conveying its educational messages.

Current status of efforts:

- Exhibit Development: (Recommendation #6) The working group has been meeting every week since late January 2000 to develop the exhibit and interpretive components of the Center. A Request for Proposals is currently being developed and will be finalized by the end of April 2000. The RFP will contain the key interpretive message and the preferred method or methods for conveying this message for each topic area of the Center. The RFP will be distributed to qualified exhibit manufacturers. Upon review of the submitted proposals, CEC will select an exhibit manufacturer(s) to finalize the design and construction of the exhibits.
- Significant progress has been made on securing funding for the project. An approximate \$900,000 budget was developed to renovate the building, develop interpretive displays, and operate the Center for 18 months (beginning January 2000). On December 1, 1999, the California Coastal Conservancy granted the CEC a \$450,000 challenge grant to help meet this budget. CEC has been working to secure the matching \$450,000 through both public and private contributions. On March 7, 2000, the County of Santa Barbara

approved a \$50,000 Coastal Resources Enhancement Fund (CREF) Grant to help with the building renovation. The following is a summary of the secured funding to date:

Funding Source	Amount Secured	Project Component
City of Santa Barbara	\$ 32,484	annual operating expenses (based on biannual budget)
County of Santa Barbara	\$ 32,484	annual operating expenses (based on 5-year contract)
Santa Barbara Foundation	\$ 18,000	audio visual system
County of Santa Barbara	\$ 15,000	installation of handicap access
CREF Grant, County of Santa Barbara	\$ 50,000	renovation of existing building
Coastal Conservancy	\$ 450,000	capital and operating expenses
Wendy P. McCaw Foundation	\$ 200,000	capital and operating expenses

- With the advice and assistance of Joe Carrillo, a very active member of the project’s advisory committee, CEC has also been working to secure donations from the local building community. Significant interest in the project has been shown by Bob Blanchard of County Lumber, who is actively soliciting donations of materials (e.g., doors, windows, decking materials) from product manufacturers. In addition, Rainbird, Inc. has committed to donating the irrigation system and The Tile Collection has expressed interest in providing tile products at cost. All of these donations will qualify as a match to our grant from the California Coastal Conservancy.
- CEC, in conjunction with Darcy Aston (SB County Water Agency) and Alison Whitney (City of Santa Barbara), has met with local school districts to begin coordination of school educational programs.
- CEC, in conjunction with Blackbird Architects, is in the process of obtaining approval from the County Board of Architectural Review. The building permit application for the renovation project will be submitted to the County Building Department by the end of April 2000.

Future Recommendations & Timeline

Project Activity	Responsibility	Implementation Period
Solicit additional funding for capital improvements & program funding	CEC	on-going
Develop working drawings for renovation	CEC/Blackbird	March/April 2000
Coordinate building permit and construction labor & materials	CEC/Blackbird	May/June 2000
Begin renovation project	CEC/contractor/volunteers	July 2000
Design & prepare interpretive exhibits	CEC/working group/ contractor	January - August 2000
Hire Watershed Resource Center manager	CEC	June 2000
Coordinate volunteer docents	CEC	August/September 2000
Grand Opening of South Coast Watershed Resource Center	CEC/working group	Fall 2000
Publicize availability of Resource Center to the community	CEC/County/City	Fall 2000/on-going

Storm Drain Stenciling

Working Group Progress Report

May 2000

Working Group Members

Darcy Aston, County Water Agency

Landon Neustadt, SB Sea

Dricka Brown

Alison Whitney, City of Santa Barbara

Joe Carrillo, SB Sea

Problem Statement:

Pollutants enter storm drain catch basins and flow to creeks and the ocean, causing creek pollution and beach closures. Many people are unaware that storm water is not treated at a wastewater treatment facility or some choose to ignore the impacts of dumping in storm drains.

Recommendations (April 1999):

- Continue implementation of the volunteer storm drain stenciling program.
- Research and implement permanent markers/tiles to mark catch basins including possibility of City of Santa Barbara (City) and County crews applying markers to supplement volunteer program
- Research options for City and County to require developers to permanently mark catch basins within new developments
- Research possibility of decorative tile markers to be used to mark catch basins in highly visible areas
- A storm drain atlas, or similar mapping system, be developed for entire County.

Progress to Date:

The City of Santa Barbara (City) continues to administer and promote the volunteer stenciling program, augmenting the stenciling that has been done by Santa Barbara Sea and Surfrider Foundation. Volunteers check out stencil kits and stencil independently. The City is beginning to track stenciled storm drains on the storm drain atlas. Approximately 20% of 2,300 catch basins and drop inlets in the City have been stenciled. The County has a total of 1,200 drainage inlets on the South Coast. County storm drain atlas is completed, and the County will begin tracking stenciled inlets.

City and County staff researched various permanent markers for catch basins and presented the information to the Working Group, which selected a product to use. These markers are easy and safe to apply so that the volunteer program can incorporate their application.

The City is now requiring anyone who requests a building permit for major development to stencil the catch basin within the developed area. County staff is looking into changing policies to include a similar requirement.

Current Status of Efforts:

The Working Group has been meeting over the last few months. The working group decided to transition to a permanent marker from stenciling the catch basins. Permanent marker tiles will last much longer than stencils (lab tests estimate a lifetime of 30 years for the selected marker). The permanent markers are also more attractive and visible. During recent meetings, the group has made final decisions on the type and format of permanent marker, including size, text and graphics of the marker. One thousand permanent markers will be ordered by the City and County (500 each) with funds at the beginning of the new fiscal year (2000-01.)

Future Recommendations:

The Working Group recommendations for the next 12 months are as follows:

- City and County staff evaluate costs for staff to apply permanent markers as well as volunteer individuals and groups and include these costs in developing the budgets for the stenciling program. Cost evaluation will incorporate cleaning off old worn stencils on non-painted curbs and should consider pros and cons of staff verses consultant to implement program.
- Volunteer program should be promoted by direct mailing to various organizations and sign in sheets for a Saturday event with incentives such as lunch and/or t-shirts.
- City and County develop an accurate tracking method in their storm drain atlas database to track marked or stenciled catch basins.
- City and County include in budgets costs for 1,000 (500 each) permanent catch basin markers per year on an ongoing basis, until all catch basins on South Coast are permanently marked. Once that is complete, continue a budget for markers for new catch basins and replacing worn out/broken markers.
- County implement requirement for developers to mark catch basins within new developments.

Youth Education

Working Group Progress Report May 2000

Working Group Members:

Darcy Aston, County Water Agency
Jennifer Ayres, CEC
Chris Chatto, Citizens Planning Assoc.
Karen Feeny, CEC
Julie Goodson, CINMS
Don Hartley, SBCC
Robin Hill-Ward

Stephanie Langsdorf, Urban Creeks Council
Landon Neustadt, SB Sea
Matt Pesce
Luis Pinedo, Agua Pura
Marsha Roberson
Heide Wascher
Alison Whitney, City of Santa Barbara

Problem Statement:

Polluted creeks, beaches and oceans have become commonplace in Santa Barbara County. It is an important component in a clean water program to educate the youth about the problem and teach actions that will help to stop pollution entering our waterways.

Recommendations (from April 1999):

- Develop and coordinate classroom presentations for K-8th grade
- Develop a plan to incorporate watershed education into existing formal and nonformal youth education programs
- Select and order appropriate curriculum materials
- Sponsor training for teachers and other educators on watershed curriculum and materials
- Participate in community events with activities for youth
- Provide water test kits to teachers

Progress to Date:

- City of Santa Barbara (City) and County staff developed and present classroom presentations to K-8th grade classes at schools and youth programs throughout the South Coast. An *Envrioscapes* watershed model was purchased which is a hands-on model used to demonstrate how non-point source pollution flows through a watershed. Materials including stickers, posters, and activities have been developed and are distributed to teachers in pre and post-packets as part of the classroom presentations.
- A Watershed Curriculum for Grades 4-8 was developed. The working group hosted a teacher training workshop for the new curriculum on February 23 which was attended by 25 teachers and youth educators. As an extension of the workshop, a water quality workshop floating lab cruise was held on March 11 sponsored by NOAA's Channel Islands National Marine Sanctuary.
- Members of the working group met with Santa Barbara School District administration and 6th grade teachers to develop a plan to incorporate watershed curriculum into the 6th

grade science framework. This work will continue as the new science standards are developed in the coming year.

- City and County provided funding to the Community Environmental Council's Creek Watchers program which provided teachers with water test kits and training on how to develop a water testing program with students.
- Agua Pura, U.C. Cooperative Extension's Latino Youth Watershed Outreach Program, participated in several community bilingual events educating youth and adults about the local watershed issues.
- City, County and Agua Pura staff participated in the JASON Project February 28 to March 3, 2000 and at the Santa Barbara Earth Day 2000 Festival on April 22 with a booth demonstrating the watershed model.

Current Status of Efforts:

The Working Group was meeting frequently to develop the curriculum but recently has not met. Meetings will resume this summer to work on next year's projects.

Future Recommendations:

- The Working Group recommendations for the next 12 months are as follows:
- Hold a teacher training workshop in the fall.
- City and County continue classroom presentations and work with summer camps to incorporate lessons and presentations into appropriate summer camp programs.
- City and County work with all South Coast school districts to incorporate watershed curriculum into the 6th grade science framework.
- Continue to coordinate with other local watershed education efforts, including the Agua Pura and Creek Watchers programs, in order to provide comprehensive education program.
- Revise and update watershed curriculum.
- Participate in various teacher conferences and workshops in the summer.
- Coordinate youth outreach program with Watershed Resource Center once it is open.

Septic System

Working Group Progress Report May 2000

Working Group Members:

Rob Almy, Santa Barbara County

John Robinson, Heal the Ocean

Andy Caldwell, COLAB

Brian Trautwein, Environmental Defense Center

Bill Ferguson, City of Santa Barbara

Joel Smith, Surfriders Foundation

Rick Merrifield, Santa Barbara County

Dan Reid, Santa Barbara County

Problem Statement:

Septic systems have been used for sewage effluent disposal in many areas of Santa Barbara County where sanitary sewer access and/or capacity does not exist. Septic systems (onsite sewage disposal systems) rely on the properties of soil to filter septic tank effluent in the disposal field area. Although current siting criteria are conservative, previous standards have not always been so conservative. In addition, a number of problematic areas within the County have been designated Special Problem areas due to unfavorable conditions for septic system siting.

Failing septic systems (sewage effluent ponding on surface or flowing offsite) pose a direct risk to public health. Hydraulic continuity to ground and or surface water has the potential for dispersing septic effluent constituents (pathogens, bacteria, nutrients, etc.) to areas well away from the disposal area. Assembly Member Hannah-

Beth Jackson has introduced legislation (Assembly Bill 885) which seeks to provide an additional level of oversight for septic systems on parcels in the Coastal Zone and parcels that may be impacting surface and/or groundwater outside of the Coastal Zone.

Several communities (e.g. specific counties in Florida, Rhode Island and Stinson Beach, CA) have identified septic system problems that are leading to environmental degradation (increasing nitrates) and or public health risk (increasing fecal contamination). As a result of bacterial problems in coastal areas of Santa Barbara County where septic system disposal is prevalent, the Working Group was formed to examine existing septic system standards and explore means to convert septic system disposal to sanitary sewer, where available, and to require additional monitoring in areas (especially problematic areas for septic disposal) where sanitary sewer was not available.

The Working Group prepared a report and list of recommendations presented to the Board of Supervisors on April 27, 1999. This report is a status report on the progress made towards implementing the recommendations presented last year.

Progress on Possible Solutions and Alternatives¹ (from 4/27/99):

5A) Adopt a countywide maintenance ordinance.

Project Clean Water Septic System Working Group became a participant in a larger working group consisting of representatives from industry (pumpers, contractors, soils engineers, real estate association), homeowners, and regulatory representatives. The larger working group met several times and presented proposals to the County Board of Supervisors in July, 1999, October 1999 and January 2000.

A memo to the Board of Supervisors was prepared and submitted in conjunction with the budget approval process in June 2000. Based upon the recommendations, the Board of Supervisors approved a transfer of \$110,000 from the General Fund to the Public Health Department to further explore servicing and inspection focussed on the South Coast area. The group will be reconvened to assist with drafting of any ordinance changes.

5B) Investigate & implement solutions in problem areas.

The working group mentioned above identified several problematic areas for septic systems. The working group's focus to date has mainly been on maintenance. However, as a result of efforts by Heal the Ocean, homeowners and the local sanitary districts, many coastal areas are exploring or moving forward with conversion of septic systems to sanitary sewer. Heal the Ocean has met with the sanitary districts concerning incentives for conversion of septic to sanitary sewer. The working group recently approved exploration of additional incentives and future meetings are planned with the sanitary districts, RWQCB, LAFCO, etc.

5C) Develop review criteria for septic systems near creeks & within coastal zone.

As part of the mandatory servicing and inspection proposals for septic systems proposed by the working group, risk categories associated with septic systems and potential impacts on ground and surface waters was examined. The group established a number of risk criteria including:

- Proximity to surface waters, floodplains and/or wetlands
- Location in designated or known special problems areas for septic system disposal
- Excessive slope in the disposal filed area
- Soils inappropriate for septic system disposal.

The criteria were briefly examined with the use of the recently completed GIS inventory for septic systems.

5D) Develop map & database of all septic systems in county.

This has been the most successfully completed task recommended by the working group. EHS in conjunction with contractor GeoDigital Mapping, Inc. completed the first Geographical Information System (GIS) inventory of septic systems within the County of Santa Barbara in January of 2000. The County is continuing to build upon this database and eventually will have all known septic system data, site-specific soils and water conditions included in the GIS. Ongoing repairs, modifications, servicing, etc. will be tracked for all septic systems within the County.

5E) Conduct DNA/other testing to determine if septic tanks are a contributing factor.

Heal the Ocean, in partnership with the County of Santa Barbara designed and implemented a DNA study for Rincon Creek known as "The Lower Rincon Creek Watershed Study."

The study was useful in identifying sources of contamination including human waste in the watershed. The County Public Works Department, Solid Waste Division is planning an additional study using these DNA techniques on the Arroyo Quemado watershed and the County has submitted a project description for an additional DNA study to Assembly Member Hannah-Beth Jackson's office for potential funding under Proposition 13 allocations.

¹ Numbering consistent with previous Board of Supervisor's report Appendix H

Recommendations:

The working group proposes the following recommendations:

- Continue to petition the Board of Supervisors to establish a mandatory servicing and inspection program. Consistent with Board direction and proposed legislation (AB 885, Jackson), the initial area of focus will likely be the south coast area. It will be essential to the creation and implementation of an ongoing servicing and inspection program to develop a dedicated funding source. The Board's direction on January 25, 2000 was to reduce the overall scope of the proposal and to reduce the associated costs for the homeowners.

- The Environmental Health Services Division of the County Public Health Department has oversight for permitting of onsite sewage disposal (septic) systems. EHS was successful in the adoption of an onsite sewage disposal system ordinance that was focused on conversion of unsafe, septic system components (i.e. hollow seepage pits, cesspools, etc.) to current standards. A component of this ordinance also requires mandatory reporting and inspection of septic system components in conjunction with homeowner voluntary servicing and septic systems. EHS initially envisioned that the County code would be modified to include all current standards and policies including:

- Septic system siting
- Review and adoption of appropriate standards
- Long-range planning policy examination
- Appropriate use of alternate system installations (e.g. aerobic systems, mound systems, sand filter systems, etc.).

The working group recommends that this effort be restarted and that particular attention and scrutiny be applied to the designated problematic areas identified using the GIS septic system inventory risk criteria: especially in the coastal areas.

- The GIS septic system inventory has proven to be a very useful tool but has not been developed to its full potential. Large amounts of septic system data exist in EHS hard file records. In addition, for the GIS tool to be useful for monitoring water quality trends and evaluating changes in septic system policies/standards, it must continue to be expanded to include additional soil information and hydrographic information. EHS is collecting a great deal of information from pumper reports associated with voluntary septic system servicing. Since inception in April 1999, EHS has collected over 1100 septic system-servicing reports. This information provides insight into current site specific conditions. The working group recommends enhancement of the GIS septic system inventory to include all hardfile information and a data entry methodology to include septic system servicing records, Mission Canyon survey district, complaint and septic system failure data as well as tracking compliance with required defect correction notices.

- Establish a task force to develop incentives for homeowners using septic system disposal to convert to sanitary sewer wherever feasible.
- The working group recognizes the value of DNA testing and recommends additional studies to be performed to identify sources of fecal contamination. Especially in watersheds where septic system effluent is suspected as being a contribution to the bacterial contamination.

Action Plan:

Septic System Ordinance Revisions

- EHS has committed to the Board of Supervisors and the Regional Water Quality Control Board to revising and modifying the existing onsite sewage disposal system ordinance to adopt appropriate sections of the Basin Plan as well as reviewing all existing policies and protocols. However, as the working group is still considering mandatory servicing and inspection, it is difficult to move forward on these proposed revisions without settling the issues surrounding mandatory servicing and inspection. The working group recommends that additional resources, in the form of facilitators and support staff be made available to assist EHS. These resources will be used in scheduling and carrying out the necessary meetings with the working group and other community components to complete this task as well as further develop mandatory servicing and inspection recommendations. The working group recommends completion of the ordinance revisions by the end of the 2000 Calendar Year.

Ongoing Septic System Program

- The working group further recommends continuation of the current voluntary septic system program and enhanced educational campaign.
- In order to expand and enhance the current GIS septic system inventory created under contract with GeoDigital Mapping, Inc. the working group recommends that EHS explore the use of interns, volunteers and students (UCSB/SBCC) to assist with conversion of hardfile data to the GIS septic system inventory. Also, a process should be developed such that newly collected septic system data (e.g. new permits, septic tank serving reports, surveys, etc.) can be assimilated into the GIS database.
- Members of the working group- specifically Heal the Ocean- have been very pro-active in seeking conversion of septic systems to sanitary sewer disposal. Heal the Ocean has met with homeowners, regulatory staff, sanitary district staff, design engineers, contractors, etc. Heal the Ocean has been successful in assisting a number of coastal communities (e.g. Rincon Point HOA, Sandyland Cove residents, etc.) to begin the process of gaining approval for conversion of their septic systems to sanitary sewer (Carpinteria Sanitary District). The working group recommends additional resources be provided to streamline the conversion process and to develop incentives for homeowner septic system conversions. The working group recommends that the following agencies be brought to the table to discuss these issues:
 - RWQCB
 - LAFCO
 - Sanitary Agency Management Association (SAMA)- management staff of various sanitary districts and municipalities
 - Coastal Commission

- Public Health Department
- Planning and Development
- Septic System Engineers, Contractors
- Homeowner and Neighborhood Associations
- PCW Septic System Working Group Members
- Other appropriate tradesmen or stakeholders

Focused Studies

- The working group recognizes that the County Public Works Department/Solid Waste Division is in the process of designing and implementing a study using DNA techniques to identify sources of fecal contamination for the Arroyo Quemado watershed. EHS, based upon previous study experience, should assist with the development of the workplan for this study and examine the possibility of assessing public health risk as part of this study.

Needs & Requirements*

Recommendation	Proposed Staffing	Timeframe and Position	Associated Costs
Septic System Ordinance Revisions			
	Project Facilitator-	Independent Contractor : ¾ FTE	50,000
Projected Completion: 9 mos.	Support Staff	EHS Specialist: ¼ FTE	15,258
		Clerk Typist II: 1/8 FTE	5,894
		Total	\$71,152

Ongoing Septic System Program			
Recommendation	Proposed Staffing	Timeframe and Position	Associated Costs
Incentive Development	Project Facilitator	EHS Senior Specialist ½ time Extra Help (6 months)	16,700
		Clerk Typist II: 1/8 FTE	5,894
		Total	\$22,594
Current Program- request for ongoing funding	Oversight staff	EH Senior: 1.00 FTE	66,722
	Oversight staff	EH Specialist: 2.00 FTE	122,064
	GIS Project Assistance	½ Extra Help Map Technician	29,200

	Support	Clerk Typist II: ¼ FTE	11,787
	Computer licenses, office supplies, etc.		43,368
		Total	\$273,141
Focused Studies			
Projected Completion-6 months after inception	Project Manager	Consultant ½ FTE for 4 months	12,756
	Field Staff	Technician Extra Help (3 months)	11,391
		Contract Biologist	500
	Support Staff	Clerk Typist II 1/8 FTE	5,894
	Laboratory Work	Public Health Lab	10,000
		Contract Lab	25,000
	Field supplies, equipment, etc		5,000
		Total	70,541

* Costs identified include staffing associated with Santa Barbara County, Environmental Health Services oversight and additional work evaluation for other Departments (e.g. Planning and Development) need to be explored.

Sewer System Testing Working Group

Progress Report May 2000

Working Group Members:

Rob Almy, County Water Agency

Jessie Altstatt, Channel Keepers

Rebecca Bjork, City of Santa Barbara

Willie Brummett, County Env. Health

Andy Caldwell, COLAB

Patricia Duffy

Cathleen Garnand, County Water Agency

Yvonne Harvey, Heal the Ocean

Hillary Hauser, Heal the Ocean

Steve Mack, City of Santa Barbara

Jack Reed, Community Planet Foundation

John Robinson, Heal the Ocean

Jeff Salt, Goleta Sanitary District

Jim Smallwood

Bill Thomas, City of Santa Barbara

Jeff Young, Heal the Ocean

Problem Statement:

Untreated or partially treated wastewater can carry bacterial contamination, human waste and human pathogens. High levels of bacterial contamination (including fecal coliform and enterococci bacteria) have been detected in creek and ocean water resulting in beach and creek closures. The sewer systems working group was established to examine the sewage collection and wastewater treatment systems throughout the County to ascertain if the systems are contributing to the water pollution problems at the beaches. The working group will also look at steps to be undertaken to minimize the potential release of wastewater to storm drain systems as well as sample testing in target areas for groundwater contamination.

Goals:

The goals identified by the sewer system working groups for implementation were:

- To initially focus on the five sanitary district on the south coast and then apply similar criteria to the Sanitary Districts countywide.
- To evaluate problems associated with inflow and infiltration.
- Determine the condition of the sewer pipes in the five sanitary districts of the south coast.
- Collect information on wet weather flows and the sanitary districts capacity to handle wet weather.
- Determine the possibility of ground water contamination through testing through a monitoring well in a selected target area.
- Public education on the need for maintenance and inspection of laterals, and the problems associated with illegal hookups of drainpipes to sewer mains and the effects of illegal discharges into the sewer system.

Progress to Date:

- **Questionnaire to Five South Coast Sanitary Districts:** The working group has developed and distributed a questionnaire to the five South Coast Sanitary Districts. The results are being tabulated. The plan is to look at all the Sanitary Districts in the County using similar criteria.
- **Inflow:** The working group has looked extensively at inflow problems in the City of Santa Barbara and the effects of illegal drainage hookups on the treatment plant. Inflow from illegal drainage hookups is detrimental to the treatment plant's capacity to handle high volumes of water during rain events. Progress with the education and enforcement program on illegal drainage hookups is being monitored. A suggestion was made to increase the fine or to assist with a program of loans to alleviate the drainage problems of individual homeowners if compliance is not effective. One of the concerns was that people may choose to pay the fine because it is so low vs. complying since the expense of the damage caused by property flooding far exceeds the amount of the fine. There may not be any financial incentive for property owners to change unless the fine is high enough to make it financially prudent not to have illegal hookups. The working group has also decided to look into current development standards for drainage to insure that they sufficiently address individual homeowners' drainage needs during heavy rain. This effort is to prevent the temptation of homeowners of new developments from illegal drainage hookups. How serious this problem is has been identified and we need to make sure that these same drainage and structural mistakes are not repeated in new developments.
- **Infiltration:** The working group has not focused on infiltration at this time since it is difficult to determine if the volume of water coming into the system is from infiltration unless the inflow problem is under control. Once it has been determined that the peak volume during rain events is no longer a result of illegal hookups we will then be able to look more closely at infiltration.
- **Laterals:** The working group has also discussed the problems with laterals and maintenance. Since these laterals are on private property, the city and county have limited capacity to test these except with smoke testing near the main connection. It is known that some laterals in the city are made of a cardboard-like substance called Orangeberg and may be leaking. A program to require lateral inspection has been recommended- see recommendations. A pilot project for testing has been recommended where we will select a neighborhood in the City of Santa Barbara where Organgeberg has been used and smoke test that area to determine if these laterals are a concern. Currently working group members are contacting plumbers to interview regarding problems they have encountered with homeowners' laterals. Education for homeowners on lateral maintenance has also been discussed.
- **Groundwater Testing:** The working group has discussed the need to test ground water and is currently working to determine the cost of a testing in a target area.

- **Cumulative Impacts and Capacity:** We are addressing capacity issues in our questionnaires to the Sanitary districts but have not fully addressed the need to look at increased development and capacity issues. We will be contacting Goleta West Sanitary District to discuss capacity issues and concerns in relation to the impacts from future development.

Current Status of Efforts:

The working group is currently working on all the projects discussed above. The working group holds regular meetings and meets the first Thursday of the month at 3 p.m. in the conference room at El Estero Wastewater Treatment Plant.

Recommendations:

- The working group has recommended a mandatory inspection program of laterals. One of the recommendations was to have lateral inspection linked to the sale of a home and to have this included in the routine home inspection. The working group will continue to work with County and City officials to facilitate a mandatory inspection program for laterals.
- The Sewer System Working group recommends and is in the process of working out the details to implement a pilot smoke testing project in a neighborhood that is identified to have orangeberg laterals.
- We recommend a pilot project to test groundwater in an area where consistently high bacteria counts are reported. The cost to drill two semi-permanent monitoring wells has been estimated at approximately \$5,000. The working group recommends that Project Clean Water assist with financial support for the pilot project.
- As mentioned above, this working group has concerns about the serious problem that illegal hookups create and is working to be kept informed on the success of the educational and enforcement program the City of Santa Barbara is implementing. Due to how serious this problem is, if the current program does not yield significant results this working group would recommend considering implementing higher fines or looking into low interest loans to offer to homeowners to have the drainage problem fixed.
- We recommend that current regulations for drainage in new development be strictly reviewed, to ascertain that during wet weather the appropriate drainage is in place to prevent homeowners from turning to solutions such as illegal hookups, in order to save their property from water damage. If current development drainage regulations are not sufficient then the need for new regulations and innovative drainage techniques should be addressed.

Timeline:

During the next four to six months, we expect to have accomplished most of the goals for the South Coast Area (with the exception of lateral inspections) and can begin to look at North County sanitation districts.

Improved Beach Signage

Working Group Progress Report

May 2000

Working Group Members:

Darcy Aston, County Water Agency

Dan Reid, County EHS

Jim Isaac, County Parks

Alison Whitney, City of Santa Barbara

Sharyn Main, McCaw Foundation

Keith Zandona, Surfrider Foundation

Problem statement:

In September 1996, Environmental Health Services began regular ocean water quality testing at 16 County beaches. The testing determines levels of fecal coliform, total coliform bacteria, and enterococcus bacteria, which can cause skin rashes, sinus infections, and other unhealthful affects. To alert the public to these conditions, Environmental Health Services distributes these test results in weekly press releases to several media sources and interested groups. EHS also posts notices on the beaches to inform the public of beach status.

According to standards established in July 1999, a beach is “closed” if there is a sewage spill, or a “warning” is posted if bacteria levels exceed established state standards. A beach is “open” if bacteria levels are below the state standards.

Currently, temporary signs (cardboard sign on a wooden stake) are posted when beaches are under warning status and closed status. Yellow ‘WARNING’ signs and red ‘KEEP OUT’ signs are posted at beach access points, and in the sand near the creek mouth. These signs are often removed, knocked over by wind or tide, or ignored. Theft is a common problem with these temporary signs, and staff must go out to remove them when beach status changes. This often results in beach users entering potentially contaminated water with the associated health risks. Also, current signage does not explain how ocean water contamination occurs, what local agencies are doing about it, or how the public can be part of the solution.

Recommendations (from April 1999):

Level I:

- Install improved, permanent beach signs that display beach status as well as general information to better inform the beach-going public.
- Install one of these signs at the main access points to the 19 beaches that are currently tested for ocean water quality
- One portion of the sign should feature interchangeable panels to provide beach status (open/closed/warning). The other half of the sign should provide information on water contamination, potential citizen actions, and information on how to learn the status of other local beaches.

Level II:

- Install multiple signs at some of the 19 beaches that have more than one main public access point.

Level III:

- Install modified versions of similar signs, (interpretive only, with the possibility of open/closed/advisory postings if creek testing is implemented in the future) in major creek access areas of public parks.

Progress to date:

Level I efforts have been completed, with multiple signs being installed at County and City beaches. With significant input and participation from City and County Parks Dept. staff, EHS staff, and the City Sign Committee, sign design was developed and completed. Signs were fabricated from porcelain enamel, which creates colorful, durable signs. County Parks Dept. staff developed a creative design for the sign frame, and worked with City Parks staff to develop the final frame design.

At the current time, signs will be installed at County and City of Santa Barbara beaches only. However, EHS also tests at State and private beaches. Efforts will continue to promote the installation of signs at the other beaches that receive regular testing.

The Working Group cooperated with the County's Green Team on a CREF grant proposal that would have covered partial costs for the beach signs. This grant was recommended by staff but subsequently not funded. Costs of the signs are being covered by PCW budget for City and County.

Current status of efforts:

Signs were installed at 12 locations in County and City beaches during May and June 2000. The locations include Rincon Beach (2), East Beach (5), Leadbetter Beach (1), Arroyo Burro Beach (1), Goleta Beach (3), Jalama Beach (2), Ocean Beach (1), and Rancho Guadalupe Dunes Beach (1). These beaches are all tested weekly by EHS, and beach status postings on these signs will be updated either by EHS staff, or City or County Parks Dept. staff.

A sign unveiling for the first beach signs was held on June 2, 2000, at Arroyo Burro Beach.

Future recommendations:

The Working Group will continue to work to implement Level II and III efforts that were not implemented as part of Level I. This includes:

- Facilitating installation of signs at State and private beaches that are part of the EHS testing program.
- Coordinate with City & County Parks Depts. to install signs in parks.
- Continue to seek grant funding for additional signs.

Targeted Information Campaign

Working Group Progress Report

May 2000

Working Group members:

Darcy Aston, County Water Agency
Andrew Breibart
Jan French, County Water Agency

Lloyd Simms, Goleta Sanitary District
Alison Whitney, City of Santa Barbara
Lee Wilkerson

Problem Statement & Background

Creek and ocean pollution in Santa Barbara most often comes from non-point sources; there is no single main polluter. However, there are several potential sources for the bacterial and other contamination in local creeks and at the beaches. Community members and business owners may not be aware of their contribution to the contamination problems, or how to change their behavior to address these problems. Community education must take place before enforcement of existing laws can be effective.

Targeted information, in the form of brochures, can be distributed to inform the community of solutions to specific types of contamination. Distribution of brochures will also be targeted and specific. Brochures will be produced in English and Spanish versions. Phase I targets were selected based on the potential contribution of these sources to bacterial contamination in creeks and the ocean. Phase II targets contribute other types of pollutants that need to be addressed in the long-term NPDES program.

By targeting specific groups and providing them with solutions, it may be possible to make significant reduction in certain types of pollution. Distribution of this targeted information can also serve as the first step for enforcement procedures.

Recommendations (April 1999)

In the last working group report, it was recommended that the targeted information be implemented in two phases. Phase I brochures (listed below) were to be developed by June 30, 1999, with Phase II (listed below) beginning at the completion of Phase I and continuing on into NPDES implementation.

Phase I brochures:

- Dog owners
- Horse owners
- Gardeners
- Homeowners and businesses near creeks/ocean
- Restaurants

Phase II brochures:

- Septic tank owners
- Construction crews/contractors/architects
- Automotive & industrial businesses
- Agriculture/livestock
- Cleaning companies (i.e. rug, furniture, steam cleaning)

Progress to date:

Phase I

The English versions of Phase I brochures were printed in July 1999; and Spanish versions were produced in December 1999. The restaurant brochure was handled slightly differently, becoming part of the Restaurant Outreach Program. This program comprises a poster, booklet and recognition award for restaurants, and is now being implemented as part of the Business Incentives Working Group (see May 2000 Business Incentives Working Group Progress Report).

Phase I brochures include:

- “A Dog Owners Duty”
- “Helpful Hints for Horse Owners”
- “Creekside Concerns”
- “A Gardener’s Guide to Clean Water”

These brochures were distributed in several ways throughout the South Coast:

- to targeted businesses (i.e. feed stores, nurseries, etc.)
- at public information events
- targeted mailing
- by enforcement officers (Solid Waste, EHS)

Phase II:

The Business Incentives Working Group was initiated in fall 1999, and at that time it was decided that the development of Phase II brochures was an appropriate part of that group’s work plan. (Conveniently, County and City staff members of these two working groups are the same.)

Current status of efforts:

The Targeted Information Campaign Working Group is continuing to work cooperatively with the Business Incentives Working Group (BIWG) to develop the Phase II brochures. The BIWG identified automobile service businesses and mobile cleaner businesses as the top two priorities. Currently, a brochure for automobile service businesses is in draft form and should be ready for distribution by summer 2000. The brochure for mobile cleaners will be developed at that time.

Future recommendations:

This working group should continue to work with the BIWG to develop the phase II brochures, with a target of completing all identified relevant brochures by the end of fiscal year 00-01.

Additional methods for distribution of targeted brochures should also be implemented.

Possible options include

- door-to-door distribution
- homeowners associations
- professional stables
- others as identified

Water Quality Hotline

Working Group Progress Report

May 2000

Working group members:

Robert Almy, County Water Agency
Darcy Aston, County Water Agency
Ryan Hill, County Fire Department
Peggy Langle, Env. Health Services
Dan Reid, Env. Health Services

Harry Slikker, City of Santa Barbara
Andrew Breibart
Keith Zandona, Surfrider Foundation
Ken Wilson, California Fish & Game
Alison Whitney, City of Santa Barbara

Problem Statement/Background:

Contamination of creeks and the ocean has led to beach closures, and possible health impacts in the Santa Barbara area. Many citizens observe dumping of trash and other waste into creeks, sewage spills or leaks, or inappropriate discharge into storm drains. Although all of these activities have negative impacts on creek and ocean water quality, most people are unaware of where to report such observations. Without knowledge of these illegal activities, government officials cannot respond appropriately to clean up the incident or deal with the offender.

State, federal, and local laws already exist to help officials deal with most water quality issues. In the past, the lack of a centralized and efficient reporting system hindered the flow of information from the public to the appropriate agencies. The development and promotion of a water quality hotline provides an efficient and effective means for community members to report water quality issues and receive information on how to protect water quality in our creeks and the ocean.

The water quality hotline, at 1-877-OUR-OCEAN (1-877-687-6232), was implemented as part of Project Clean Water, and went into affect on February 22, 1999. By calling this toll-free, 24-hour hotline, citizens can access a menu of choices in Spanish and English that will allow them to report water quality issues to the responsible agency. A network for incident response is being developed between various enforcement agencies. Once the report is taken by a specific agency, that information will be shared with others at the state, federal, or local level, who also have jurisdiction.

Hotline callers can also select options to receive information on recycling used motor oil or disposing of hazardous waste. Another option will put them in touch will local organizations that deal with protecting our watersheds and the ocean.

Recommendations (from April 1999)

In April 1999, the working group recommended that the hotline be evaluated after six months to determine the value of the service. Factors to be considered include:

- Number of calls received
- Adjustments that have been made to the hotline since initiation
- Comments from participating agencies
- Comments from the public
- Role of the hotline in the NPDES permit process

Progress to date:

Over the past year, many comments were received from the public and PCW Stakeholders. These comments were used to implement revisions to the hotline to make it easier to use and more efficient. Also, efforts to improve the hotline also led to discussions between various agencies to clarify enforcement responsibilities. Specific progress over the last year included:

- **Revisions:** The hotline was revised to increase ease of use for callers by more quickly delineating English and Spanish speaking callers, and facilitate direction of calls to the appropriate agencies. When callers reached County PCW staff with specific complaints about the hotline, or uncertainty about the end result of a report, staff were able to track response to a report. Most calls tracked in this way received appropriate response. Other calls that had been misrouted were able to be corrected.
- **Promotion:** The hotline was promoted through a variety of methods. Public service announcements were placed in the News Press and Independent. Wallet-size cards with the hotline number were produced and distributed. Information on the hotline was placed in the newsletters of several nonprofit organizations that participate in Project Clean Water. Any material produced by PCW (ads, brochures, newsletters) always contains the hotline number. Recently, PCW produced a refrigerator magnet featuring the hotline number; hundreds of these refrigerator magnets were distributed at the Earth Day Festival.
- **Call tracking:** Calls to the hotline have varied throughout the year, but overall usage has dropped to between 10 –20 calls per month. After currently recommended revisions are implemented, additional promotion should increase hotline usage.

Current status of efforts:

Recently, there have been three recommended revisions to the hotline:

- **Option to report illegal encampments:** As bacterial contamination continues to be a primary water quality concern, there is a significant need to respond to illegal encampments in creek areas. Currently, there is no option to report such encampments; callers must know that they should call police/sheriff. The recommendation was made by the Illegal Activities Working Group to add an illegal encampment reporting option, which would transfer calls to the police or sheriff department. This option has already been cleared with police and sheriff dispatch.
- **Addition of City of Santa Barbara Public Works Department phone number:** City staff have requested that certain calls now routed to EHS be instead directed to the City's Public Works Department. when they occur within the City of Santa Barbara.
- **Routing to live person:** While considering the addition of the above two options, working group members discussed the increasingly complicated configuration of the hotline. This can add to caller dissatisfaction, and ultimately decrease usage. When the hotline concept was initially discussed, most working group members agreed that a live person answering the line would be optimal. However, staffing concerns caused this idea to be set aside. Now, after over a year of experience and response to complaints, we are back to the point of considering whether routing the hotline to a live person would be more efficient and increase hotline use. This set up is shown in the following table. The hotline number would remain the same and would have the same opening message.

Proposed Hotline Revision 4/00

Caller dials hotline	Automated message asks caller to choose whether they want information or to report a water quality problem.
Caller wants information	Transfers to recorded message (retains current configuration)
Caller wants to make a report	Caller is prompted to press (1) if the problem is within the City of Santa Barbara, or (2) if the problem is in any other area (Carp, Goleta, Montecito, Summerland, etc.)
Caller chooses option 1 (within City of SB)	Caller is transferred to the City's Public Works Department reception line. The receptionist takes the report and transfers the caller to the proper person for response.
Caller chooses option 2 (County areas)	Caller is transferred to EHS receptionist. The receptionist takes the report and transfers the caller to the proper person for response.

This arrangement creates the following considerations:

- Additional work load: This may add work for receptionists who are handling the incoming calls. However, both EHS and City of Santa Barbara Public Works Department receptionists already receive such reports and are accustomed to routing them either to EHS staff or other departments. We could also sponsor training with enforcement staff so that reception staff can have a solid background in appropriate routing of calls. Currently, hotline use is low, but we hope that a more streamlined system combined with additional promotion will increase usage. However, the anticipated workload should not overwhelm reception staff.
- Weekend calls: Both EHS and City Public Works offices are closed on weekends. However, the City has an answering service that can route hotline calls after hours and on weekends. Harry Slikker, City of Santa Barbara Water Conservation Specialist, has talked with the local 911 supervisor, and he may be willing to have calls routed through 911 during EHS off-hours. The fire department is another potential back-up number when EHS staff are not available.

First priority is for County and City staff to pursue the option of routing hotline calls to EHS and City Public Works Department staff. If this is not feasible, the other changes will be implemented to the existing hotline.

Future recommendations:

- Pursue implementation of routing of hotline calls to County/City staff.
- Implement illegal encampment reporting option and City Public Works Department routing option (if Recommendation #1 proves infeasible).
- Enhance hotline promotion through PCW media campaign (scheduled for May 2000), PSA ads in newspapers, brochures, and other public information materials.
- Continued monitoring by County/City staff.

Business Incentives

Working Group Progress Report

May 2000

Working Group Members:

Darcy Aston, County Water Agency

Craig Fusaro, Cal Trout

Sharyn Main, McCaw Foundation

Dan Reid, County EHS

James Smallwood, Heal the Ocean

Mark Wheeler, Heal the Ocean

Alison Whitney, City of SB

Daniel Wilson

Keith Zandona, Surfriders Foundation

Problem Statement:

Much of the emphasis for Project Clean Water programs to date has been on improving and implementing best management practices for City and County agencies and educating the general public about their role in non-point source pollution and the associated impacts to water quality. Most of business and industry groups in the region, however, have not been targeted for this type of education.

While the southern Santa Barbara County region has relatively few point-source industry dischargers, there are many businesses and industry groups that contribute to urban run-off in much the same way agencies and homeowners do. The cumulative effect of contaminated run-off from businesses, including parking lots, hardscape and landscaping, and the mismanagement of waste products can have a significant impact on water quality.

Regardless of size, businesses making even minor changes in their daily practices could greatly reduce non-point source pollution impacts.

There are a number of reasons and motivations for the business sector to be participating in the community's efforts to clean up the local creeks and oceans. Many businesses derive profit from tourism, and beach closures resulting from poor water quality adversely affects that industry. More importantly, as vital community members businesses should take a leadership role in the water quality. By taking the lead, businesses can develop their own voluntary incentive programs that improve water quality and meet their needs without adding additional layers of regulations. In this report, the Business Incentives Working Group identifies ways of reaching this critical target audience through a voluntary program that includes financial and goodwill incentives.

Goal:

The goal of the Business Incentives Working Group (BIWG) is to garner voluntary participation of businesses in local water quality efforts in the short-term through a voluntary educational incentive-based program. Long-term goals include the development of a financial- incentive program to greatly increase participation by the business sector.

Strategies:

Target Business/Industry Groups

The BIWG selected business groups to target for a volunteer-based incentive program based on their potential to impact water quality. Information appropriate to each of these industry

types will be developed and distributed within the coming fiscal year. These business types include:

- Automotive businesses (service & repair, gas stations, car dealerships, etc.)
- Mobil Cleaners (including auto detailers and carpet cleaners)
- Restaurants (outreach already being developed for this target business)
- Waterfront Area Businesses
- Construction/Building Trades
- Painters (incorporate efforts by CEC)
- Hotels
- Landscapers/Gardeners (Green Gardener Program already under development)

Incentive Program

BIWG is developing incentives that would entice businesses to participate in the water quality effort. The level of participation may vary depending on the business size and type; however, all businesses can participate in improving water quality on some level. The types of incentives that can be offered are cover a widerange, from education and awards to financial incentives.

- **Promotional Value Incentives**

The types of incentives that will be developed in the short-term will provide promotional value (acknowledgement), and stimulate additional businesses to participate through peer pressure and competition. For instance, businesses willing to implement appropriate Best Management Practices (BMP's) to improve run-off from their operation would be acknowledged with a certificate, window sticker or in advertising. Another example would be having the local Chamber of Commerce or business associations make a direct plea to their membership to participate in such a program. "Goodwill", or promotional value incentives, will most likely appeal to businesses that already have or are close to implementing the BMP's established for their industry. Businesses that only need to make minor changes or changes that don't cost much may also be likely candidates for this program. Examples of this type of program include the Restaurant Recognition Program, and the Green Gardener Program (described below).

- **Financial Incentives**

Tax credits and other financial incentives will provide incentive for the majority of businesses, where capital investments or other major modifications are needed to reduce water quality impacts. Because these types of financial incentive programs require detailed fiscal analysis, this type of program is planned for long term implementation.

- **Other Incentive Programs**

In addition to creating an acknowledgement-based program that promotes businesses' water quality improvement efforts, the BIWG is also looking into ways of including water quality and run-off management components into existing environmental incentive programs. The following programs have potential for adding or enhancing a water quality component:

- Innovative Building Review Committee (County): Provides an incentive of fast-tracked building permits for projects that meet energy related standards. Controlling water run-off during the construction phase and implementing on-site runoff

management such as bio-swales could be added to trigger this fast-tracked review process.

- Green Awards: A coalition of Traffic Solutions, Community Environmental Council, Air Pollution Control District, and County Solid Waste and Water Resources recognizes businesses annually for implementing BMP's including recycling, car pooling, reduction of waste and other "green" innovations. One of their current criteria is "activities...that result in cleaner air". A Project Clean Water staff person will participate on this committee to encourage and promote recognition for businesses implementing water quality improvement activities.
- Green Gardener Program: Promotes sustainable gardening through the use of Integrated pest management (pesticide reduction), green waste reduction, and water efficiency. Although this program is still under development, it incorporates Project Clean Water goals.

Costs & Other Considerations

Implementing a voluntary promotional value incentive program requires planning, implementation, and on-going maintenance. Any time an agency certifies or promotes a business for water quality efforts, clear criteria and some type of quality assurance program are needed to maintain the program's integrity.

The cost for this type of incentive program can vary depending on scale (i.e., extent of criteria and requirements, and follow-up inspections, etc.). King County, Washington's EnviroStar Program has a very thorough inspection and certification program that requires full-time staffing and support services, including promotion and outreach materials. While this program is tied directly to their hazardous waste inspection, an existing and funded regulatory program, it requires additional expense to certify that a business is meeting all the criteria and maintains certification throughout the year.

At this phase of development, the BIWG is designing a program that will be far less staff and resource intensive than an EnviroStar-type program. By simply agreeing to basic water protection principles and a willingness to implement standardized BMP's for a given industry or business type, a business will qualify for the program. If a business falls within an established inspection program, such as an automotive shop or restaurant, inspectors from the appropriate government agencies could also check to see if the water quality BMP's are being properly implemented. For businesses not normally inspected by local agencies, an honor system can be implemented.

Education & Outreach

Education and outreach to the target business groups will be accomplished through a variety of different methods. As materials (including suggested BMP's) are developed for each of the targeted business types, a mailing will be done to reach those specific businesses. Depending on the business type, follow-up and additional outreach will be done by inspection agencies. Workshops providing training on BMP's specific to a given industry can also be offered to assist businesses in implementing a water quality program.

Once businesses agree to participate in the program, elements such as point-of-purchase information, a Water Quality Pledge, acknowledgement advertising, and certificates and awards can be implemented. This would not only encourage other businesses to participate

in the program, but would further assist Project Clean Water in getting the broader message out to the community-at-large.

Resources

Providing resources to businesses wishing to make water quality improvements will be a critical component to the success of the program. These resources should include a directory of agencies and organizations that have specific services (i.e., source reduction education), as well as a list of businesses, products and services provided by the private sector. The following are existing organizations and agencies that assist, oversee or regulate businesses that can be included in the directory:

- County Public Health Dept./ Env. Health Division: Food inspection program promotes Restaurant Recognition Program; Liquid waste program; septic system permitting.
- County Fire / Hazardous Materials Unit: Regulatory agency for hazardous materials and hazardous waste, business inspections.
- County of SB / Solid Waste: Assists businesses with recycling and waste reduction.
- County Agricultural Commissioner: Oversees pesticide applications for commercial applicators and agriculture.
- County Planning & Development: Building permits.
- Air Pollution Control District: Regulatory agency for air quality issues and business inspections.
- Waste Water Treatment Plants: Regulates and investigates illegal storm drain and wastewater discharges.
- Community Environmental Council / Community Hazardous Waste Program: Household and small business hazardous waste disposal program, and source reduction and education service.
- Green Building Alliance: Promotes sustainable building practices.
- Santa Barbara Horticulture Consortium: Promotes sustainable landscaping.
- Green Gardener Certification Program: Trains and certifies landscape professionals in resource efficient gardening practices.

The resource directory should also include services, providers and products, as well as non-profit educational organizations that can provide information or assist businesses in improving their water quality management program. This list of resources will be developed over the next fiscal year and made available to the business community in the short-term.

Progress To Date:

Prior to the formation of the Business Incentives Working Group, materials targeting restaurants to encourage proper management of run-off, grease management and other water quality related issues was developed as part of Project Clean Water's outreach efforts. The Restaurant Outreach Program will be launched in May 2000. Booklets explaining restaurant BMPs, posters for restaurant employees, and applications for the recognition program will be distributed to over 900 restaurants throughout the South Coast area.

Recommendations:

The Business Incentives Working Group recommends that funds be allocated to implement a volunteer “acknowledgement-based” incentive program in the short-term to encourage businesses to participate in water quality improvement efforts. Program component needs in the short-term include:

- Staff Coordination (County/City)*
- Development of Outreach/Educational Materials*
- Promotion/Advertising
- Development & Distribution of Resource Materials
- Coordinate with existing programs to include water quality component*
- Begin Analysis of Financial Incentive Program

* These efforts have already been initiated.

Implementation of a “financial-based” incentive program, such as tax-credits for voluntary implementation of specific source reduction measures, should be analyzed in the short-term and developed for implementation in Fiscal Year 2001/02.

Illegal Activities

Working Group Progress Report May 2000

Working Group Members:

Isabel Blagborne, Project Recovery
Joe Carrillo, SB SEA
Cathleen Garnand, County Water Agency

Steve Mack, City of Santa Barbara
Harry Slikker, City of Santa Barbara
Ken Williams, County Social Services

Problem Statement:

This working group is the combination of the No Dumping Signs & Trash Cans, Portable Toilets, and Homeless Outreach working groups that held some separate meetings and developed recommendations in 1999. At the Stakeholders Committee Meeting it was apparent that there was overlap in the subject matter and meeting attendees for these three working groups. Agreement was reached to consolidate and change the name to better describe the focus of the group's activities.

Many illegal human activities contribute to water quality degradation in local South Coast creeks, such as illegal encampments and human waste disposal in the creeks. Local creeks are used by the transients and other casual users who do not have access to proper sanitation facilities and/or are performing illegal activities such as drug and alcohol use, trespassing, disposal of stolen property, littering, etc. These users leave much that degrades water quality in creeks -- bottles and debris, needles, bedding, contaminated clothing, and feces. In the past these people and activities were usually left alone. That is changing but more needs to be done.

Most of the evidence of these problems is anecdotal. There has been no regular, systematic documentation of the locations of these illegal activities, amounts of contaminants left in the creek areas, and seasonality or other timing of the contamination.

Some of the suggested solutions may be illegal themselves or have community or neighborhood opposition. For example, visible, permanently installed, portable toilets may not be considered acceptable in many neighborhoods and may violate City ordinances. Concern exists for where people may stay if they are removed from creek areas. Also, people gathering in creeks may not, by itself, be an illegal activity, although the gathering may lead to results detrimental to creek water quality.

Possible Solutions and Alternatives:

A number of solutions have been discussed, including:

- Place portable toilets near problem areas and investigate locations for permanent toilets
- Place signage and trash receptacles at problem areas
- Increase police/sheriff enforcement of illegal activities in creeks
- Clean up encampment areas more frequently
- Do periodic surveys of creeks to establish problem areas. Design solutions for the problem areas.

Progress to date:

This working group was restarted in January 2000 and has held three meetings as of April 5, 2000. The group has set a regular meeting time, date and location of the first Wednesday of each month at 3:30 in the City of Santa Barbara Public Work/Community Development Building at 630 Garden Street. For purposes of this report progress will be compared to 1999 recommendations for each of the three separate working groups.

No Dumping Signs & Trash Cans

The 1999 report recommended installation of signs and trash cans. The City of Santa Barbara installed seven trash cans at selected bridges in 1999. Three trash cans have been installed by MTD. Please see the list below for locations. These cans have been used and apparently are contributing to a reduction in trash where they have been placed. A concern with the installation of trash cans has been the issue of "trash attracting trash". That has been a problem at one location but more frequent servicing appears to have solved the problem. Also in 1999 the City enacted an ordinance that requires mandatory trash pickup at all residences and businesses within the City.

Trash cans and signs have been placed at the following locations:

Arroyo Burro Creek

- Hope Avenue behind the dealership

Mission Creek

- Victoria Street at the creek.
- Cota at the bridge.
- Montecito Street at the bridge.

Sycamore Creek

- Indio Muerto Street at the bridge.
- Cacique Street at footbridge.
- Quinientos Street at Canada St. near bridge

A can was planned for Carrillo Street, but it was never put in service because of lack of easy access.

MTD Cans Near Creeks:

- Sycamore Creek at Punta Gorda
- Mission Creek at State Street & Alamar, NW
- De La Vina at Haley, NW

The City of Santa Barbara has agreed to investigate the feasibility of installing trash cans and appropriate signage at more bridges. Funding for this has been included in the City's FY 2001 budget. We recommend that the Beach Sign Working Group take the lead on designing and getting approval of appropriate signs for bridges.

The County of Santa Barbara will investigate the possibility of funding and installing trashcans as well for fiscal year 2000/2001. Some initial options for location of these trash cans are the Maria Ygnacio and Atascadero confluence at Patterson Rd, Atascadero Creek along the bike path near UCSB, and on Hollister Rd. in downtown Goleta at one of the creek crossings.

Portable Toilets

The 1999 report recommended installation of three portable toilets for a six month trial period, promotion of toilet sponsorship program and a report on results.

The City of Santa Barbara has installed portable toilets at Yanonali Street near Laguna Channel. The portable toilets are used but considerable fecal material still accumulates in the area. The City of Carpinteria has installed a portable toilet near Carpinteria Creek and has reported good results from that installation. The City of Santa Barbara has reported increased clean up of sleeping areas near creeks.

There has been general agreement among meeting participants that more information is needed prior to further consideration of portable toilet installations at any locations in the City of Santa Barbara. Known creek locations where human feces have been found include for Mission Creek the Islay Street Bridge, Alamar Bridge, and downstream of Carrillo Street. San Roque Creek has a known problem area at the San Remo Street Culvert. However, these reports are anecdotal and the amounts of fecal material present have not been quantified.

The City has agreed to start a pilot project that would document contamination in Arroyo Burro, Mission, and Sycamore Creeks. The investigator(s) will do a weekly survey of the creeks to identify high-impact areas, who is using them and how frequently, what are people doing in these areas, what type and volume of waste is left behind, and other related information. Data from the County's creek walks and other previous work will be incorporated. Since the City is initiating a Creeks Inventory study (under contract), these upcoming creek walks need to be coordinated with this effort. We expect that the pilot project would last through August 2000.

Homeless Outreach

The 1999 report recommended provision of accessible trash cans and toilet facilities and direction of residents of illegal encampments to established campgrounds or other accommodations. A homeless shelter did start operations for the 1999-2000 winter. Direction of residents of illegal encampments to existing facilities is current practice. As noted above trash cans and signage will be expanded in 2000, focusing on bridge sites. The creek survey results may identify possible locations for toilet facilities. To the extent creek restoration efforts within the City of Santa Barbara expand parklands along creeks, toilet facilities may be included in these projects.

Overall Future Goals:

The paramount goal of this working group is to remove human feces as a contaminant of local creeks. The group also seeks to reduce the amount of trash, debris and other possible contaminants of creek water quality that get into the creeks from illegal activities such as dumping and littering.

Summary of 1999 Recommendations

for No Dumping Signs & Trash Cans, Portable Toilets, and Homeless Outreach Working Groups

(These working groups have now been combined into the Illegal Activities Working Group)

Working Group/Task	Meetings	Current Status	Recommendations (from 1999)
No Dumping Signs & Trash Cans (now part of Illegal Activities)			
1A-Install signs	3 recent meetings	City of SB has installed several City of Carp has installed one None for County	1.Status report from Cities on effectiveness 2. County to install one or two
Portable Toilets			
2A Install portable toilets at 3 locations for 6 month trial	Combined with portable toilets and no dumping sign workgroups.	Working group met recently to discuss City of SB options; City of Carp has installed one	Status update from Cities Encourage City of SB to install portable toilets as pilot project
2B: Facilitate & promote toilet sponsorship program		Not implemented	
2C: Evaluate trial program and make recommendations		See above	Request written evaluation from Cities
Homeless Outreach (Now part of Illegal Activities)			
19A: Provide accessible toilet facilities and trash cans	Combined with portable toilets and no dumping sign workgroups.	Permanent shelter for homeless opened on Cacique Street	
19B: Direct residents of illegal encampments to established campgrounds or other accommodations		Currently implemented by police and social services staff	

Media Campaign

Working Group Progress Report

May 2000

Working Group members:

Darcy Aston, County Water Agency

Alison Whitney, City of Santa Barbara

Debra Arviso, community member

Sigrid Wright, Community Environmental Council

Jan French, County Water Agency

Daniel Wilson

Problem Statement/Background:

Many community members may be unaware of the ongoing creek and ocean water pollution problem in Santa Barbara. People need to be informed and educated in order to minimize health risks, and to take appropriate measures on an individual basis to alleviate the problem. An educated community will also be more supportive of County and City of Santa Barbara efforts to enforce existing ordinances and/or new ordinances where needed, and willing to support future funding needs.

For Project Clean Water to succeed, broad-based community support is essential. That support will hopefully come from an informed, concerned community – a community aware of the issues, including the need for personal behavior modifications, as well as the need for funding on an ongoing basis. To achieve and maintain the required level of community awareness and support will necessitate an ongoing communication of the messages initiated in 1999 by Project Clean Water's media campaign.

Recommendations (from 4/99):

The following recommendations were included in the working groups last report from April 1999:

- The Project Clean Water media campaign should be continued and periodically modified to inform as well as to reinforce the County's clean water actions during the upcoming NPDES implementation period.
- In the short term (the next 12 - 18 months), emphasis should be placed on providing information to the public about the costs and benefits of clean-up actions.
- Longer term, as required by Clean Water Act NPDES requirements, emphasis should be placed on continued awareness, education, and practical "tips" for reducing non-point source pollution.

Progress to date:

The first media campaign comprised a series of public service announcements in print (Jan. – March 1999), and on radio (Jan. – March 1999) and television (April – June 1999). As was discovered during the first year's efforts, implementing an effective media campaign requires that air time and print space be purchased. If "public service announcement" placement is used, i.e. not purchasing air time or print ads, exposure is minimal, and does not justify the cost of developing the media pieces. Due to the high cost of media campaigns, and the fact

that lower rainfall resulted in fewer beach closures/advisories in 1999, it was decided to hold the FY 99-00 media campaign in spring '00, and focus efforts on general education about storm water quality.

Current status of efforts:

The working group began meeting again in March 2000 to develop a spring media campaign. The group reviewed media pieces from other agencies, and based on this review decided to hire a professional media consultant to develop the campaign. A Request for Proposals was developed and sent out in April. Two proposals were received. County and City of Santa Barbara staff interviewed the consultants and selected Eric Christiansen of EC Productions. EC Productions has a contract to:

- Develop & produce one or two television spots
- Develop & produce one radio spot
- Development of television and radio spots will include development of a character/theme that can also be used in print ads.
- Television and radio spots will be ready to air by the beginning of July 2000.

County staff will coordinate with the consultant to produce print ads that utilize the same theme/character developed for the television and radio ads. The PCW campaign will run from the beginning of July until the end of August. This dovetails with a campaign sponsored by the City of Santa Barbara and the Community Environmental Council, which is running through the end of May. The City and CEC campaign focuses on used motor oil recycling, which also carries a water quality theme and will tie in with the PCW media campaign.

County and City staff met with media representatives to schedule air time and ad space. Every effort was made to leverage PCW campaign budget with matches of free time/space from the media.

Future recommendations:

- Media campaigns should continue to be developed on an annual basis, consistent with any PCW budget constraints.
- Future campaigns should build on the information/themes/characters used in previous campaigns, and relate to any current events (i.e. significant numbers of beach advisories)
- The Media Campaign Working Group should coordinate with County EHS to assist in getting information out about the changes in beach posting standards.
- PCW should attempt to utilize the free services of the City of Santa Barbara's public access staff for production of television ads.

Water Testing Protocol

Working Group Progress Report

May 2000

Working Group Members:

Rob Almy, County Water Agency

Kerry Sears, County Water Agency

Cathleen Garnand, County Water Agency

Brian Trautwein, Env. Defense Center

Dan Reid, County EHS

Keith Zandona, Surfrider Foundation

John Robinson, Heal the Ocean

Problem Statement:

The leading cause of water quality degradation in California and the nation is nonpoint source pollution (SWRCB 2000). Sources of nonpoint source pollution include: bacteria and nutrients from animal waste, excess pesticides and fertilizers applied to agricultural lands and urban areas; oil, grease and associated heavy metals and toxic chemicals from areas of vehicle usage, failing septic or sanitary sewer systems, dumping of wastes and other excessive use of creek areas. Adverse effects include beach health advisories, closure of shellfish harvest areas, and impacts to sensitive habitats.

Ongoing Public Health Department ocean water testing and Project Clean Water creek testing have revealed the presence of human-derived contaminants, especially indicator bacteria, in all areas throughout the County of Santa Barbara. Pollutant levels are elevated during storm events especially within the creeks and channels that convey urban runoff. Recent epidemiological studies (Haile et al., 1999) have demonstrated an increased public health risk from recreational activities such as surfing, swimming, and wading, during and immediately following storm events and in areas adjacent to major storm drain outfalls.

This committee report shows the progress made to date and lists recommendations for continued efforts to improve water quality within Santa Barbara County. This committee's efforts are focused on the water quality sampling protocol and data analysis. The committee is responsible for developing a protocol that is cost-effective and at the same time provides sufficient data to make recommendations. The committee is responsible for evaluating the protocol as needed to reflect the current research in this field and to verify that water quality sampling efforts are directed in the most efficient manner.

Development of Water Testing Protocol:

The information developed by the sampling program will be used to establish baseline creek water quality conditions, enable staff and decision makers to make better choices to address water quality degradation, and to a certain degree track the effects of pollution reduction strategies over time. The overall purpose of the water quality sampling program is to allow better planning and implementation of water quality Best Management Practices and, over the long-term, determine compliance with the NPDES requirements.

The City of Santa Barbara and the County have initiated a storm water sampling program to examine water quality in streams within the urbanized areas of County watersheds. The City's efforts focus on Mission Creek, Arroyo Burro Creek, Sycamore Creek, and Laguna Channel. The County's efforts include the remaining creeks in the urbanized South County area, plus two creek systems in the North County area at Vandenburg Village and Orcutt.

In 1998, the South Coast Watershed Characterization Study was initiated by the County to characterize the water quality of several south coast streams (URS Greiner Woodward Clyde 1999). This study included both dry and wet weather sampling of Arroyo Burro, Mission, Carpinteria, and Rincon Creeks. In order to gain a better understanding of the types and extent of pollutants contributed by storm water, additional wet weather sampling was continued during the winter of 1999/2000. The sampling program added many more creek sites and water quality constituents, including pesticides and herbicides.

Progress to date:

The county has sampled the water quality of creeks during five storm events in the 1999-2000 wet weather season. Four of these events involved the monitoring of 20 south county creeks for a wide range of contaminants (pesticides, heavy metals, oil & grease, bacteria, VOC's, etc.), while the other event consisted of bacteria testing only. North County creeks, including Davis Creek in Vandenburg Village and Orcutt Creek in Orcutt, were sampled during one storm event for the same constituents as on the South Coast. Additional low flow and hot-spot sampling may occur during the late spring/early summer months. The City of Santa Barbara conducted a similar program three times in Sycamore Creek and one time in Laguna Channel. The City has also collected monthly bacteriological samples at the lowermost sampling location above tidal influence in Mission Creek, Arroyo Burro Creek, and Sycamore Creek, and Laguna Channel. The City also conducted additional bacteriological monitoring in an effort to identify sources of contamination in Mission Creek.

During the 1999/2000 rainy season, the water quality sampling Technical Advisory Committee met on November 9, 1999, January 27, and May 3, 2000 to discuss the sampling methods and initial results. It was agreed that the County Water Agency would generate a report to describe the findings of the water quality monitoring program.

In addition, the City conducted intensive creek surveys under contract with URS Greiner Woodward Clyde. Results of inventory and assessment will provide a necessary foundation for all work efforts on creek planning, such as Demonstration Projects, Master Plans, and efforts in conjunction with UCSB, CEC, the County or other organizations.

The committee developed the following recommended solutions and alternatives in April 1999. Most of the recommendations have been addressed, as described in the table below.

Possible Solutions and Alternatives (identified 4/29/99 report):	Progress to Date:
Provide additional resources to conduct testing for additional pollutants of concern (public health risk) in creek and ocean waters	Additional resources were made available in 1999/00 and are itemized in the County and City budgets for FY 00/01.

Possible Solutions and Alternatives (identified 4/29/99 report):	Progress to Date:
Increase the level of current testing of coliform bacteria in ocean and creek waters	Testing of coliform bacteria is included in the storm water quality testing, along with E. coli and enterococcus. The County Public Health Department samples ocean water on a weekly basis throughout the year. The storm water quality and low-flow monitoring program has increased the level of all previous testing of coliform bacteria. The City of Santa Barbara conducts monthly bacteriological sampling of City creeks.
Include watersheds that are not currently being explored under Project Clean Water, the South Coast Watershed Characterization Study, or other related studies	All watersheds in the urbanized South County area, from Rincon to Tecolotito, as well as creeks in Orcutt and Vandenburg Village are included in the sampling program. The Public Health Department continues weekly ocean monitoring throughout the County. A UCSB-sponsored project has been approved under the Shoreline Preservation Fund. The project involves sampling of both storm water runoff and ocean water in the surf zone for bacteria and other contaminants of concern in Isla Vista. Results of bacteria levels will be published in the local paper using County criteria for public health safety. The sampling would be conducted during rain events in the spring or fall of 2000.
Explore new techniques for better identification of sources of bacterial contamination (i.e. DNA "fingerprinting" of suspect sources of bacterial contamination)	DNA "fingerprinting" was conducted at the lower Rincon Creek, and the Solid Waste Division is planning a similar study at Arroyo Quemado. Additional opportunities for DNA testing have not been identified. The County has proposed a DNA study for funding under the recently passed Proposition 13.
Increase resources for the current website postings to include more frequent updates, additional hyperlinks to other programs, more extensive and user friendly data analysis of water quality testing results	The website has been updated and moved from Public Health to Public Works. Hyperlinks to other organization sites are available. Water quality testing results will be posted together with a report after the data has been interpreted and a report generated (anticipate summer 2000).

Overall Future Goals:

The long-term goal of this working group is to develop appropriate data that characterize the water quality of our surface waters in a way that can be used as a decision-making tool. The data would be used to determine where and what kind of source control or treatment control measures to implement; what type of programs can be implemented by municipalities; how to target public education and involvement; and how enforcement activities should be focused.

Ultimately, data collection will focus on measuring overall or specific changes in the water quality of our creeks and ocean as a result of implementing a water quality/storm water management program. The results will also be used to direct Project Clean Water efforts to meet Phase II NPDES requirements.

Specific Future Departmental Goals, Actions, and Recommendations:

- Project Clean Water was initially established to ascertain sources of bacterial contamination in 7 watersheds (Jalama Creek, Arroyo Quemado Creek, Arroyo Burro Creek, Mission Creek, Sycamore Creek, Carpinteria Creek and Rincon Creek). These creeks were identified due to the number of associated beach closures as determined by the Santa Barbara County, Public Health Department Ocean Water Monitoring Program. Water quality sampling under Project Clean Water has been expanded to include all the south coast watersheds and urban areas in the north county.
- Continue and enhance the water quality sampling program. Continued monitoring (bacterial testing, creek walks, storm water, low-flow etc.) will establish base line conditions and where possible, will evaluate effectiveness of implemented solutions over the long-term. Enhancement may include adjusting sampling sites to better characterize pollutant levels, identify potential sources, or measure pollutant removal of BMPs, adding and/or dropping constituents based on the 1999/2000 results and available budget, etc.
- Sediments in creek watersheds have been identified as a potential reservoir for coliform bacteria that can be resuspended in the water column during high flow or turbulent flow conditions. A focused study, and/or a research review should be conducted to better understand this relationship and to propose methods to combat this problem. This recommendation is carried forward from the April 27 committee report. The County has applied for state funding for such research. Upcoming research efforts at UCSB may provide an opportunity to conduct such studies with County support. It is not recommended that the County conduct this research independently.
- The April 1999 committee report recommended that additional watersheds and minor tributaries for the seven watersheds of Project Clean Water should be investigated for sources of bacterial contamination. This recommendation has been implemented within all watersheds in the urbanized areas of the south coast and the urbanized County portions of the north coast. Additional sites will be added to the north coast during the following year. Continued review of current ocean water monitoring information, water quality data, and all known sources of relevant data should be conducted to identify and prioritize sub-watersheds and catchment areas of concern. To develop this information, the County will utilize available information on existing land uses (from the County assessor's parcel data) and correlate land use to runoff and anticipated pollutant

discharge. Areas where a potential for high pollutant loading exists will be investigated and as appropriate, targeted for appropriate best management practices.

- The April 1999 committee report recommended that the beach zone monitoring program be improved to better represent an accurate picture of actual surfzone conditions at any one point in time. A cost/benefit analysis was recommended as a means to ascertain how increasing the sample collection and testing frequency would impact the current program and whether the additional information would be valuable in decreasing public health risk.

At this time, the Public Health Department lacks the necessary funds to modify the testing program. Modifications might include weekend sampling, lab work conducted during evening hours, etc. The Public Health Department is researching other techniques that may be used to provide a faster means of identifying the presence of pathogens that could be used to augment the mandated beach monitoring program. The Public Health Department has proposed a study to produce rapid, in the field, detection methods for human pathogens, particularly viruses. If funding for this study is obtained, results will significantly alter and enhance current mandatory monitoring and public warnings concerning recreational water (ocean surfzone) contact. The County has also proposed a study to create a predictive model that could be used under a variety of flow conditions to establish adequate advisory zones. A UCSB Bren School project has been developed to evaluate current monitoring efforts and make recommendations to improve current methods for ocean water quality monitoring of Southern California beaches.

- A number of popular beach areas are not being tested under the Public Health Department's ocean water monitoring program (e.g. beaches off Isla Vista, Santa Claus Lane, More Mesa, Padaro, Haskell's, etc.). Under the current program, resources do not exist to greatly increase the number of monitoring locations. The April 1999 report recommended that the Santa Barbara County Public Health Department prepare a report identifying the incremental costs associated with adding additional beach sites and present the report to the Board of Supervisors for increasing the current scope of this program.

AB411 requires monitoring to occur between April and October at beaches having more than 50,000 visitors annually and having a summer source of creek water or other runoff. The County Health Department does test a number of beaches that are outside the requirements of AB411. For example, the County monitors beaches throughout the year, not just during the summer months. Also, the County monitors beaches that have a large number of visitors but that do not have a summer source of creek runoff (e.g., Carpinteria City Beach), as well as beaches that may have a summer source of runoff but do not have a large number of visitors (e.g., Butterfly Beach, Guadalupe Dunes).

That part of the monitoring program outside the scope of AB411 requirements is paid for by the County's General Fund. The budget for FY 2000-01 does not include increased monitoring for additional beaches and such funding has not been sought.

- In the April 1999 committee report, the group recommended that a focused study be performed to develop a plan to enhance the current website. The County continues to improve the Project Clean Water website. For example, the recommended links to other websites has been made. Updates will eventually include the water quality data collected during the winter sampling program. The website should reflect all reports and data

made available to the public by the County. Maintaining the website is best addressed by the Website Working Group committee.

- In the April 1999 report, the committee recommended using the pilot study of the lower Rincon Creek watershed as a model for future studies, if such study proved effective. This pilot study used DNA “fingerprinting” techniques to determine the source of bacteria in the water. The results from this pilot study indicated that the technique is appropriate for certain situations, however there are limitations that make the technique inappropriate for most situations. These limitations include: potential interference from many sources in the watershed; relatively high expense for ongoing monitoring or extensive studies; long timeframe between sample submission and test results; and an inability to address potential public health risk based on findings. Bacteria sources should be tracked in the most efficient manner in order to eliminate the source. This may include: low flow sampling, conducting or supporting studies that determine the effect of sediment contributions, creek walks and remote cameras to determine illicit or uncontrolled discharges, evaluation of illegal creek use, and continued low-flow sampling. All of these techniques will be applied as appropriate during the proceeding fiscal year.

For those applications where DNA studies are appropriate, the County has developed a proposal for funding under the recently passed Proposition 13. This proposed study would be designed to segregate bacterial sources in a local watershed and determine the associated health risk for recreation contact in these waters, through pathogen identification, dose-response, etc. Information would be used to focus and implement appropriate BMPs to control sources of contamination.

- Upon completion of the 1999/00 storm water sampling effort, the Water Quality Technical Advisory Committee should review the year-end storm water report. The report will present findings and develop recommendations for future sampling that may include, for example: additional constituents and sampling sites, reducing the laboratory reporting limits to more closely match regulatory standards, modifying sampling frequency and sampling methods (composite vs. grab), including additional watersheds, etc. The final report will be presented to the Board of Supervisors and made available to the public.
- It is recommended that the group continue coordination with other groups such as the RWQCB, CEC, Cities of Santa Barbara and Carpinteria, UCSB's Water Quality Forum, SCCWRP, and volunteers in sampling program.

Action Plan:

Ongoing Creek Testing: The current preliminary County budget for FY 00/01 includes an estimate of \$266,000 for laboratory fees and equipment associated with water testing. The City of Santa Barbara has prepared a budget of \$25,000 for water quality sampling in the urban portions of the Arroyo Burro, Sycamore and Mission Creeks, and Laguna Channel. The sampling program will continue in urbanized areas on a regular basis during storm events for a full suite of constituents such as bacteria, heavy metals, VOCs, and pesticides. Lab fees also include occasional sampling in selected sites during storms or during low flow (dry weather) conditions to identify contaminants of concern that may originate from illicit connections, commercial or industrial contaminants, agricultural runoff, etc.

Ongoing dry weather evaluations of creeks will be conducted to track and identify potential water quality problems. Information collected from previous surveys, or "creek walks", will provide the model for ongoing tracking efforts. Both the City and County will conduct dry weather surveys of creeks to track and evaluate pollutant sources. Creek walks shall be conducted during an approximately six to eight week period for all urbanized watersheds (4 to 6 staff at approximately \$12/hr, x 6 staff x 8 weeks x 40hours/week = \$23,000).

Total: \$291,000

References:

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