NAPA COUNTY
STORMWATER MANAGEMENT PROGRAM

ANNUAL REPORT - FY 03/04

Draft Date: November 15, 2004

Member Agencies
City of Napa
Town of Yountville
City of St. Helena
City of Calistoga
Napa County

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&
Water Conservation District

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INTRODUCTION

The Cities of Napa, St. Helena, Calistoga, Town of Yountville, and Napa County submitted an NOI and a SWMP to the RWQCB on March 10, 2003 to comply with the Phase II Municipal Stormwater regulations. This was the initial phase of the review process to gain coverage under the Phase II permit. After reviewing the SWMP, the RWQCB submitted comments and a request for clarifications regarding the content of the SWMP. The comments received from the RWQCB were very thorough and constructive. The majority of these comments were used to improve the clarity of the plan and to add goals that were lacking.

The plan was resubmitted to the RWQCB in December of 2003 and the RWQCB deemed the SWMP as adequate. The SWMP was posted on the SWRCB website for public review and comment before adoption. Public notices also ran in three local newspapers once per week for three weeks during this 60-day public comment period. Baykeeper requested a public hearing near the end of the comment period to request a public hearing. Baykeeper requested that two programs be added to the SWMP, an outfall monitoring program and an integrated pest management (IPM) program. The NCSWMP agencies did not wish to modify the SWMP to include an outfall monitoring program because the Phase II permit does not require monitoring, the SWMP already includes a voluntary water quality monitoring program, and the large variability in pollutant concentrations in outfall samples requires that many samples be taken to gather meaningful data. The NCSWMP agencies also did not want to modify the SWMP to include an IPM program because many of the program elements will include IPM practices, such as landscape and park maintenance and corporation yards. Baykeeper withdrew its request for a public hearing and the RWQCB issued coverage under the Phase II permit to the NCSWMP co-permitees on May 20, 2004.

In order to fund the County-wide Program, each of the Local Programs entered into a JPA administered by the NCFCWCD. The JPA was adopted with a budget of $100,000 and each Local Program provided funds based upon population and BAU. The purpose of the JPA is to allow the Local Programs to combine their resources to implement programs that promote pollution prevention practices within each of their jurisdictions.

The majority of the 1ˢᵗ year measurable goals involved program development and training. The major accomplishments included:

1) Developed lesson plans and activities and piloted them at 3 schools.

2) Sponsored two Kids in Creeks workshops to provide teachers resources and training on creek and water quality.

3) Participated in the Our Water Our World program to encourage the use of less-toxic pest control methods.

4) Hosted 3 creek cleanup events that had over 300 participants and removed more than 8,000 pounds of trash from Napa County waterways.

5) Collected over half a million pounds of household hazardous waste at the Napa-Vallejo Collection Facility and at upvalley collection events.

6) Developed a draft BMP field guide for surface cleaners.

7) Established authority to prohibit illicit discharges and require runoff controls for development projects

8) Developed an enforcement response plan for enforcing the local stormwater ordinances.

9) Provided outreach materials and explained stormwater requirements to all the restaurants in Napa County.

10) Co-sponsored a Construction Site Planning and Management workshop in Napa and sponsored an additional workshop in Calistoga.

11) Developed a draft Stormwater Standards Maintenance Manual that includes standards and BMPs for street sweeping, storm drain maintenance, stormwater pump stations, road and street maintenance, and creek and ditch maintenance. Local Program staff were trained on the standards and the BMPs in the manual.

The effectiveness of many of the program activities in the 1st year is unknown because the evaluation tools (public surveys, illicit discharge tracking, and pre and post-surveys for trainings) are still in the development stage. As these practices are developed and improved upon, a more comprehensive evaluation of the program's effectiveness can be performed.

BACKGROUND

Napa County encompasses 754 square miles of land and has a population of 124,279 with approximately 78% of its citizens living in the incorporated areas of American Canyon, Napa, Yountville, St. Helena, and Calistoga. There are two major watersheds in Napa County: the Napa River and Putah Creek Watersheds. Most of Napa County's citizens (perhaps 95% or more) live in the Napa River watershed. For this reason, most of the NCSWMP activities will be focused in the Napa River Watershed. The Napa River is 55 miles long and drains an area of 426 square miles. With the exception of 35 square miles in Solano County, the entire Napa River watershed is within the boundaries of Napa County. It is contained by Mt. St. Helena to the north, mountains to the west and east, and ultimately discharges to the San Pablo Bay to the south.

SUMMARY AND EVALUATION FOR FIRST YEAR

I. PUBLIC EDUCATION AND OUTREACH

INTRODUCTION

The measurable goals for the first year of the permit term were intended to 1) continue existing outreach programs related to hazardous waste disposal and used oil recycling, 2) conduct new outreach efforts at community events to highlight the perils of stormwater pollution, and 3) to develop curricula for outreach efforts in the schools. The majority of the public education and outreach element were implemented by the County-wide Program that is administered by the NCFCWCD for the benefit of each of the Local Programs. The City of Napa also contributed to some of the outreach efforts by continuing their existing used oil recycling and hazardous waste disposal programs.

The major accomplishments for the 1st year of the SWMP include:

- Developed and piloted survey materials to measure public awareness of stormwater-related issues.

- Gave presentations to elected officials from each Local Program on the Phase II requirements and goals for the SWMP.

- Attended community events to educate the public about household hazardous waste disposal, less toxic methods of controlling pests, and aquatic insects as indicators of water quality.

- Ran Yellow Page and radio advertisements and sponsored a point of purchase program to inform the public about used oil recycling and household hazardous waste disposal locations in Napa County.

- Developed lesson plans and activities for schools and piloted the program at five classes in the City of Napa.

- Sponsored two Kids in Creeks (Watershed Project) workshops that provided materials and training for teachers on water quality-related lessons and activities they can use in their classrooms.

OVERVIEW OF MEASURABLE GOALS

See Tables 1 and 2.

SUMMARY OF MEASURABLE GOALS

Task 1. Characterize the General Public

A. Collect Census Data

Performance: Census data collected.

The 2000 census data was gathered for each Local Program from the ABAG website. The census data indicates that Napa County has a significant population of Hispanics. This suggests that outreach materials should be developed in English and Spanish to ensure that information on stormwater pollution and BMPs is available to the general public.

Effectiveness: NA

B. Develop Survey Materials

Performance: Survey form developed.

A survey form was developed (Appendix A) to gauge the public's understanding of stormwater and other water quality-related issues. The survey questions were selected from materials developed by other municipalities to measure public awareness. The DEM provided comments on the survey material before it was field-tested at community events.

Effectiveness: NA

C. Conduct Pilot Survey

Performance: Four pilot surveys conducted.

Pilot surveys were conducted at three events: 1) Earth Day, 2) Symphony on the River, and 3) Home and Garden Show. Twenty-eight survey forms were filled out at these events. Additional forms were filled out by Napa County employees to fulfill the performance measure for this task. The staff that participated in the survey were not involved in the implementation of the SWMP and were probably representative of the general public at large.

Our limited success at the community events was probably due to the length of the survey form and the public's reluctance to answer a long questionnaire. Our choice is to either shorten the survey questionnaire or to offer a prize to participants. Rather than compromise the survey, a prize will be offered at future events for participating in the survey.

Effectiveness: NA

Task 2. Outreach to Local Government Officials

A. Develop Presentations

Performance: Two presentations developed.

A Power Point presentation was developed in May 2003 to inform elected officials on the Phase II permit requirements and the importance of reducing stormwater pollution. A second presentation was developed in April 2004 to give elected officials and the public a progress report on the first year of the SWMP and an overview of the measurable goals for FY 04/05.

Effectiveness: NA

B. Give Presentations

Performance: Eleven presentations given to elected officials and the public.

The presentations were given to each of the City/Town Councils, Board of Supervisors, and the Flood Control District Board in May and June of 2003. A progress report and goals for FY 04-05 were presented to each of the City/Town Councils, Board of Supervisors, and the Flood District Board in May and June of 2004. As a result of the presentations the elected officials from each local program voted to authorize their municipality to enter into a JPA to fund the County-wide Program for FY 03-04 and to renew the JPA for FY 04-05. The elected officials for the Local Programs, with the exception of Yountville, also passed local ordinances to prohibit illicit discharges and require BMPs for development projects.

Effectiveness: Unknown.

Task 4. Community Events

A. Develop booths for Community Events

Performance: Four booths were developed to educate the public about water quality-related issues.

Creek Critters and Water Quality Monitoring

The NCFCWCD developed a booth with the Friends of the Napa River (FONR) to educate the public about the life history of salmonids and the use of benthic macroinvertebrates to monitor water quality. The booth included displays of the salmon life cycle and examples of larval and adult macroinvertebrates.

Napa River Flood Protection Project

The NCFCWCD and the FONR developed a booth that featured the design of the Napa River Flood Protection Project. The display included a 20-foot long map of the project that showed the areas where levee removal and wetland restoration has occurred or planned as well as future public access along the river. Brochures and other materials with information about the project were provided to the public.

Our Water Our World (OWOW)

A booth on less toxic pest control was developed with the assistance of Annie Joseph of the OWOW program. The booth included the following OWOW factsheets: Ants, Mosquitoes, Snails and Slugs, Yellow Jackets, Healthy Lawns, Healthy Roses, and Healthy Gardens. Free samples of Sluggo were provided to the public to try at home. A collection of common "beneficial" and "pest" insects was also on display at the booth.

Household Hazardous Waste and Used Oil Recycling

The City of Napa and Napa County Environmental Management continued to improve their recycling booth. The booth provides outreach materials that encourages the public to recycle used motor oil and household hazardous waste and where these materials may be disposed of in Napa County.

Effectiveness: Unknown

B. **Attend Community Events**

Performance: Five events attended in the 1st year of the SWMP.

Earth Day, April 2003 – The NCFCWCD staffed the Creek Critters and Water Quality Monitoring booth with the Friends of the Napa River (FONR).

The City of Napa and DEM staffed their recycling booth at this event.

Symphony on the River, September 2003 – The NCFCWCD and FONR staffed the Creek Critters and the Napa River Flood Project booths at the Symphony on the River Event in the Summer of 2003. Many people were interested in the project and how it will protect the City of Napa from flooding while enhancing habitat for fish and wildlife. NCFCWCD and FONR staff explained the benefits of the newly created wetlands and river terracing for fish and wildlife.

OSH No Tax Day, April 2004 - Staff from the NCFCWCD and DEM assisted Annie Joseph with staffing the Our Water Our World booth at the No Sales Tax Day at Orchard Supply and Hardware in Napa to educate customers about less toxic pest control. The OWOW banner at the booth invited customers to ask an expert about controlling pests at home using less toxic products. Many of the less toxic products were on display and free sample of Sluggo were provided to the public to try at home. The booth also featured a collection of common bugs found in the home and garden. The collection was a big attraction for the booth and prompted many questions about pest management in the home and garden. In addition to identifying some of the bugs in the collection, staff emphasized that insect pests make up a small fraction of the insect world. Most insects do not pose a problem for humans and many are beneficial by either preying upon or parasitizing pests. It was pointed out that most pesticides are non-selective and tend to kill these "natural enemies" while the pests become more resistant to the pesticide which requires more toxic chemicals to control them. Our main message at the event was to encourage customers to try less toxic products before buying the toxic sprays and other products that could pollute the environment.

Earth Day, April 2004

NCFCWCD, Orchard Supply and Hardware (OSH), and Annie Joseph brought the OWOW booth to the Earth Day event at the Connolly Ranch in April of 2004. The issues covered by the booth was the same as the OSH No Tax Day event.

The City of Napa and Napa County Environmental Management staffed their recycling booth at this event.

Home and Garden Show, May 2004

NCFCWCD and Orchard Supply and Hardware staff brought the OWOW booth to the Napa Home and Garden Show in May of 2004. This three-day event was the largest event attended in the 1st year of the SWMP. OSH offered a free plant to each person who had a garden-related question to ask one of the experts at the booth. Approximately 150 people stopped by the booth to ask a question about controlling pests in the home and garden. The most common questions were about controlling snails, ants, scales, and earwigs. Advice on less-toxic pest control methods was offered and the OWOW fact sheets, the OWOW magnets, and free samples of Sluggo were provided.

Effectiveness: Unknown.

The effectiveness of the booths at the community events may be evaluated over the long term with data collected from the public awareness surveys and from the illicit discharge response program.

Task 5. Outreach to the General Public

A. Yard Waste Reduction Workshops

Performance: The City of Napa held four yardwaste reduction workshops for the community in the 1st year of the SWMP.

The workshops educated the public about home yard waste composting, worm bin composting, and grass-cycling practices. The participants received rebates on compost bins and grass-cycling mowers for attending the workshop. The workshops may result in less yard waste dumped into the storm drains and into creeks by educating the public on how to make good use of their yard waste.

Effectiveness: Unknown.

The effectiveness of this outreach program may be evaluated in the future by the number of reported incidents of leaf dumping into creeks and storm drains.

B. Trash Can Decals

Performance: The City of Napa continued to provide household hazardous waste decals on all garbage totters to garbage customers.

The decals provide information in English and Spanish about local disposal of used oil and hazardous waste. The information includes a description of common hazardous wastes and a map and directions to the Napa-Vallejo Household Hazardous Waste Collection Facility.

Effectiveness: A total of 489,178 pounds of hazardous waste was collected at the facility in FY03-04 and was not disposed in a manner that would contaminate surface or ground waters.

C. Napa-Vallejo Household Hazardous Waste Facility

Performance: The City of Napa and Napa County DEM both continued to sponsor the Napa-Vallejo household hazardous waste collection facility in the first year of the SWMP.

Both Local Programs also continued outreach activities to increase the public's awareness of this facility and why hazardous materials must be disposed of properly. Outreach included inserts in garbage bills, outreach at community events (see Task 4B) as well as radio ads. A total of 4,200 households disposed of 489,178 pounds of hazardous waste at the facility in FY03-04. See

Appendix B for a summary report of the types and amounts of materials collected. Surveys indicate that 70% (2,940) of the households that used this facility are from Napa County.

Effectiveness: Assuming there's no difference in the use of hazardous wastes between Napa and Solano County residents, a total of 342,425 pounds of hazardous waste was not disposed in a manner that would contaminate surface or ground waters in Napa County. Although the illicit discharge reporting and response program is not fully developed, there were no reports of intentional dumping of hazardous wastes in FY03-04 except two reports of accidental spills in the City of Napa. This measure of the hazardous waste collection program efforts will improve as the illicit discharge detection and elimination program is fully implemented.

D. Upvalley Hazardous Waste Collection

Performance: Two upvalley household hazardous waste collection events were held.

The larger collection event was held at the Napa County Fairgrounds in Calistoga. A smaller event was held at the Yountville corporation yard. A total of 183 households disposed of 25,105 pounds of hazardous waste at these events. Numbers for each event are not available at this time, but the majority of the waste collected was from the event at the fairgrounds. See Appendix B for amounts and types of materials collected.

The effectiveness of the collection events will be evaluated over time to determine if more households are participating. The amount of waste collected may also be used to report effectiveness from year to year, but an increase or decrease may not necessarily reflect overall effectiveness at protecting water quality.

Effectiveness: 25,105 pounds of hazardous waste was not disposed of in a manner that would contaminate surface or ground waters in Napa County.

Although the illicit discharge reporting and response program is not fully developed, there were no reports of intentional dumping of hazardous wastes in FY03-04 except two reports of accidental spills in the City of Napa. This measure of the hazardous waste collection program efforts will improve as the illicit discharge detection and elimination program is fully implemented.

E. Develop Creek Dumping Brochure

Performance: Brochure on yard waste disposal and creek banks developed.

Artwork will be added to the brochure in the 2nd year of the SWMP to make it more attractive for distribution to the general public.

Effectiveness: Unknown.

The effectiveness of this brochure may be evaluated in the future by tracking the number instances of leaf dumping reported with the Creek Survey Form or the Illicit Discharge Investigation forms.

F. Mail Brochure

Performance: The brochure was mailed with a letter to all the existing landscape contractors found in the Yellow Pages.

Effectiveness: Unknown.

The effectiveness of this outreach effort may be evaluated in the future by the number of reports of yard waste dumping on creek banks.

H. Used Oil Recycling Radio Ads

Performance: One-hundred and thirty radio ads were aired on local radio stations (i.e. KVON) that encouraged the public to recycle used motor oil.

The radio ads identified the locations where used oil may be recycled in Napa County. The ads were purchased by the City of Napa and Napa County DEM with used oil grant funding. The ads were run during the morning and afternoon commute time to maximize outreach effectiveness.

Effectiveness: 24,004 gallons of used motor oil and 3,107 used oil filters were collected within the City of Napa and disposed of in a manner that would not contaminate surface or ground waters.

I. Used Oil Yellow Pages Ads

Performance: Ads were placed in the Yellow Pages to inform the public of the need to recycle used oil and the locations of used oil collection centers in Napa County. The yellow page ads are an effective outreach tool because they go to nearly every household and most people can readily find their phonebook to their nearest collection center.

Effectiveness: 24,004 gallons of used motor oil and 3,107 used oil filters were collected within the City of Napa and disposed of in a manner that would not contaminate surface or ground waters.

J. Used Oil Recycling Point of Purchase

Performance: The City of Napa continued to sponsor the used oil recycling point-of-purchase program in the first year of the SWMP.

The shelf markers encourage consumers to recycle their used motor oil and provide information on where oil can be recycled in Napa County. 100% of the businesses willing to participate were provided with the materials for the point of purchase program. Some of the businesses that sell motor oil were not willing to participate due to concerns about shelf space and corporate policy. The City of Napa will continue to work with these businesses to enroll them in a point-of-purchase program. The percentage of the participating businesses that still have shelf markers in place will be evaluated in the second year of the program.

Effectiveness: 24,004 gallons of used motor oil and 3,107 used oil filters were collected within the City of Napa and disposed of in a manner that would not contaminate surface or ground waters.

Task 6. Outreach to Schools

A. Develop Education Program

Performance: Three lesson plans were developed for grades 3 to 5.

Three lesson plans and activities were developed using materials from the Kids in Creeks program developed by the Watershed Project. These lessons include Pollution Soup, Habitat Loss and Salmon, and Aquatic Bug Safari (see Appendix C). These lessons were tested at several schools in the City of Napa and the feedback from the teachers and students was very positive. See "Additional Accomplishments" below for details about the outreach that was conducted to these schools.

Effectiveness: Unknown

B. Develop Before and After Survey Materials

Performance: Survey materials developed.

Before and after survey materials were developed to evaluate the effectiveness of the outreach program to schools. See Appendix D for the survey materials.

Effectiveness: The effectiveness of the survey forms will be evaluated for the information they provide when they are used in next years school outreach program.

ADDITIONAL ACCOMPLISHMENTS

Kids in Creeks

Performance: Hosted two Kids in Creeks workshops.

The County-wide Program and the City of Napa co-sponsored two Kids in Creeks workshop in April of 2004 to educate teachers about creek and water quality issues. One workshop was targeted for K-6 grade educators and the other was targeted to 7-12 grade educators. Those who participated in the workshop received a copy of the Kids in Creeks resource binder with lesson plans, activities, and materials related to creek and water quality. The program and the resource binder for Kids in Creeks was developed and conducted by the Watershed Project (formerly known as the Aquatic Outreach Institute).

Twenty-five teachers attended the two workshops. There was a larger attendance at the K-6 workshop probably because there is a larger population of elementary school teachers. A report that summarizes the effectiveness of the Kids in Creeks workshops in included in Appendix E.

Effectiveness: Unknown.

Outreach to Schools

Performance: The County-wide Program "field-tested" several of the Kids in Creeks lesson plans for use in next year's school outreach program. The lesson plans included Watershed in Your Hand, Habitat Loss and Salmon, Creek Detectives, Plant ID, and Aquatic Bug Safari. These lessons and activities were tested in 5 classes from three elementary schools in the City of Napa. See the report from the Alta Heights Aquatic Bug Safari and the developed lesson plans and activities in Appendix C.

The students loved the bug safari lesson and the Habitat Loss and Salmon lesson. The other lessons were also well received and many of the students were very interested in stormwater pollution. Feedback from the parents suggests the message is making it into the home with the most common message being not to wash your car in the street with soaps. Actually, conducting a survey of the students' parents may be a valuable way to measure the effectiveness of the school outreach program.

Effectiveness: Unknown.

II. PUBLIC INVOLVEMENT AND PARTICIPATION

INTRODUCTION

The PIP goals for the 1st year of the SWMP were to provide opportunities for the public to comment on the SWMP, to conduct storm drain stenciling and creek cleanup events, and to support the Salvador Creek Stewardship and Rutherford Dust Restoration Team with their watershed activities. The objectives of these efforts were to encourage public participation and support for stormwater pollution prevention and restoration efforts.

Public comment on the SWMP was sought when the 2nd draft of the SWMP was submitted to the RWQCB in January of 2004 and at the end of the 1st year of the program. One group submitted comments during the review period. The SWMP was not modified based on these comments because the SWMP already some included components of the activities suggested or the requests were not required by the phase II permit.

A total of 5 stormdrain stenciling events were held in the 1st year: 4 in the City of Napa, one in Calistoga and one in Angwin. Four of the events involved elementary school classes in the City of Napa that participated in the NCSWMP school outreach program. The other group was recruited from Pacific Union College after a stormwater presentation was given to an Environmental Studies class. Approximately 120 stormdrains were stenciled in the City of Napa, 35 in Angwin, and 35 in Calistoga.

NCSWMP was a co-sponsor of 3 creek cleanup events in the first year of the SWMP. The largest event was the Coast and Creek Cleanup Day where 290 volunteers removed 8,320 pounds of trash from waterways at 9 sites in Napa County. The other two events were held in the Spring of 2003 and 2004 to clean up creeks in the City of Napa.

The City of Napa continued to contract with the Napa County RCD to coordinate the Salvador Creek Stewardship Group. The mission of the Salvador Creek Stewardship Group is to develop a restoration plan to protect homes and property from flooding while improving habitat for fish and wildlife. A hydrologic model for Salvador creek was developed by the RCD in the first year of the program to assist with the project design. The Salvador Creek stewardship also sponsored two creek cleanup events in the Spring of 2003 and 2004.

The NCFCWCD and the Napa County CDPD provided staff to assist the Rutherford Dust Restoration Team with the development of a conceptual plan to restore a 4-mile reach of the Napa River. The conceptual plan was completed in the first year of the SWMP and funds are now being sought to develop the 50% design phase of the project.

OVERVIEW OF MEASURABLE GOALS

(See Tables 3 and 4)

SUMMARY OF MEASURABLE GOALS

Task 1. Public Comment on the SWMP

A. Public Comments

Performance: The public was invited to comment on the SWMP.

The SWMP was available for public comment at public hearings for each of the City Councils, the Board of Supervisors, and the Flood Control District board. While there were no comments received from the general public at these hearings, the elected officials supported the goals of the SWMP and authorized its adoption and submittal to the RWQCB.

As required by the general permit, a public notice was also posted in the Napa Valley Register and St. Helena Star on January 15th, 22nd, and 29th of 2004 to announce that Napa County's SWMP was open to public review. No comments were received from the public notices placed in the Napa Valley Register and St. Helena Star. Baykeeper did comment on the SWMP and requested that monitoring and an integrated pest management (IPM) program is included in the SWMP.

On June 4, 2004**,** The SWMP and a letter requesting comments were sent to business, farming, and environmental groups. The request for comments was sent to the following groups: Calistoga

Chamber of Commerce, Friends of the Napa River, Get a Grip on Growth, Napa Chamber of Commerce, Napa County Farm Bureau, Napa Sierra Club, Napa Sustainable Winegrowers Group, Napa Valley Grape Growers Association, Napa Valley Vintners Association, St. Helena Chamber of Commerce, The Land Trust of Napa County, and the Yountville Chamber of Commerce. One response was received from these groups and there were no suggested changes to the measurable goals in the SWMP. The response was a statement of gratitude for providing the opportunity to comment on the SWMP.

Effectiveness: Unknown.

B. Response to Comments

Performance: A verbal response regarding Baykeeper's request for a public hearing was provided to the RWQCB.

The SWMP was not modified to include the monitoring requested by Baykeeper because monitoring is not required by the Phase II permit. Monitoring is included in Element II of the SWMP to include expansion of the Napa County RCD's volunteer water quality monitoring program. Some additional monitoring is also being conducted by NCSWMP (see Element III, Additional Accomplishments –Water Quality Monitoring), but not as a measurable goal.

The second request by Baykeeper to include an IPM program is a good suggestion, but the SWMP was not modified because IPM practices will be incorporated into the maintenance standards that will be developed for parks and landscaping in the 2nd year of the SWMP. Other standards developed for maintenance activities may also include IPM practices if appropriate. The NCSWMP also participated in the Our Water, Our World program as an additional accomplishment (see Element I) and will continue to support this program to inform the public about IPM practices.

Effectiveness: Not applicable.

C. Revise SWMP

Performance: The SWMP was not revised.

The SWMP was not revised because the request for monitoring is not required by the Phase II permit and IPM practices will be included in the existing measurable goals to develop maintenance standards.

Effectiveness: Not applicable.

Task 2. Storm Drain Stenciling

A. Storm Drain Stenciling Plan

Performance: Each Local Program developed a plan to mark their storm drains with no dumping signage.

The plans for St. Helena, Yountville, Calistoga, and Napa County set a goal of having all storm drain inlets marked by the end of the 3rd year of the SWMP. The City of Napa has not set a goal to have all their drains marked by a certain date because it is unknown how many inlets there are in the City. Instead, the City of Napa has set a goal of marking at least 120 inlets per year. For each of the programs, the markers that are glued will be inspected every 8 years and replaced as needed and the painted stencils will be inspected every 3 years.

Effectiveness: Not applicable.

B. Storm Drain Stenciling Program

Performance: The City of Napa, Calistoga, and Napa County each conducted volunteer storm drain stenciling events in the 1st year of the SWMP. Yountville will modify this measurable goal to conduct a volunteer storm drain-marking event in FY 04-05.

The objective of the storm drain stenciling events was to foster community involvement in the effort to reduce water pollution and to educate the public at large about the role of storm drains in carrying pollutants to waterways. We believe that including the activity in the outreach program to schools in the City of Napa and at Pacific Union College was very effective because the students were able to take what they learned from the program and participate in an activity that will reduce water pollution. Many of the students took stormwater pollution to heart by identifying sources of pollution that could enter storm drains. A short video of some students from Sunrise Montessori was recorded where the students talked about a poorly designed storm drain inlet surrounded by bare earth.

The markers (see Appendix F) included a message that stated "No Dumping, Drains to Napa River, Solomente Lluvia en el Dranje". 100 markers were specially made for the Salvador Creek watershed and stated "No Dumping, Drains to Salvador Creek, Solomente Lluvia en el Dranje".

A total of 4 stenciling events were conducted in the City of Napa as an activity associated with the outreach program to schools (See Element I). The groups that participated in these events included a class from Salvador Montessori and 3 classes from Phillip Edison. These groups also hung door hangers in the neighborhoods with a message in English and Spanish about stormwater pollution and practices we can use to protect water quality. A total of 127 students participated in the events and marked about 190 inlets.

The volunteers for the storm drain marking events in Calistoga and Angwin were recruited after a presentation was given to an Environmental Studies class at Pacific Union College. The marking done in Angwin was chosen for Napa County's stenciling event because there have been a number of stormwater-related problems identified in the community and it is one of the few areas in the County with storm drains. A total of 21 storm drain inlets were marked in the City of Calistoga and approximately 30 were marked in Angwin.

The Town of Yountville did not conduct a stenciling event, but did schedule a group of Boy Scouts to mark storm drains on August 21, 2004.

Effectiveness: Unknown.

The effectiveness of the storm drain stenciling program may be evaluated in the future by the number of illicit discharges reported from areas that are marked versus unmarked as well as from the public surveys that will be conducted in the future.

Task 4. Creek Cleanups

A. Coast and Creek Cleanup Day

Performance: The County-wide Program, City of Napa, and Napa County sponsored three creek cleanup events in the 1st year of the SWMP.

Of the three cleanup events, Coast and Creek Cleanup Day was the most successful with 290 volunteers participating at nine sites in Napa County. A total of 7,800 lbs of garbage and 520 lbs of recyclables were removed from local waterways during this event. This represents a 55% increase

in the number of volunteers and a 42% increase in the amount of garbage collected compared to the previous year's Coast and Creek Cleanup Day. See Appendix G for a report of the 2003 event.

The two other cleanup events were held in the spring of 2003 and 2004. The cleanup event in the spring of 2003 targeted Napa Creek in downtown Napa and Salvador Creek on the north side of the City of Napa. Despite the light showers on that spring morning, a couple dozen volunteers turned out and removed approximately 500 pounds of trash from these creeks. The Salvador Creek Stewardship Group sponsored a cleanup event along Salvador Creek in the spring of 2004. Approximately a dozen volunteers removed approximately 500 pounds of trash from Salvador Creek.

Effectiveness: The three events combined removed more than 9,000 pounds of trash from Napa County's waterways.

Task 5. Stewardships

A. Salvador Creek Stewardship

Performance: The Napa County Flood Control District and the City of Napa supported the Salvador Creek Stewardship Group in the first year of the SWMP.

A total of 6 meetings were held during the first year of the SWMP. The stewardship meetings included presentations on the creeks plants and wildlife and opportunities for restoration and the RCD's stream modeling work that will help to design a flood protection and riparian enhancement project. The Napa County RCD, funded by the City of Napa and the NCFCWCD, has completed their survey work of the channel in the first year of the SWMP. In the second year the RCD will develop a hydrologic model that will be used to evaluate the benefits various treatments proposed by the stewardship group.

The Salvador Creek Stewardship Group also sponsored the Coast and Creek Cleanup event as well a two Spring cleanup events along Salvador Creek (see Element II, Task 4A).

Effectiveness: The three creek cleanup events removed approximately 890 pounds of trash and recyclables from Salvador Creek.

B. Rutherford Dust Restoration Team (RDRT)

Performance: Napa County assisted the RDRT with the development of a conceptual plan for restoring riparian and aquatic habitat along a 4-mile reach of the Napa River.

RDRT is a group of landowners and vineyard managers that live and work along a 4-mile reach of the Napa River in Rutherford. RDRT's overall objective is to reduce problems of bank instability, eradicate non-native invasive plants, and to improve habitat for fish and wildlife. Staff from the NCFCWCD and CDPD attended several RDRT strategy meetings during the first year of the program. The purpose of these meetings was to discuss survey work needed to characterize the geomorphology of the Napa River and its riparian vegetation.

The NCFCWCD assisted with the mapping of the riparian vegetation in the Spring of 2003 and entered the data into a database. The vegetation mapping will assist with the design of the restoration project by identifying significant stands of trees that should be preserved and areas that are in need of weed eradication and/or revegetation with native plants. Ellie Insley and Associates and NCFCWCD staff prepared a report on the results of this survey work and it was included in the *Conceptual Plan for the Stabilization and Restoration of the Napa River, Rutherford Reach* (see

Appendix I). Napa County is now working with RDRT to acquire funding for the 50% design for the project.

NCFCWCD staff also assisted the Napa County RCD with a fish snorkel survey to determine species presence and relative abundance. The most common fish found included minnow species such as Pike Minnow, California Roach and Hardhead. Juvenile Steelhead Trout were present, but in low numbers.

The NCFCWCD also submitted a grant proposal to the DFG to eradicate Arundo donax from the Rutherford reach. The proposal was denied by the DFG, but the NCFCWCD submitted a similar proposal to other agencies for funding and is waiting for a response.

The NCFCWCD and Acorn Soupe (a local non-profit that conducts environmental education and restoration in Napa County) prepared and submitted a project proposal to map and eradicate Black Locust, Tree of Heaven, and Sesbania from the Rutherford reach. The project will include the participation of local school groups to educate them about the importance of aquatic habitats and how we can restore them. The proposal was funded by the EPA's 5-Star Program and the Napa County Wildlife Commission Board. The initial survey work and education activities will begin in the Fall of 2004.

NCFCWCD also collected insects from riparian vegetation in the Summer of 2002 to learn about the insects and their association with different plant species. This information may be used by farmers to create hedgerows or to manage riparian vegetation to create habitat for "beneficial" insects that prey upon or parasitize vineyard pests. This program could significantly reduce crop pest populations to a level that is manageable without the use of pesticides.

Effectiveness: Unknown.

The effectiveness of this year's effort and continuing support for the RDRT conceptual plan Napa County's future support for RDRT will be evaluated by the final design of the restoration project and the outcome of its implementation. A monitoring program will be developed and implemented to establish baseline conditions for aquatic and riparian habitat and water quality. This baseline data will be used to evaluate post-project conditions and improved stream conditions.

III. ILLICIT DISCHARGE DETECTION AND ELIMINATION

INTRODUCTION

The major goal for the Local Programs in the first year was to establish legal authority to prohibit illicit discharges, adopt an enforcement response plan, and to identify staff responsible for response and enforcement. The major goals for the County-wide Program was to develop record-keeping forms to track illicit discharge response and enforcement and to conduct inspections and outreach to local businesses.

Each of the Local Programs have established authority to prohibit illicit discharges. The Local Programs also developed enforcement response plans and trained appropriate staff on its procedures. The County-wide Program developed and field-tested forms and a database to document illicit discharge response and enforcement. The County-wide Program also conducted inspections and outreach to restaurants and business plan facilities.

OVERVIEW OF MEASURABLE GOALS

(See Tables 5 and 6)

SUMMARY OF MEASURABLE GOALS

Task 1. Develop and Adopt Authority

A. Develop and Adopt Ordinance

Performance: Ordinances adopted.

Each Local Program with the exception of the Town of Yountville adopted an ordinance that prohibits illicit discharges and illicit connections to the stormwater conveyance system. The Town of Yountville adopted their legal authority to prohibit illicit discharges in 2001. Each Local Program's ordinance is included in Appendix J.

Effectiveness: Unknown.

The effectiveness of the ordinances will be evaluated in the future based upon the success of the illicit discharge response program that will be implemented in the 2nd year of the SWMP.

C. Develop and Implement Enforcement Response Plan (ERP)

Performance: An ERP was developed for each Local Program to enforce the authority granted under each Local Programs' stormwater ordinance.

The ERP outlines roles and responsibilities of staff responsible for enforcement and the appropriate enforcement actions taken for different categories of violations. The ERP includes a table of guidelines for enforcement options appropriate for Residential, Commercial, and Construction-related illicit discharges. The ERP for each Local Program is included in Appendix K.

Effectiveness: Unknown.

The ERP will be evaluated for effectiveness based upon the Local Program's ability to eliminate illicit discharges. The reporting forms developed for complaints, investigations, and follow-up inspections (see Element III, Task 2A) will be used to track the performance of the illicit response program. An effective ERP should result in corrective action taken by the responsible party in a reasonable time period. A measure that could be used to evaluate the ERPs effectiveness may include the average number of days required to achieve compliance after a violation is noted, the percentage of violations corrected by the compliance date, and/or the percent of illicit discharges eliminated immediately.

D. ERP Training

Performance: Each Local Program trained staff on the procedures in the ERP.

Each Local Program trained staff responsible for enforcing the stormwater ordinance on the procedures and appropriate enforcement actions for the different types of illicit discharges. Staff trained on the ERP understood the enforcement options and procedures in the ERP, but there were many questions about which types of illicit discharges are significant and not significant.

An additional training will be conducted in the 2nd year of the program to provide examples of illicit discharges and appropriate enforcement responses. Enforcement staff will also discuss with their supervisor and the County-wide Program coordinator issues that arise as the ERP is implemented.

Effectiveness: Unknown.

The effectiveness of the training may be evaluated in the future by the average time required to abate illicit discharges.

Task 2. Spill Response Plan

A. Develop Reporting Forms

Performance: Forms were created to document complaints received, investigations conducted, and follow-up inspections and enforcement to abate illicit discharges.

The illicit discharge response forms are included in Appendix L. The complaint form is used to record information received by the public or government agencies about illicit discharges. Because information received from the public is not always accurate, an investigation form was developed to document observations made by the Local Program's enforcement officer. The follow-up form is intended to document corrective actions taken by the responsible party to abate the discharge.

Effectiveness: Unknown.

The effectiveness of the illicit discharge response forms will be evaluated as the program is implemented and improvements will be made as needed.

B. Identify Structure

Performance: Each Local Program identified staff responsible for receiving calls from the public, conducting investigations and clean-up of illicit discharges, and following up to ensure that corrective actions are implemented. See Appendix M for each Local Program's illicit response structure.

Effectiveness: Unknown.

At this early stage in the SWMP, the Local Programs have limited staff available to conduct investigations and enforcement of illicit discharges. Once the illicit response plan is implemented in the 2nd year of the SWMP, each Local Program will evaluate their effectiveness at eliminating illicit discharges and will take measures to improve effectiveness as appropriate.

Task 4. Business Inspections

A. Develop education materials for restaurants.

Performance: The DEM developed a brochure that describes the laws that regulate stormwater discharges and the common BMPs that may be used by restaurants to prevent stormwater pollution. The brochure is included in Appendix N.

Effectiveness: Unknown

The brochure's effectiveness may be evaluated in the future based on the number of illicit discharges detected at food service facilities during routine inspections and from complaints to the stormwater hotline.

B. Distribute BMP booklets.

Performance: All (700) restaurants in Napa County, including those in American Canyon, were provided with the Food Service Facility BMP booklet developed by DEM.

The DEM provided the BMP booklet to all food service facilities during their routine inspections. The inspectors explained the new stormwater requirements for Napa County and discussed some of

the common sources of pollution generated from restaurants and the BMPs that may be used to eliminate these discharges.

Effectiveness: Unknown.

The brochure's effectiveness may be evaluated in the future based on the number of illicit discharges detected at food service facilities during routine inspections and from complaints to the stormwater hotline.

C. Develop inspection forms and database

Performance: A restaurant inspection checklist was developed by DEM and NCFCWCD staff to document illicit discharges found during routine inspections, BMPs used by restaurants to avoid illicit discharges, and educational materials provided to the business. A prototype Access database was also developed to document program performance and effectiveness.

Effectiveness: Unknown.

A database was developed to track the effectiveness of the restaurant inspection program. The database will allow enforcement coordinators to track violations of the stormwater ordinance and enforcement actions taken to ensure that violations are corrected in a timely fashion.

D. Training

Performance: The Stormwater Program Specialist trained DEM staff on the Phase II requirements and the appropriate use of BMPs to eliminate illicit discharges.

A post survey was not conducted to measure the effectiveness of the training because the 1st year of the inspection program was educational and very basic (e.g. only rain down the drain). The enforcement authority granted in the local stormwater ordinances will take effect in the 2nd year of the SWMP, therefore, the restaurant inspections will become more enforcement oriented. For this reason, a more in-depth training program will be implemented to cover enforcement response and other decisions inspectors will make in the field. This training will include a pre and post-test to measure the inspectors understanding of the stormwater requirements and enforcement response.

Effectiveness: Unknown.

The training program's effectiveness will be evaluated in the future by the number of illicit discharges eliminated and the average time to achieve abatement.

E. Conduct Restaurant Inspections

Performance: The County-wide Program conducted inspections at all (700) restaurants in Napa County, including American Canyon.

The DEM provided the Food Service Facility BMP booklet during its routine restaurant inspections and explained the new stormwater requirements. The inspections were educational and not enforcement oriented because the time budgeted for these inspections was limited to 15 minutes and there was no local authority to enforce water quality laws. Inspections for illicit discharges will begin in the 2nd year when all the Local Programs ordinances take effect.

Effectiveness: Unknown.

The effectiveness of the inspection program will be determined by the percent of restaurants in compliance on the day of inspection. Complaints received by the stormwater hotline will also be

used to document violations associated with restaurants and will be used as part of the inspection program evaluation.

F. Hazardous Waste Disposal

Performance: A BMP booklet for business plan facilities was developed on stormwater pollution prevention practices and distributed to 30% of these facilities.

The DEM developed a brochure that provided business plan facilities with information on the new stormwater requirements and BMPs that may be used to protect water quality, including proper hazardous waste disposal. Rather than mailing the booklets to the businesses, they were provided during routine business plan facility inspections. The method of distribution was changed because the outreach effort would be more effective if the inspectors explained the brochure and discussed stormwater-related issues with the site manager.

Although this method did not achieve the performance measure of reaching ½ of the businesses (600), the overall effectiveness was far greater than if the brochures were mailed to half the businesses. This measurable goal has been modified to distribute the booklets to 300 facilities during routine inspections.

Effectiveness: Unknown.

The effectiveness of the business plan facility booklet will be evaluated in the by the number of illicit discharges reported from these facilities.

G. Conduct Business Plan Inspections

Performance: Staff from DEM conducted inspections at 360 business plan facilities in the 1st year of the SWMP.

These inspections were educational in nature because local ordinances had not yet taken effect. The inspections will be more enforcement oriented when the local ordinances take effect in the 2nd year of the SWMP.

Effectiveness: Unknown.

The effectiveness of the inspection program will be determined by the percent of business plan facilities in compliance on the day of inspection. Complaints received by the stormwater hotline will also be used to document violations and will be used as part of the inspection program evaluation.

H. Business Newsletter

Performance: A newsletter with an article on stormwater pollution and BMPs was mailed to all restaurants in Napa County, including American Canyon, in December of 2003.

The article described the requirements of the Phase II Municipal permit and some example BMPs that restaurants can use to reduce polluted runoff. The newsletter is included in Appendix N. The performance measure to send a newsletter to all regulated businesses was not reached because the business plan facilities were not included in this outreach. A newsletter will be mailed to all business plan facilities in the second year of the SWMP.

Effectiveness: Unknown.

The effectiveness of the newsletter may be evaluated in the future based upon the number of illicit discharges detected and BMPs implemented at restaurants and business plan facilities.

ADDITIONAL ACCOMPLISHMENTS

Water Quality Monitoring

A. Nutrient and Pathogen TMDL

Performance: The County-wide Program assisted RWQCB staff with the pathogen and nutrient TMDL studies by helping to identify sampling sites and collecting samples in the Spring of 2003. The DEM also contributed to this study by providing the pathogen sampling data they collected from the Napa River in the City of Napa.

The assistance with the site selection was very helpful to RWQCB staff because the Stormwater Program Specialist has local knowledge of the creeks and access locations. Collecting some of the samples also helped to increase the TMDL study's efforts by saving RWQCB staff time. The data collected by DEM staff has proved to be very useful for the Pathogen TMDL study because the Napa River in the city limits was not sampled on a frequent basis by the RWQCB.

Effectiveness: NA

B. Benthic Macroinvertebrate Monitoring

Performance: The County-wide Program assisted the Friend of the Napa River with the BMI sampling in three creeks during the 5th and final year of the monitoring program. The County-wide Program also helped the FONR gain access to sites and helped recruit volunteers by handing out flyers at Earth Day and posting them at the Napa Valley College.

The final results of the monitoring project will be released next year. Benthic macroinvertebrates are the best indicator of overall stream health and the composition of the BMIs collected can sometimes be used to identify pollutants causing water quality impairment in streams.

Effectiveness: NA

C. Pollution Prevention for Surface Cleaning Guide.

Performance: A pollution prevention booklet was developed for surface cleaning.

The County-wide program developed a draft field guide to educate businesses, residences, and municipal staff about the use of BMPs for surface cleaning. Members from NSSSA have been commenting on the drafts as they have been developed and a final draft will be complete and ready for distribution after a couple contact phone numbers are added. See Appendix O for a copy of the draft field guide.

Effectiveness: Unknown.

The effectiveness of this brochure may be evaluated in the future by the number of reported illicit discharges from surface cleaning.

IV. CONSTRUCTION SITE RUNOFF CONTROL

INTRODUCTION

The goals for the Local Programs in the first year of the SWMP were to establish legal authority to require BMPs at construction sites, to develop an enforcement response plan, and to train staff on construction site runoff control BMPs. The County-wide Program goals were to conduct training for staff, develop a brochure, and sponsor workshops to educate the public about the Phase II requirements and construction site runoff control BMPs.

Each of the Local Programs adopted an ordinance that prohibits illicit discharges and establishes the authority to adopt requirements to control non-stormwater runoff from construction sites. Specific BMP requirements for construction sites will be adopted in the 2nd year of the SWMP. The Local Programs also developed enforcement response plans and trained staff on its procedures. Staff from each of the Local Programs attended workshops and training on the Phase II requirements and construction site runoff control BMPs. The County-wide Program sponsored two workshops that were attended by nearly 100 participants from the private and public sector.

OVERVIEW OF MEASURABLE GOALS

(See Tables 7 and 8)

SUMMARY OF MEASURABLE GOALS

Task 1. Legal Authority

A. Develop and Adopt Authority

Performance: Each Local Program, with the exception of Yountville, adopted an ordinance that prohibits illicit discharges and establishes authority to requirement that new development and redevelopment projects implement pollution control measures to protect water quality. The Town of Yountville adopted their stormwater ordinance with the same authority in 2001. The ordinance for each Local Program is included in Appendix J.

Effectiveness: Unknown.

The effectiveness of the ordinance will be evaluated based on the results of the construction site inspection program that will be implemented in the 2nd year.

C. Develop Enforcement Response Plan (ERP)

Performance: An ERP was developed for each Local Program to enforce the provisions of the stormwater ordinance.

The ERP describes the roles and responsibilities of staff responsible for enforcement of the stormwater ordinance and appropriate enforcement actions that may be taken for different categories of violations.

Effectiveness: Unknown.

The effectiveness of the ERP will be evaluated when the construction site inspection program is implemented in the 2nd year of the SWMP. The effectiveness of the ERP will be evaluated by the percent and number of violations corrected and the average time required to reach compliance after a violation is discovered.

D. ERP Training

Performance: Each of the Local Programs trained appropriate staff on the procedures related to enforcement response at construction sites.

The City of Napa and St. Helena are the only two Local Programs with staff or a contractor with stormwater construction inspection duties. The other Local Program stormwater coordinators serve as interim enforcement officials for construction sites. If these programs hire or dedicate other staff to perform construction site inspections, they will be trained accordingly.

Effectiveness: Unknown.

The effectiveness of the training will be evaluated as the construction site runoff-related programs are implemented. The effectiveness of the ERP will be evaluated by the percent and number of violations corrected and the average time required to reach compliance after a violation is discovered.

Task 3. Inspection Program

A. Draft Training Materials

Performance: The County-wide Program developed training materials for construction site inspections.

The training includes a Power Point presentation (See Appendix P) that includes an overview of the Phase II requirements and examples of local construction sites with effective and ineffective pollution prevention measures.

Effectiveness: Unknown.

The effectiveness of the training program will be evaluated when the inspection program is implemented in the 2nd year of the SWMP.

B. Pilot Training Program

Performance: The power point presentation on construction site BMPs was included in the Construction Site Planning and Management workshop held in Napa in the Fall of 2003. Planners and public works staff from each Local Program except the Town of Yountville attended the workshop and saw the presentation. See Appendix P for a list of workshop participants.

A second workshop was held in Calistoga in March 2004 and was attended by staff from the City of Napa, Town of Yountville, and Napa County. This workshop was presented by Lucinda Dustin from Stevens, Ferrone, and Bailey and included a site visit to a local construction site. The presentation did not include the presentation developed in measurable goal 3A, but did include similar content. See Appendix P for an outline of the presentation and workshop.

The City of Napa's construction site stormwater inspector was accompanied by the Stormwater Program Specialist during an inspection of a site that was in non-compliance. The City inspector was instructed on the use of the inspection checklist developed by the County-wide Program (see Appendix Q), the NPDES Construction Permit requirements, and BMPs used to prevent pollution.

Effectiveness: Unknown.

The effectiveness of the training program will be evaluated when the inspection program is implemented in the 2nd year of the SWMP. The Stormwater Program Specialist at the NCFCWCD will accompany each Local Programs inspector on some site visits to ensure that inspectors correctly identify construction site violations and take appropriate enforcement action.

Task 4. Outreach

A. Develop Brochure

Performance: A brochure was developed that describes the Phase II requirements and sources where information on construction and post-construction BMPs can be obtained. The brochure is included in Appendix R.

Local programs distributed the brochures at their front counters and provided them to applicants and contractors inquiring about the Phase II permit requirements. The brochures were also

provided at two workshops related to construction site runoff control. All told, 90 brochures were distributed to participants at workshops and 150 were distributed by Local Programs at the front counter.

As the Local Programs implement their construction site runoff control programs in the 2nd year, the brochure will be adapted to include the Local Program requirements.

Effectiveness: Unknown.

The effectiveness of the brochure may be measured in the future by tracking the number of incidents of illicit discharges detected at construction sites.

B. **Provide Fact Sheets**

Performance: The County-wide program developed a CD of development-related guidance materials to provide to the public. The CD's table of contents is included in Appendix S.

About a dozen of the CDs were distributed at a presentation to the Napa Engineers Society on the upcoming Phase II requirements. Factsheets from the CASQA BMP Handbooks were also provided to contractors during construction site visits. The most common factsheets distributed were for dewatering operations and concrete washout stations.

Effectiveness: Unknown.

The effectiveness of the factsheets will be evaluated by the number of violations documented at construction sites.

D. **Construction Workshop**

Performance: Advertisements for the Fall 2003 construction site workshop were placed in the Napa-Solano Builder's Exchange Newsletter and each Local Program provided workshop brochures at their front counters. The Spring 2004 workshop was advertised by placing an ad in the Napa-Solano Builders Exchange newsletter and mailing announcements to private contractors.

The Fall 2003 workshop was well attended by local agency staff and private engineering firms and contractors. A total of 91 people attended the workshop. This was the largest attended of the workshops held in the Bay Area in 2003.

The Spring 2003 workshop at Calistoga Ranch was attended by 15 people from the public and private sector. Twenty-one were enrolled, but scheduling conflicts prevented six from attending. The presentation for the Spring 2003 workshop is included in Appendix P.

Effectiveness: Unknown.

The effectiveness of future workshops will be evaluated by the number of violations detected at construction sites.

E. **Attend Workshop.**

Performance: The City of Napa, St. Helena, Calistoga, and Napa County each sent staff representing their Public Works and Planning departments to the Fall 2003 construction site management workshop. The workshop was attended by 15 employees from Napa County, 4 from the City of Napa, 3 from the City of St. Helena, and 2 from the City of Calistoga.

Staff from Napa County, City of Napa, and Town of Yountville attended the Spring 2004 construction site workshop in Calistoga. The workshop was attended by 4 employees from Napa

County, 3 from the City of Napa, and 2 from Yountville. This workshop included a site visit to a large development in a sensitive watershed called Calistoga Ranch. Many BMPs were featured at the site and the participants had the opportunity to ask questions about their installation and appropriate use. The participants also broke up into groups and developed a site plan for BMP implementation at the Calistoga Ranch construction site. These hands-on activities are very effecting in trainings because it forces the attendees to participate and think through stormwater pollution prevention practices.

Effectiveness: Unknown.

The effectiveness of future workshops will be evaluated by the number of violations detected at construction sites.

V. POST-CONSTRUCTION RUNOFF MANAGEMENT

INTRODUCTION

The goals for the first year of the SWMP were to adopt local ordinances, establish an enforcement response plan, and develop a polity for long-term maintenance of post-construction BMPs.

Each of the Local Programs adopted an ordinance that establishes authority to adopt requirements for post-construction runoff management practices for new development and redevelopment projects. Each of the Local Programs also developed an enforcement response plan (ERP) to correct violations of BMP maintenance requirements. The County-wide Program also developed policy guidelines to ensure long-term maintenance of post-construction BMPs.

OVERVIEW OF MEASURABLE GOALS

(See Tables 9 and 10)

SUMMARY OF MEASURABLE GOALS

Task 1. Legal Authority

A. Develop Authority

Performance: Each Local Program, with the exception of Yountville, adopted an ordinance that grants authority to the Director of Public Works to establish requirements for post-construction BMPs from new development and redevelopment projects. The Town of Yountville adopted their authority in 2001. The ordinance for each Local Program is included in Appendix J.

Effectiveness: Unknown.

The effectiveness of the ordinance will be evaluated as controls for post-construction runoff are implemented.

C. Enforcement Response Plan (ERP)

Performance: An ERP was developed for each Local Program to enforce authority granted by the local stormwater ordinances. The ERP describes the roles and responsibilities of Local program staff and appropriate enforcement actions that may be taken to correct violations. For the purposes of the ERP, the guidelines for construction sites describes the enforcement options available for violations related to post-construction operation and maintenance.

Effectiveness: Unknown.

The effectiveness of the ERP will be evaluated as the post-construction-related programs are implemented. A database will be developed once the post-construction requirements take effect (2nd year) to track post-construction BMP conditions and maintenance practices and evaluate the effectiveness of the ERP.

D. ERP Training

Performance: The Local Program stormwater program coordinators are acting as interim enforcement officials until the program is fully implemented. The stormwater coordinators were each trained on appropriate enforcement actions for different categories of violations at a NCSWMP's meeting in the Spring of 2003. Additional trainings will be conducted if additional staff are identified to enforce the local ordinances.

Effectiveness: Unknown.

The effectiveness of the ERP training will be evaluated as the post-construction-related programs are implemented. A database will be developed once the post-construction requirements take effect (2nd year) to track post-construction BMP conditions and maintenance practices and evaluate the effectiveness of the ERP. Effectiveness measures may include average time for corrective actions taken and number and percent of developments in noncompliance.

Task 2. Design Standards

A. Introductory Training

Performance: Each Local Program sent staff to at least one of the construction workshops that included a presentation about post-construction BMPs.

The Construction Site Planning and Management workshop hosted in the Fall of 2003 included a presentation by a speaker from the City of Livermore with 8 years of experience reviewing and approving development plans with Post-Construction BMPs. This workshop was well attended by Local Program staff (see Element IV, Task 4E).

A presentation was also given at a Napa Engineer's Society meeting that was attended by engineers from the City of Napa and Napa County as well as employees from local engineering firms. The presentation was given by the NCFCWCD and it served as an introduction to the post-construction requirements in Attachment 4 in the Phase II permit.

Effectiveness: Unknown.

The effectiveness of these trainings and future trainings will be evaluated by the quality of plans submitted and approved after the post-construction runoff management requirements are implemented in the 2nd year of the SWMP.

Task 4. Long Term Maintenance

F. Develop Policy

Performance: the County-wide Program developed policy guidelines for ensuring long-term operation and maintenance of post-construction BMPs approved by the Local Programs. These guidelines will be incorporated into the local plan review in the 2nd year of the SWMP. The City of Napa currently has a policy adopted to ensure maintenance of detention basins and other long-term BMPs. The policy guidelines and the City's adopted policy are included in Appendix T.

Effectiveness: Unknown.

The effectiveness of the BMP maintenance policies will be evaluated in the future by the number of post-construction BMPs that are properly operated and maintained.

VI. MUNICIPAL OPERATIONS

INTRODUCTION

The goals for the first year of the program was to continue the existing street sweeping, litter collection, and stormdrain cleaning schedule for each of the local programs and to develop operation and maintenance standards for the following activities: 1) Street Sweeping, 2) Stormdrain Cleaning, 3) Stormwater Pump Stations (City of Napa only), 4) Roads and Streets, and 5) Creeks and Ditches. In addition to developing operation and maintenance standards for these activities, the training of municipal staff on the standards and the use of BMPs was also included as a measurable goal for the first year of the program.

Each of the Local Programs continued their routing street sweeping, catch basin cleaning, and litter-collection activities to reduce pollutant discharged to the stormwater conveyance system. Standards and BMPs for maintenance activities were developed for each of the municipal activities and the appropriate staff were trained on pollution prevention practices.

OVERVIEW OF MEASURABLE GOALS

(See Tables 11 and 12)

SUMMARY OF MEASURABLE GOALS

Task 1. Street Sweeping

A. Sweep streets according to the schedule in Table 8.

Performance: Each of the local programs followed the schedule in Table 8 100 % of the time.

Effectiveness: The City of St. Helena removed 3,455 cubic yards of debris from city streets. The effectiveness of the other Local Programs is unknown.

Based on St. Helena's data from March 2003 to June 2004, 3,455 cubic yards of debris was removed from city streets. The amount of debris collected over a given year (Figure X) is relatively constant except during the fall when trees are dropping their leaves. Debris collected during the leaf season (October through December) averaged 250 cubic yards per month while non-leaf season street sweeping collected an average of 115 cubic yards per month.

The other Local Programs have not implemented a tracking system for reporting the quantity of pollutants removed from street surfaces. The tracking form developed form developed in the first year of the SWMP will be piloted by these Local Programs and in the second year and modified to improve efficiency of data collection.

B. Develop Operation and Maintenance Standards.

Performance: All Local Programs developed operation and maintenance standards for street sweeping.

Street sweeping standards were developed from the CASQA BMP Municipal Handbook and incorporated in each local program's Stormwater Maintenance Standards Manual. See Appendix U for a copy Napa County's Stormwater Standards Maintenance Manual. Each Local Program may revise their standards in the future to improve street sweeping effectiveness for their community.

Effectiveness: Unknown.

A draft street sweeping log was developed as part of the standards and the Local Programs will pilot a street sweeping tracking program to document the areas swept, the frequency of sweeping, the miles swept, and the amount of material collected starting in the second year of the program. The City of St. Helena will continue to improve their existing street sweeping tracking program evaluate their sweeping program's effectiveness.

Task 2. Storm Drain Maintenance

A. Develop Maintenance Standards

Performance: Standards for storm drain maintenance were developed and included in each Local Program's Stormwater Maintenance Standards Manual.

The maintenance standards include cleaning out storm drains prior to the wet season and protecting temporary storage of storm drain debris stormwater runoff.

Effectiveness: Unknown.

A draft storm drain maintenance tracking form was developed and will be piloted in the 2nd year of the SWMP to track the amount of material collected and frequency of cleaning.

B. Training

Performance: Each of the Local Programs trained appropriate staff on the maintenance standards and BMPs for storm drain cleaning and disposal of debris.

Effectiveness: Unknown.

The effectiveness of the training program will be evaluated in the future when the maintenance tracking program is implemented in the 2nd year of the SWMP.

C. Routine Inspection and Cleaning

Performance: Each of the Local Programs followed the storm drain maintenance schedule according to Table 8.

Effectiveness: Unknown.

The effectiveness of the storm drain maintenance activities will be evaluated when the tracking program is implemented in the 2nd year of the SWMP. If the tracking program is practicable, the effectiveness of the maintenance program may be evaluated by the amount of material removed from catch basins. Data collected may also improve the Local Program's effectiveness by identifying areas that require more frequent cleaning.

Task 3. Stormwater Pump Stations

A. Develop Maintenance Standards

Performance: The City of Napa developed maintenance standards for stormwater pump station cleaning and maintenance (see Appendix U).

These standards were developed from the 2003 edition of the CASQA BMP Municipal Handbook.

Effectiveness: Unknown.

B. Train Municipal Staff.

Performance: The City of Napa trained staff responsible for cleaning stormwater pump stations in the Fall of 2003 using the CASQA BMP factsheet for pump stations. In the future, the City of Napa will use their adopted standards and BMPs for stormwater pump stations to train staff prior to the wet season each year.

Effectiveness: Unknown.

A pilot training log was developed with the maintenance standards and will be piloted in the second year of the program. The pump station maintenance log may be adapted by the City of Napa to improve data collection efficiency and effectiveness.

C. Visual Inspections

Performance: The City of Napa inspected the wet wells and forbays for oils and other spills in June and August and once per month during the wet season.

Effectiveness: Unknown.

The draft inspection form for stormwater pump stations will be piloted in the 2nd year of the SWMP to track inspection frequency and pollutants found. The inspection log will be adapted to improve data collection efficiency and usefulness.

D. Clean Pump Station Wet Wells

Performance: The wet wells at each of the City's pump stations were cleaned in September of 2003.

Effectiveness: Unknown.

Task 4. Litter Control

A. Services

Performance: Each of the Local Programs continued their routine litter collection service at public parks and city centers. Most areas are serviced on a weekly basis to ensure that containers do not overfill with garbage.

Effectiveness: Unknown.

Task 6. Road Maintenance

A. Education and Outreach

Performance: The measurable goal to sponsor a public workshop on Fish-Friendly Road Design and Maintenance was not implemented in the first year because attempts to contact the contractor was unsuccessful until May 2004. It was possible to hold the workshop in June, but the date of July 9th, was chosen to provide more time to conduct outreach to private contractors. For these reasons, the SWMP will be modified to hold the workshop in the 2nd year of the program.

To conduct outreach for the workshop, ads were placed in the Napa Solano Builders Exchange and letters and flyers were mailed to engineering firms that design and build roads in Napa County. A total of 6 staff members from the Napa County road crew, 2 Public Works Engineers, and 2 County fire Marshals were signed up for the workshop by June 30th.

Effectiveness: Unknown.

B. Develop Maintenance Standards

Performance: Maintenance standards for roads and streets were developed and incorporated into the Stormwater Maintenance Standards Manual for each Local Program. The standards address road repair and maintenance, slipouts, and berms. The standards were developed from the San Mateo Maintenance Standards and the California BMP Municipal Handbook. The San Mateo Manual was reviewed and approved by RWQCB, DFG, USFWS, and NOAA

Effectiveness: Unknown.

C. Training

Performance: The Local Programs trained their staff on the road and street maintenance standards.

The training included the content of the standards as well as on overview of beneficial uses provided by rivers, creeks, lakes, and estuaries and how pollutants degrade these beneficial uses. The trainings included a pre-test and/or a post-test to measure staff's understanding of water quality issues and pollution prevention practices.

Effectiveness: Unknown.

Task 7. Creek and Ditch Maintenance

A. Develop Maintenance Standards

Performance: Maintenance standards for creeks and ditches were developed and incorporated into each Local Program's maintenance standards manual.

The standards were developed from the San Mateo Maintenance Standards, the NCFCWCD's routine maintenance agreement with the DFG, and the California BMP Municipal Handbook. The standards were designed to address common water quality impacts associated with creek and ditch maintenance including large woody debris removal, vegetation management, and bank repair.

Some of the outcomes expected from implementing these standards include: 1) the conservation of in-stream habitat for fish and other aquatic life, 2) the preservation of tree canopy to moderate temperature and provide habitat for terrestrial wildlife, 3) the elimination or minimization of impacts from pesticide use, 4) conserving streambank vegetation to reduce bank erosion and the introduction of sediment into streams, and 5) maintaining buffer areas to filter runoff from adjacent land uses.

Effectiveness: Unknown.

B. Record Keeping

Performance: Data sheets for stream maintenance activities were developed and field-tested in the first year of the program (see Appendix V).

The purpose of the data sheets is to document stream conditions and work performed in creeks to protect life and property from flooding and bank erosion. The survey forms are used to document the locations of large woody debris, vegetative overgrowth, bank erosion, and dumping of yard waste and debris on stream banks. The survey form is also used to prioritize and describe corrective actions to be taken to avoid damage to life and property from flooding. Information from these forms will be entered into a database and reports will be generated for the work proposed. These reports can be used to instruct crews on the work to be performed and the habitat that shall

be protected. The follow-up data sheet is used to verify that the work was performed according to the recommendations in the survey report.

The record-keeping forms will also be used to document yard waste and debris dumping on creek banks. These cases will be referred to the Local Program's stormwater enforcement official to correct the violation.

Effectivness: Unknown.

The data generated from this record-keeping practice will allow Local Programs to monitor their creek maintenance activities for adherence to the standards and BMPs in their Stormwater Maintenance Standards Manual.

C. Training

Performance: Stream maintenance work was conducted in the City of Napa, St. Helena and the unincorporated area of Napa County in the Summer of 2003. All work was supervised by FCWCD staff and permitted under the authority of the DFG through a routine maintenance agreement. Crews involved in the creek maintenance activities (i.e. City of Napa Street Division and the CCC) were trained on the standards in the agreement with DFG.

Effectiveness: The follow-up survey report showed that the crews followed the recommendations in the survey report.

<u>GOALS AND MODIFICATIONS FOR 2ND YEAR</u>

I. PUBLIC EDUCATION AND OUTREACH

<u>GOALS FOR THE 2ND YEAR</u>

See Table 13.

<u>MODIFICATIONS TO MEASURABLE GOALS</u>

No modifications are proposed for the Public Education and Outreach Measurable Goals

<u>ADDITIONS TO MEASURABLE GOALS</u>

No additions are proposed for the Public Education and Outreach Measurable Goals

II. PUBLIC INVOLVEMENT AND PARTICIPATION

<u>GOALS FOR THE 2ND YEAR</u>

See Table 14.

<u>MODIFICATIONS TO MEASURABLE GOALS</u>

No modifications are proposed for the Public Involvement and Participation Goals

<u>ADDITIONS TO MEASURABLE GOALS</u>

III. ILLICIT DISCHARGE DETECTION AND ELIMINATION

GOALS FOR THE 2ND YEAR

See Table 15.

MODIFICATIONS TO MEASURABLE GOALS

Task 4. Business Inspections

F. Hazardous Waste Disposal

The performance measure has been modified to reach 300 business plan facilities per year.

ADDITIONS TO MEASURABLE GOALS

No additions are proposed for the Illicit Discharge Detection and Elimination Measurable Goals

IV. CONSTRUCTION SITE RUNOFF CONTROL

GOALS FOR THE 2ND YEAR

See Table 16.

MODIFICATIONS TO MEASURABLE GOALS

No modifications are proposed for the Construction Site Runoff Control Measurable Goals

ADDITIONS TO MEASURABLE GOALS

No additions are proposed for the Construction Site Runoff Control Measurable Goals

V. POST-CONSTRUCTION RUNOFF MANAGEMENT

GOALS FOR THE 2ND YEAR

See Table 17.

MODIFICATIONS TO MEASURABLE GOALS

No modifications are proposed for the Post-Construction Runoff Management Measurable Goals

ADDITIONS TO MEASURABLE GOALS

No additions are proposed for the Post-Construction Runoff Management Measurable Goals

VI. MUNICIPAL OPERATIONS

GOALS FOR THE 2ND YEAR

See Table 18.

MODIFICATIONS TO MEASURABLE GOALS

No modifications are proposed for the Municipal Operations Measurable Goals

ADDITIONS TO MEASURABLE GOALS

Task 6. Road Maintenance

A. Education and Outreach

This task is added to the 2nd year of measurable goals because the Fish-Friendly Road Maintenance and Design workshop was not implemented in the 1st year of the SWMP. The workshop will be held on July 8, 2004.

<u>GLOSSARY AND ABBREVIATIONS</u>

1. **Best Management Practices (BMPs)** – Best management practices means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of "waters of the United States." BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. (40 CFR § 122.2)

2. **Maximum Extent Practicable (MEP)** – A technology-based standard established by congress in CWA §402(p)(3)(B)(iii) that municipal dischargers of stormwater must meet. Technology-based standards establish the level of pollutant reductions that dischargers must achieve. MEP is generally the result of emphasizing pollution prevention and source control BMPs as the first lines of defense in combination with treatment methods where appropriate serving as additional lines of defense. The MEP approach is an ever evolving, flexible and advancing concept, which considers technical and economic feasibility.

3. **Measurable Goal** – Defined tasks or accomplishments that are associated with implementing best management practices.

4. **Minimum Control Measure** – A stormwater program area that must be addressed by all regulated MS4s. The following six minimum control measures are required to be addressed by the regulated Small MS4s: Public Education and Outreach, Public Involvement/Participation, Illicit discharge Detection and Elimination, Construction Site Runoff Control, Post-Construction Runoff Management, Municipal Operations.

5. **New Development** – land disturbing activities, structural development, including construction or installation of a building or structure, creation of impervious surfaces, and land subdivision.

6. **Outfall** – A point source at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States. (40 CFR § 122.26(b)(9))

7. **Point Source** – Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff. (40 CFR § 122.2)

8. **Regulated Small MS4** – A small MS4 that is required to be permitted for discharging stormwater through its MS4 to waters of the U.S. and is designed either automatically by the U.S. EPA because it is located within an urbanized area, or designated by the SWRCB or RWQCB in accordance with the designation criteria listed at Finding 11 of the General Permit.

9. **Redevelopment** - Redevelopment means, on an already developed site, the creation or addition of at least 5,000 square feet of impervious surface. Redevelopment includes, but is not limited to: the expansion of a building footprint or addition or replacement of a structure; structural development including an increase in gross floor area and/or exterior construction or remodeling; replacement of impervious surface that is not part of a routine maintenance activity; and land disturbing activities related with structural or impervious surfaces. Where redevelopment results in an increase of less than fifty percent of the impervious surfaces of a previously existing development, and the existing development was not subject to these SUSMP's, the Design Standards apply only to the addition, and not to the entire development.

10. **Restaurant** – A stand-alone facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption.

11. **Small Municipal Separate Storm Sewer System (Small MS4)** – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that are:

    i. Owned or operated by the United States, a State, city, town, boroughs, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district, or drainage district, or similar entity, or an Native American tribe or an authorized Native American tribal organization, or designated and approved management agency under section 208 of the CWA that discharges to waters of the United States.

    ii. Not defined as "large" or "medium" municipal separate storm sewer systems.

    iii. This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings. (40 CFR §122.26(b)(16))

1. **BASMAA** – Bay Area Stormwater Management Agencies Association

2. **BAU** – Benefit Assessment Unit

3. **BMP** – Best Management Practice

4. **CCC** – California Conservation Corps

5. **CDPD** – Napa County Conservation Development and Planning Department

6. **CWA** – Clean Water Act

7. **DEM** – Napa County Department of Environmental Management

8. **DFG** – Department of Fish and Game

9. **FONR** – Friends of the Napa River

10. **JPA** – Joint Powers Authority

11. **MEP** – Maximum Extent Practicable

12. **MS4** - Small Municipal Separate Storm Sewer System

13. **NCFCWCD** – Napa County Flood Control and Water Conservation District

14. **NCSWMP** – Napa County Stormwater Management Program

15. **NSSSA** – Napa-Solano-Sonoma Stormwater Agencies

16. **NOI** – Notice of Intent

17. **NPDES** – National Pollutant Discharge Elimination System

18. **RCD** – Napa County Resource Conservation District

19. **SFRWQCB** – San Francisco Regional Water Quality Control Board

20. **SWMP** – Stormwater Management Program

21. **SWPPP** – Stormwater Pollution Prevention Plan

22. **SWRCB** – State Water Resources Control Board

23. **TMDL** – Total Maximum Daily Load

SIGNATORY REQUIREMENTS

Table 1: Public Education and Outreach Element

Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Status			*Evaluation		
			Implemented	Not Implemented	Modified	QT Achieved	QT Not Achieved	Unknown
1. Characterize general public.								
1A Collect census data.	Characterize the general public through census data. Through census data, determine groups of population in terms of age, language spoken, and	**PM** Information collected from census data.	X			X		
1B Develop survey material	Review and adapt other agencies' survey to gather resident's current knowledge of storm water pollution, gardening, and vehicle servicing habits; and determine how to best reach different pockets of audience.	**PM** Completed survey ready for use.	X			X		
1C Conduct a pilot survey	Conduct an initial survey to a small audience.	**PM** 25 to 50 survey forms filled out at community events.	X			X		
2. Outreach to local government officials.								
2A Develop presentation	Develop presentation to inform local government officials of the importance of reducing storm water pollution, the regulatory requirements, and the local Storm Water Pollution Prevention Plan.	**PM** Completed PowerPoint presentation.	X			X		
2B Give presentation	Give presentation at local council meetings and management meetings.	**PM** Number of presentation given to local council members, and managers.	X			X		
4. Community Events								
4A Develop booth	Develop booth to inform the public on the importance of reducing SW pollution and what they can do to reduce SW pollution.	**PM** Booth, outreach materials, and activities developed.	X			X		
4B Staff booth at events	Staff SW booth at community events.	**PM** Attend at least 3 events per year. (e.g. Earth Day, Home and Garden Show, Symphony on the River, etc.)	X			X		
5. Outreach to general public								
5D Upvalley hazardous waste collection	Continue to hold hazardous waste collection days for the upvalley community.	**PM** 2-4 events per year	X			X		
5E Creek Dumping Brochure	Develop a brochure to address creek dumping of leaves and landscape materials.	**PM** Brochure developed	X			X		
5F	Mail brochure to landscape contractors in Napa County.	**PM** Mailed to > 80% of listed landscape contractors in Napa County.	X			X		
5H Used oil recycling	Purchase radio advertisements	**PM** Advertisements purchased	X			X		

Table 1: Public Education and Outreach Element

Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Status			*Evaluation		
			Implemented	Not Implemented	Modified	QT Achieved	QT Not Achieved	Unknown
5I	Place ad in Yellow pages and purchase "used Oil Recycling in Napa County" radio advertisement	**PM** Advertisement placed	X			X		
5J	Provide Point of purchase info at stores that sell used oil.	**PM** 50 percent of businesses selling used oil participating first year. 80 Percent 2nd year. **EM** Amount of used oil collected.	X			X		
6. Outreach to schools								
6A Develop a SW education	Develop lesson plans and activities.	**PM** Lesson plans and activities developed.	X			X		
6B Develop before/after survey materials	Develop before and after survey to evaluate effectiveness of the presentation.	**PM** Survey materials developed	X			X		

Overview of Measurable Goals - Local Programs
Table 2: Public Education and Outreach Element

Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Napa (City) Status	Napa (City) Eavaluation	Yountville Status	Yountville Eavaluation	St. Helena Status	St. Helena Eavaluation	Calistoga Status	Calistoga Eavaluation	Napa County Status	Napa County Eavaluation
2. Outreach to local government officials.												
2A Develop presentation	Develop presentation to inform local government officials of the importance of reducing storm water pollution, the regulatory requirements, and the local Storm Water Pollution Prevention Plan	**PM** Completed PowerPoint presentation.	I	A	I	A	I	A	I	A	I	A
2B Give presentation	Give presentation at local council meetings and management meetings.	**PM** Number of presentation given to local council members, and managers.	I	A	I	A	I	A	I	A	I	A
5. Outreach to general public												
5A Yard waste reduction workshops	Conduct a yard waste reduction and home composting workshop.	**PM** Workshop held.	I	A	X	X	X	X	X	X	X	X
5B Trash can decals	Provide bilingual (English and Spanish) trash can decals about proper disposal of hazardous waste and used oil. Include message "only rain down the drain".	**PM** Include with all cans provided by garbage service.	I	A	X	X	X	X	X	X	X	X
5C Napa-Vallejo Household Haz Waster Facility	Continue to provide	**PM** Open to the public every Fri and Sat, (May-Oct) and two weekends per month (Nov-Apr). **EM** Quanity and types of waste collected.	I	A	X	X	X	X	X	X	X	X

I = Implemented; NI = Not Implemented; M = Modified

A = Quantifyable target achieved; NA = Quantifyable target not achieved; U = Unknown

X = Not Applicable

Table 3: Public Involvement and Participation Element

Activity/BMP's	Implementation Plan	Quantifiable Target/Evaluation Tool	Status			*Evaluation		
			Implemented	Not Implemented	Modified	QT Achieved	QT Not Achieved	Unknown
1. Public Comment on SWMP								
1A Public comment on SWMP	Invite public to comment on Stormwater Management Plan as required by State and local public notice requirements.	**PM** Send notice of request for comments on SWMP to environmental and business groups. **EM** Number of comments and number of individuals and groups participating.	X			X		
1B Response to comments	Respond to comments.	**PM** Submit written comments to public.	X			X		
1C Revise SWMP	Revise Storm Water Management Plan based on comments.	**PM** Revision complete. **EM** Revisions made.	X			X		
4. Creek Cleanups								
4 Coast and Creek Cleanup Day	Promote and facilitate event.	PM Increase garbage collected and number of participants by 10% in 2003. **EM** Number of participants and amount of garbage collected.	X			X		

Overview of Measurable Goals - Local Programs
Table 4: Public Involvement and Participation Element

Activity/BMP's	Implementation Plan	Quantifiable Target/ Evaluation Tool	Napa (City)		Yountville		St. Helena		Calistoga		Napa County	
			Status	Eavaluation	Status	Eavaluation	Status	Eavaluation	Status	Eavaluation	Status	Eavaluation
2. Stormdrain Stenciling												
2A Storm drain stenciling plan	Determine which SD inlets have SD markers/stencils, develop a plan for filling gaps, determine how often SD's need to be stenciled, which messages are appropriate, and identify groups to stencil SD's	**PM** Plan developed	I	A	I	A	I	A	I	A	I	A
2B SD stenciling program	Provide materials and supplies to citizens and groups. Advertise program on SW website, SW booth, and at applicable stewardship group meetings.	**PM** One SD stenciling event per year.	I	A	NI	M	X	X	I	A	I	A
5. Stewardships												
5A Salvador Creek Stewardship	Hire the RCD to coordinate and support activities in the stewardship group.	**PM** Stewardship meeting held, mission statement adopted, and group activities conducted.	I	A	I	A	I	A	I	A	I	A
5B Rutherford Dust Restoration Team	Provide staff to support restoration efforts along the Napa River in Rutherford.	**PM** Conceptual restoration plan developed.	I	A	I	A	I	A	I	A	I	A

I = Implemented; NI = Not Implemented; M = Modified

A = Quantifyable target achieved; NA = Quantifyable target not achieved; U = Unknown

X = Not Applicable

Overview of Measurable Goals - County-wide Program
Table 5: Illicit Discharge Detection and Elimination Element

Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Status			*Evaluation		
			Implemented	Not Implemented	Modified	QT Achieved	QT Not Achieved	Unknown
2. Spill Response								
2A Reporting forms and database.	Review other agencies' reporting forms and databases. Develop reporting forms and database.	**PM** Database and reporting forms developed.	X			X		
5. Business Inspections								
4A Develop materials for food service facilities	Develop BMP booklet for food service facilities and distribute to retail food businesses. Attach to all new restaurant business applications.	**PM** Materials developed and distributed to all restaurants. Reduce SW violations by third year.	X			X		
4B Distribute BMP booklets	Distribute BMP guides during routine restaurant inspections and all restaurant permit applications.	**PM** Distributed to all restaurants inspected and with all restaurant permit applications. **EM** % of businesses in compliance	X			X		
4C Develop inspection forms and database.	Develop inspection forms and data base to track business compliance and program performance.	**PM** Forms and database developed.	X			X		
4D Training for inspectors	Develop and implement training program for inspectors. Use post survey to gauge inspector's understanding of the requirements.	**PM** Annual training for inspectors as appropriate. **EM** Score on post survey.	X			X		
4E Inspections	Conduct restaurant inspections	**PM** Inspect at least 25% of restaurants annually. **EM** % of restaurants in compliance.	X			X		
4F Hazardous waste disposal	Develop and mail brochures to businesses on proper hazardous waste disposal.	**PM** Developed and sent to 1/2 of businesses 1st year, 1/2 of businesses 2nd year.	X		X		X	
4G Inspections	Implement inspection program for businesses that handle hazardous materials and waste.	**PM** Inspection program implemented; inspect 300 facilities per year. **EM** % of businesses in compliance.	X			X		
4H Business Newsletter	Produce and mail annual newsletter to businesses which includes a message on SW regulations and preventing SW pollution.	**PM** Annual newsletter mailed to all regulated businesses.	X				X	

Overview of Measurable Goals - Local Programs
Table 6: Illicit Discharge Detection and Elimination Element

Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Napa (City)		Yountville		St. Helena		Calistoga		Napa County	
			Status	Eavaluation	Status	Eavaluation	Status	Evaluation	Status	Eavaluation	Status	Eavaluation
1. Legal Authority												
1A Develop and adopt ordinance.	Review other agencies' ordinances. Adapt and adopt.	**PM** Ordinance adopted.	I	A	I	A	I	A	I	A	I	A
1C Enforcement Response Plan (ERP)	Establish actions taken for violations, a timeframe for action, by whom the actions will be taken, and along what paths enforcement will be escalated.	**PM** Enforcement Response Plan implemented.	I	A	I	A	I	A	I	A	I	A
1D ERP Training	Train appropriate staff on the ERP procedures and policies.	**PM** All relevant staff trained annually.	I	A	I	A	I	A	I	A	I	A
2. Spill Response												
2B Identify structure	Identify staff to receive calls from the public, conduct elimination, clean-up, and follow-up of illicit discharges.	**PM** Staff identified.	I	A	I	A	I	A	I	A	I	A

I = Implemented; NI = Not Implemented; M = Modified

A = Quantifyable target achieved; NA = Quantifyable target not achieved; U = Unknown

X = Not Applicable

Table 7: Construction Site Runoff Control Element

Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Status			*Evaluation		
			Implemented	Not Implemented	Modified	QT Achieved	QT Not Achieved	Unknown
3. Inspection Program								
3A Draft training materials.	Develop training materials and curricula to ensure that inspectors understand stormwater regulations and use of BMP's to reduce or eliminate non-SW discharges.	**PM** Completed training materials ready for use.	X			X		
3B Pilot training program.	Hold pilot training program for planners/inspectors.	**PM** At least one inspector from each municipality. **EM** Pre and post surveys and candid evaluation of training materials.	X			X		
4. Outreach								
4A Stormwater regulations and guidance for compliance brochure	Develop a brochure explaining NPDES construction requirements and guidelines for Post-construction design. Attach to all permit applications.	**PM** Brochure developed and distributed with applications, planning department front counters, and at workshops. **EM** Number of comments and diversity of groups commenting.	X			X		
4B Provide BMP fact sheet(s) for construction activities	Provide BMP fact sheets, guidance documents, and handbooks to contractors and developers	**PM** Informational materials (Stormwater BMP Handbooks, ESC Field manual, Guidelines for Construction Projects, etc.) provided to public upon request. **EM** # distributed.	X			X		
4D Construction site erosion control workshop	Encourage planners, inspectors, municipal staff, contractors, and architects to attend annual construction workshops held by the Regional Board and SFEI.	**PM** Advertisement posted in Solano-Napa Builders Exchange newsletter, brochures provided at planning and building departments. **EM** Attendance	X			X		
4E Construction site erosion control workshop	Attend workshop.	**PM** At least one planner/inspector and one public works employee shall attend.	X			X		

Overview of Measurable Goals - Local Programs
Table 8: Construction Site Runoff Control Element

Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Napa (City)		Yountville		St. Helena		Calistoga		Napa County	
			Status	Eavaluation	Status	Eavaluation	Status	Eavaluation	Status	Eavaluation	Status	Eavaluation
1. Legal Authority												
1A Develop and adopt ordinance requirements for construction sites that disturb one acre or more.	Review other agencies' ordinances. Adapt and adopt.	**PM** Ordinance adopted.	I	A	I	A	I	A	I	A	I	A
1C Enforcement Response Plan (ERP)	Establish actions taken for violations, a timeframe for action, by whom the actions will be taken, and along what paths enforcement will be escalated.	**PM** Enforcement Response Plan implemented.	I	A	I	A	I	A	I	A	I	A
ERP Training	Train appropriate staff on the ERP procedures and policies.	**PM** All relevant staff trained annually.	I	A	I	A	I	A	I	A	I	A
3. Inspection Program												
3A Draft training materials.	Develop training materials and curricula to ensure that inspectors understand stormwater regulations and use of BMP's to reduce or eliminate non-SW discharges.	**PM** Completed training materials ready for use.	I	A	I	A	I	A	I	A	I	A
3B Pilot training program.	Hold pilot training program for planners/inspectors.	**PM** At least one inspector from each municipality. **EM** Pre and post surveys and candid evaluation of training materials.	I	A	I	A	I	A	I	A	I	A
4. Outreach												
4E Construction site erosion control workshop	Attend workshop.	**PM** At least one planner/inspector and one public works employee shall attend.	I	A	I	A	I	A	I	A	I	A

I = Implemented; NI = Not Implemented; M = Modified

A = Quantifyable target achieved; NA = Quantifyable target not achieved; U = Unknown

X = Not Applicable

Overview of Measurable Goals - County-wide Program
Table 9: Post-Construction Runoff Management Element

Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Status			*Evaluation		
			Implemented	Not Implemented	Modified	QT Achieved	QT Not Achieved	Unknown
2. Design Standards, * = standards in Attachment 4 of State Municipal General Permit.								
2A Introductory training	Develop training materials and curricula.	**PM** Materials and curricula developed.	X			X		

Table 10: Post-Construction Runoff Management Element

Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Napa (City)		Yountville		St. Helena		Calistoga		Napa County	
			Status	Eavaluation	Status	Evaluation	Status	Eavaluation	Status	Evaluation	Status	Evaluation
1. Legal Authority												
1A Develop and adopt ordinance requirements for construction sites that disturb one acre or more.	Review other agencies' ordinances. Adapt and adopt.	**PM** Ordinance adopted.	I	A	I	A	I	A	I	A	I	A
2. Design Standards, * = standards in Attachment 4 of State Municipal General Permit.												
2A Introductory training	Develop training materials and curricula.	**PM** Materials and curricula developed.	I	A	I	A	I	A	I	A	I	A
4. Long-term Maintenance												
4F Develop policy	Develop policy to ensure long-term maintenance of BMP's	**PM** Policy developed.	I	A	I	A	I	A	I	A	I	A

I = Implemented; NI = Not Implemented; M = Modified

A = Quantifyable target achieved; NA = Quantifyable target not achieved; U = Unknown

X = Not Applicable

Overview of Measurable Goals - County-wide Program

Table 11: Municipal Operations Element

Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Status			*Evaluation		
			Implemented	Not Implemented	Modified	QT Achieved	QT Not Achieved	Unknown
1. Street Sweeping								
1B Develop O&M Standards	Develop O&M standards for street sweepers to reduce pollutants.	**PM** O&M standards developed.	X			X		
2. Storm Drain Maintenance								
2A Develop maintenance standards	Develop maintenance standards for handling and disposal of SD debris.	**PM** Standards developed	X			X		
6. Road Maintenance								
6A Education and outreach	Conduct public workshop on designing and maintaining roads to reduce pollution.	**PM** Workshop held. Attended by at least one planner and one PW supervisor from Napa County. **EM** Workshop attendance, feedback.			X		X	
6B Develop maintenance standards	Develop maintenance standards for roads	**PM** Standards developed	X			X		
6C Training	Train employees on O&M standards for roads. Post-survey used to evaluate staff understanding of BMP's.	**PM** All relevant staff trained annually.	X			X		
7. Creek and Ditch maintenance								
7A Develop maintenance standards	Develop maintenance standards for the work in and near waterways.	**PM** Maintenance-standards developed	X			X		
7B Record-keeping	Develop forms to track stream and channel conditions, maintenance work conducted, and inspections to ensure work was conducted according to standards.	**PM** Forms and database developed **EM** % of work done according to standards.	X			X		
7C Training	Train all relevant staff and contractors on maintenance standards.	**PM** All relevant staff trained annually.	X			X		

Overview of Measurable Goals - Local Programs
Table 12: Municipal Operations Element

Activity/Best Management Practices		Implementation Plan	Quantifiable Target/Evaluation Tool	Napa (City)		Yountville		St. Helena		Calistoga		Napa County	
				Status	Eavaluation	Status	Eavaluation	Status	Eavaluation	Status	Eavaluation	Status	Eavaluation
1. Street Sweeping													
1A	Street sweep according to Table 8.	Street sweep according to schedule in Table 8.	**PM** Review records quarterly to ensure compliance to schedule in Table 1 80% of the time.	I	A	I	A	I	A	I	A	I	A
2. Storm Drain Maintenance													
2B	Training	Train municipals staff on use of BMP's.	**PM** All relevant staff trained annually	I	A	I	A	I	A	I	A	I	A
2C	Routine Inspection and Cleaning	Inspect and clean SD's according to Table 8.	**PM** Review records quarterly to ensure compliance to schedule in Table 1 80% of the time.	I	A	I	A	I	A	I	A	I	A
4. Litter Control													
4A	Services	Provide litter receptacles in litter source areas and empty regularly to prevent spills.	**PM** Receptacles provided and maintained.	I	A	I	A	I	A	I	A	I	A

I = Implemented; NI = Not Implemented; M = Modified

A = Quantifyable target achieved; NA = Quantifyable target not achieved; U = Unknown

X = Not Applicable

Table 13: Public Education and Outreach Element

Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Message/Pollutants Addressed	Targeted Audience(s)	Implementers
1. Characterize general public.					
1D Conduct survey	Evaluate and improve survey as needed. Evaluate options for conducting survey and implement.	**PM** Get at least 300 responses to the survey. Repeat survey in 4th year.	Public's opinion on pollution and how to protect our waters is important.	General Public	**County-wide Program** NCFCWCD
2. Outreach to local government officials.					
2C Annual progress reports	Present annual progress report to public officials.	**PM** Presentations given to local council members, and managers after each annual report is completed.	Program achievements and needs.	Local government officials	**All Local Programs/ County-wide Program** NCFCWCD
3. Stormwater Website					
3B Develop Website	Develop website with info on the SWMP, illicit discharge hotline, upcoming workshops/events, FAQ, and BMPs for businesses and residences. Website will be a stand-alone site. City and County websites will link to the NCSWMP website.	**PM** Evaluate annually and continued development/ updates	Only rain down the storm drain.	General Public	**County-wide Program** NCFCWCD
4. Community Events					
4A Develop booth	Develop booth to inform the public on the importance of reducing SW pollution and what they can do to reduce SW pollution.	**PM** Booth, outreach materials, and activities developed.	Only rain down the stormdrain; reduce use of water, nutrients, and pesticides; hazardous waste disposal and used oil recycling.	General Public	**County-wide Program** DEM
4B Staff booth at events	Staff SW booth at community events.	**PM** Attend at least 3 events per year. (e.g. Earth Day, Home and Garden Show, Symphony on the River, etc.)			

Draft Date: November 15, 2004   **Note: Modifications in Italics**

Table 13: Public Education and Outreach Element

Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Message/Pollutants Addressed	Targeted Audience(s)	Implementers
5. Outreach to general public					
5B Trash can decals	Provide bilingual (English and Spanish) trash can decals about proper disposal of hazardous waste and used oil. Include message "only rain down the drain".	**PM** Include with all cans provided by garbage service.	Hazardous waste and used oil recycling; "only rain down the drain".	Residences and businesses.	**Local Program** City of Napa
5C Napa-Vallejo Household Haz Waster Facility	Continue to provide	**PM** Open to the public every Fri and Sat, (May-Oct) and two weekends per month (Nov-Apr). **EM** Quantity and types of waste collected.	Pesticides, cleaners, batteries, solvents, paints, thinners, old gasoline, adhesives, syringes.	Residences and businesses.	
5D Upvalley hazardous waste collection	Continue to hold hazardous waste collection days for the upvalley community.	**PM** 2-4 events per year	Paints, solvents, pesticides, etc.	Residences	**County-wide Program** DEM
5G	Mail to property owners adjacent to streams.	**PM** Mailed to > 80% of property owners adjacent to streams.		Private residences	**County-wide Program** NCFCWCD
5I	Place ad in Yellow pages and purchase "used Oil Recycling in Napa County" radio advertisement	**PM** Advertisement placed		Public	**County-wide Program** City of Napa DEM
5J Used oil recycling (cont)	Provide Point of purchase info at stores that sell used oil.	**PM** 50 percent of businesses selling used oil participating first year. 80 Percent 2nd year. **EM** Amount of used oil collected.	Why used oil should be recycled, locations in Napa County that accept used oil.		
5K Prioritize future outreach	Prioritize outreach to address other sources of SW pollution based upon results of illicit discharge data.	**PM** Outreach priorities established.	Depends on the priority pollutants and most common sources.	Public	**County-wide Program** NCFCWCD

Table 13: Public Education and Outreach Element

Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Message/Pollutants Addressed	Targeted Audience(s)	Implementers
6. Outreach to schools					
6C Conduct presentations	Conduct presentations.	**PM** Present to 5 classrooms by 2nd year, 10 classrooms every year thereafter.	Importance of healthy streams, lakes, wetlands, etc; pollutants that threaten water quality; Pollution prevention practices.	Grades 3-6	**County-wide Program** RCD
6D Evaluation	Conduct survey before and after presentation to assess understanding of SW pollution.	**PM** Survey conducted **EM** Results analyzed for accomplishments and deficiencies.			
6E Program improvement	Improve program lesson plans and activities based on feedback from students and teachers.	**PM** Lesson plans and activities revised as needed.			

Table 14: Public Involvement and Participation Element

Activity/BMP's	Implementation Plan	Quantifiable Target/Evaluation Tool	Message(s)/Pollutants Addressed	Targeted Audience(s)	Implementer
2. Stormdrain Stenciling					
2B SD stenciling program	Provide materials and supplies to citizens and groups. Advertise program on SW website, SW booth, and at applicable stewardship group meetings.	**PM** One SD stenciling event per year.	"No Dumping - SD drains to creek/river/bay"	Citizen volunteers	**Local Programs** City of Napa Yountville Calistoga Napa County
3. Water Quality Monitoring					
3A Evaluation and assessment	Evaluate existing monitoring program. Determine other sites and chemical tests for monitoring.	**PM** Sites and parameters for monitoring determined.	To be determined (e.g. Temp, DO, pH, etc.)	Citizen volunteers	**County-wide Program** RCD
3B Data Management	Evaluate existing database and improve as appropriate.	**PM** Database improved as appropriate.	Data can be used to prioritize watershed efforts and to track illicit discharges.		
3C Recruit volunteers	Solicit volunteers for monitoring program. Advertise in newsletters, websites, and newspaper.	**PM** Volunteers recruited. **EM** # of volunteers participating and # of sites monitored.	NA		
3D Develop training program	Develop training program for volunteers.	**PM** Training program developed.	Proper use of sampling equipment and using water quality kits.		
3E Train volunteers	Implement training program to ensure data quality.	**PM** Volunteers trained			
3F Monitoring	Implement volunteer water quality monitoring program.	**PM** Implement monitoring program. 12 sites FY 04/05; 18 sites FY 05/06. **EM** Use of data to establish needed programs and characterize water quality.	To be determined (e.g. Temp, DO, pH, etc.)		

Table 14: Public Involvement and Participation Element

Activity/BMP's	Implementation Plan	Quantifiable Target/Evaluation Tool	Message(s)/Pollutants Addressed	Targeted Audience(s)	Implementer
4. Creek Cleanups					
4 Coast and Creek Cleanup Day	Promote and facilitate event.	**PM** Increase garbage collected and number of participants by 10% in 2003. **EM** Number of participants and amount of garbage collected.	Trash and litter	Citizen volunteers	**County-wide Program** RCD, NCFCWCD, DEM
5. Stewardships					
5B Rutherford Dust Restoration Team	Provide staff to support restoration efforts along the Napa River in Rutherford.	**PM** Conceptual restoration plan developed.	Enhanced riparian habitat and improved stream function.	Landowners along a 4 mile reach of the Napa River in Rutherford.	**Local Program** Napa County

Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Message(s)/ Pollutants Addressed	Targeted Audience(s)	Implementers
2. Spill Response					
2C Spill response plan	Develop procedures for responding to and cleaning up hazardous and nonhazardous spills/dumping during normal working and non-working hours.	**PM** Spill response plan developed.	Only rain down the storm drain; Oil, grease, sediment, paint, detergents, etc.	Municipal staff	**County-wide Program** NCFCWCD
2D Staff training	Develop training program for receiving calls, identifying illicit discharges, spill clean-up, and educating the public on the use of BMP's	**PM** Training program developed.			
2E	Implement training program. Administer a survey at the beginning of the training to gauge staff's understanding of illicit discharges. At the end of the training, give case studies as a quiz to ensure staff can recognize illicit discharges and understand the procedures for responding to them.	**PM** All relevant staff trained. **EM** Staff performance on quiz.			
2F Stormwater Hotline	Establish a phone number to receive information about non-storm water discharges from the public. Identify staff to receive calls from the public and initiate spill response plan	**PM** Phone number established and staff identified. **EM** # of violations reported from the public.		General public	**All Local Programs**
2G Record keeping	Dedicated staff will maintain and update data base and generate reports as requested. Reports used to determine common pollutants, activities contributing to non SW discharges, and repeat offenders. Information used to prioritize PEO efforts, business inspections, and conduct enforcement.	**PM** Annual reports generated on time. **EM** Use of reports to prioritize outreach and business inspections. Number of spills prevented from reaching waters of the State.		Municipal staff	
2H Develop a road kit.	Develop appropriate outreach materials for distributing to violators (e.g. creek dumping, paint and other haz waste disposal, surface cleaning, construction BMP's, etc.)	**PM** Materials developed. Provide a road kit for every vehicle used for inspection and maintenance purposes. Distribution of materials tracked with spill investigation form. **EM** # of repeat offenses.	Sediment, grease, oil, sediment, landscape waste, etc.	Inspectors and maintenance staff	**County-wide Program** NCFCWCD

Table 15: Illicit Discharge Detection and Elimination Element

Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Message(s)/ Pollutants Addressed	Targeted Audience(s)	Implementers
3. SD System Mapping					
3A Develop maps of outfalls.	Collect all existing information on outfalls and map it.	**PM** Information compiled.	Final outfall map will assist in locating all the outfalls	NA	**All Local Programs**
3E Develop map of the municipal storm drain system.	Collect all existing information on storm drains and Waters of the State and map it.	**PM** Information compiled.	Final storm drain system map will help accurately trace illicit discharges.		
4. Business Inspections					
4B Distribute BMP booklets	Distribute BMP guides during routine restaurant inspections and all restaurant permit applications.	**PM** Distributed to all restaurants inspected and with all restaurant permit applications. **EM** % of businesses in compliance	Legal requirements; Proper management and disposal of litter, grease and oils, detergents.	Food service facilities	**County-wide Program** DEM
4D Training for inspectors	Develop and implement training program for inspectors. Use post survey to gauge inspector's understanding of the requirements.	**PM** Annual training for inspectors as appropriate. **EM** Score on post survey.	Phase II requirements; impacts of grease, soaps, and other pollutants potentially generated from restaurants on water quality, proper use of BMP's	Inspectors	
4E Inspections	Conduct restaurant inspections	**PM** Inspect at least 25% of restaurants annually. **EM** % of restaurants in compliance.	Meet local and state requirements for SW discharges.	Food service facilities	
4F *Hazardous waste disposal*	*Distribute outreach materials to businesses on stormwater pollution prevention practices to businesses.*	***PM** Distribute to 300 business plan facilities per year.*	*Paints, pesticides, solvents*	*Commercial facilities*	
4G Inspections	Implement inspection program for businesses that handle hazardous materials and waste.	**PM** Inspection program implemented; inspect 300 facilities per year.**EM** % of businesses in compliance.	Legal requirements; Proper use of BMP's to reduce SW pollution.	Commercial facilities	

Table 15: Illicit Discharge Detection and Elimination Element

Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Message(s)/ Pollutants Addressed	Targeted Audience(s)	Implementers
4H Business Newsletter	Produce and mail annual newsletter to businesses which includes a message on SW regulations and preventing SW pollution.	**PM** Annual newsletter mailed to all regulated businesses.	Grease, oil, hazardous materials, etc.	Businesses regulated by DEM	

Table 16: Construction Site Runoff Control Element

Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Message(s)/Pollutants Addressed	Targeted Audience(s)	Implementers
2. Plan review process					
2A Develop review process	Review and revise plan review process. Develop plan check list and instructions. Include relevant State and Federal permits in checklist.	**PM** Plan review process developed; plan check list and instructions developed.	Organization and requirements of the plan review process. Compliance with NPDES Construction Permit and implement ESC measures.	Planners, developers, contractors, and the public.	**All Local Programs**
2B Draft training materials	Develop training program for plan review staff.	**PM** Training program developed.	Organization and requirements of the plan review process. Compliance with NPDES Construction Permit and implement ESC measures.	Planning staff	**All Local Programs**
2C Implement training program	Train staff on revised plan review process.	**PM** Relevant staff trained annually. **EM** All participants understand the process and requirements.			
2D Implement Plan Review Process	Implement plan review process to ensure that construction sites > 1 acre are covered by the NPDES Construction Permit and projects < 1 acre include plans for ESC measures.	**PM** Plan review process implemented. **EM** % approved with an ESC plan; % approved in compliance with State and Federal regulations.		Project applicants.	
3. Inspection Program					
3C Revision of training materials.	Revise training materials based on comments from pilot program.	**PM** Final version of training materials developed.	Proper use of BMP's to reduce non SW pollution; sediment, pathogens, oil, paint, etc.	Construction site inspectors	**County-wide Program** NCFCWCD
3D Implement training program	Inspectors from each municipality to attend training program.	**PM** Annual training of all relevant inspectors. **EM** Use pre and post surveys to ensure that participants understand the requirements.	Proper use of BMP's to reduce non SW pollution; sediment, pathogens, oil, paint, etc.	Construction site inspectors	

Table 16: Construction Site Runoff Control Element

	Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Message(s)/Pollutants Addressed	Targeted Audience(s)	Implementers
3E	Implement inspection program	Inspect construction sites prior to the onset of the wet season and after major storm events.	**PM** Inspect 5 construction sites within 48 hours of a major (>0.25 inches) storm event. **EM** % of sites inspected during wet season; % of sites in compliance	Proper use of BMP's to reduce non SW pollution; sediment, pathogens, oil, paint, etc.	Construction site inspectors	**All Local Programs**
3F	Construction compliance hotline	Establish a phone number for the public to report nonstormwater runoff from construction sites.	**PM** Hotline established **EM** # of noncompliant sites reported		General Public	
4. Outreach						
4B	Provide BMP fact sheet(s) for construction activities	Provide BMP fact sheets, guidance documents, and handbooks to contractors and developers	**PM** Informational materials (Stormwater BMP Handbooks, ESC Field manual, Guidelines for Construction Projects, etc.) provided to public upon request. **EM** # distributed.	Sediment, cement, paint, oils, trash, etc.	Contractors and developers	**County-wide Program** NCFCWCD
4C	Permit process	Develop a brochure explaining the revised permit process. Attach to all permit applications.	**PM** Brochure developed	Explain permit process for construction activities > 1 acre and < 1 acre.		**All Local Programs**
4D	Construction site erosion control workshop	Encourage planners, inspectors, municipal staff, contractors, and architects to attend annual construction workshops held by the Regional Board and SFEI.	**PM** Advertisement posted in Solano-Napa Builders Exchange newsletter, brochures provided at planning and building departments. **EM** Attendance	Phase II requirements, proper use of BMP's to control runoff.	Planners, inspectors, municipal staff, contractors, architects.	**County-wide Program** NCFCWCD
4E	Construction site erosion control workshop	Attend workshop.	**PM** At least one planner/inspector and one public works employee shall attend.	Phase II requirements, proper use of BMP's to control runoff.	Planners, inspectors, municipal staff, contractors, architects.	**All Local Programs**

Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Message/Pollutants Addressed	Targeted Audience(s)	Implementers
1. Legal Authority					
1B Evaluate and revise ordinance	Evaluate effectiveness of ordinance and revise as appropriate.	**PM** Ordinance evaluated and revised.	Ensure the ordinance provides the most effective long-term control of pollution from new development and redevelopment.	New and redevelopment > 1 acre	**All Local Programs**
2. Design Standards, * = standards in Attachment 4 of State Municipal General Permit.					
Design Standards Attachment 4* - All categories: Single-Family Hillside Residences, 100,000 sq. ft. Commercial Developments, Automotive Repair Shops, Retail Gasoline Outlets, Restaurants, Home Subdivisions with 10 or more housing units, Parking Lots 5,000 sq ft or more or with 25 or more parking spaces					
2B Peak SW runoff discharge rates	Adopt standard in attachment 4 of the State General Permit	**PM** Design standard adopted	PD peak SW runoff discharge rates shall not exceed estimated predevelopment where increased runoff will result in increased potential for downstream erosion.	New development and redevelopment	**All Local Programs**
2C Conserve natural areas			Cluster development, limit clearing and grading, maximize trees and other vegetation.		
2D Minimize SW pollutants of concern			Incorporate BMP's or combination of BMP's to reduce runoff of pollutants of concern to the MEP.		
2E Protect slopes and channels			Plans must include BMP's to decrease potential of slopes and/or channels from eroding and impacting SW runoff.		
2F Provide SD system stenciling and signage			Mark SD inlets with a sign or stencil that includes a brief statement that prohibits dumping into the SD system.		
2G Properly design outdoor material storage areas			Ensure outdoor storage areas do not contaminate SW runoff.		
2H Properly design trash storage areas			Ensure trash storage areas do not contaminate SW runoff.		
2I Provide proof of ongoing BMP maintenance			Ensure that PD BMP's are adequately maintained for the life of the project through maintenance agreements (see Tasks 3A to 3D below).		

Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Message/Pollutants Addressed	Targeted Audience(s)	Implementers
2J Design standards for structural of treatment control BMP's	Adopt standard in attachment 4 of the State General Permit	PM Design standard adopted	Require PD treatment control incorporate either a volumetric or flow-based treatment control standard to mitigate SW runoff.	New development and redevelopment	**All Local Programs**
Design Standards Attachment 4* - 100,000 sq. ft commercial					
2K Properly design loading/unloading dock areas.	Adopt standard in attachment 4 of the State General Permit	**PM** Design standard adopted	Covers, reduce run-on and runoff, prohibit direct connections of depressed loading docks to SD system.	100,000 sq ft commercial.	**All Local Programs**
2L Properly design repair/maintenance bays			Design to eliminate run-on and runoff of SW, prohibit direct connections to the SD system.		
2M Properly design vehicle/equipment wash areas			Self-contained and/or covered, equipped with pretreatment facility, and properly connected to sanitary sewer or other appropriately permitted disposal facility.		
Design Standards Attachment 4* - Restaurants					
2N Properly design equipment/accessory wash areas	Adopt standard in attachment 4 of the State General Permit	**PM** Design standard adopted	Self-contained, equipped with grease trap, and properly connected to sanitary sewer; outdoor wash areas must be covered, paved, have secondary containment, and be connected to the sanitary sewer or other appropriately permitted disposal facility.	Food service facilities.	**All Local Programs**
Design Standards Attachment 4* - Retail gasoline outlets					
2O Properly design fueling area	Adopt standard in attachment 4 of the State General Permit	**PM** Design standard adopted	Fueling area properly covered, paved with smooth impervious surface, designed to reduce run-on and runoff.	Retail gasoline outlets	**All Local Programs**
Design Standards Attachment 4* - Automotive repair shops					
2P Properly design fueling area	Adopt standard in attachment 4 of the State General Permit	**PM** Design standard adopted	Fueling area properly covered, paved with smooth impervious surface, designed to reduce run-on and runoff.	Automotive repair shops.	**All Local Programs**

Table 17: Post-Construction Runoff Management Element

	Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Message/Pollutants Addressed	Targeted Audience(s)	Implementers
2Q	Properly design repair/maintenance bays	Adopt standard in attachment 4 of the State General Permit	PM Design standard adopted	Must be indoors, designed to eliminate run-on and runoff of SW, prohibit direct connections to the SD system.	Automotive repair shops.	**All Local Programs**
2R	Properly design vehicle/equipment wash areas			Self-contained and/or covered, equipped with pretreatment facility, and properly connected to sanitary sewer or other appropriately permitted disposal facility.		
2S	Properly design loading/unloading dock areas.			Covers, reduce run-on and runoff, prohibit direct connections of depressed loading docks to SD system.		
	Design Standards Attachment 4* - Parking Lots					
2T	Properly designing parking areas	Adopt standard in attachment 4 of the State General Permit	**PM** Design standard adopted	Reduce impervious surfaces of parking areas; infiltrate or treat runoff.	Parking lots	**All Local Programs**
2U	Properly design to limit oil contamination and perform maintenance			Treat to remove oil and petroleum hydrocarbons at heavily used parking lots; ensure adequate operation and maintenance of treatment systems.		
2V	Consider other appropriate design standards.	Identify and develop other design standards appropriate to community.	**PM** Additional design standards considered to protect water quality identified.	Stormwater quantity and quality from new development and redevelopment	New development and redevelopment.	
2W	Adopt design standards	Adopt design standards identified in task 2X.	**PM** Design standards adopted			

Table 17: Post-Construction Runoff Management Element

Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Message/Pollutants Addressed	Targeted Audience(s)	Implementers
3. Plan Review Process					
3A Develop plan review process	Review and revise plan review process to incorporate new requirements for Post-construction. Plan review process includes a checklist and instructions.	**PM** Plan review process revised to incorporate new requirements for post-construction.	Ensure that new development and redevelopment projects over 1 acre implement BMP's to the MEP to reduce or eliminate long-term nonstormwater runoff.	Planners and developers.	**All Local Programs**
4. Long-term Maintenance					
4A Develop O&M standards for BMP's.	Develop maintenance standards for Post-Construction BMP's.	**PM** O&M standards developed.	Prompt inspection and maintenance of structural controls will reduce discharge of polluted water into the storm drain system and help comply with SWMP.	PW staff, homeowners, businesses.	**County-wide Program** NCFCWCD
4B Identify all structural controls operated by the Municipality.	Locate, map, photograph and describe the site conditions of the structural controls. Group the different structural controls with their respective BMPs in a final report.	**PM** Completed report.		Maintenance staff	**All Local Programs**
4G Implement policy	Implement policy to ensure long-term maintenance of BMP's	**PM** Policy implemented.	Ensure that BMP's are properly operated and maintained for the life of the development.	Developers	**All Local Programs**
5. Outreach					
5A Workshop	Hold annual workshop explaining new requirements and the appropriate use and maintenance of structural and nonstructural control measures.	**PM** Annual workshops held. **EM** Attendance.	Long-term runoff management requirements for new and redevelopment. Sediment, oil and grease, trash, fertilizer and pesticides.	Planners, developers, contractors, architects.	**County-wide Program** NCFCWCD

Table 18: Municipal Operations Element

Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Message(s) and Pollutants Addressed	Targeted Audience(s)	Implementers
1. Street Sweeping					
1A Street sweep according to Table 8.	Street sweep according to schedule in Table 8.	**PM** Review records quarterly to ensure compliance to schedule in Table 1 80% of the time.	Oil and grease, metals garbage, fertilizer, dirt, and leaves.	Street sweeping department	**All Local Programs**
1C Record Keeping	Develop and use forms to report the miles swept, area covered, volume or weight of material collected, and problems associated with sweeping (e.g. parked cars, leaves, trees, etc)	**PM** Forms developed.	Data used to evaluate performance and effectiveness of sweeping program.		**County-wide Program** NCFCWCD
1D	Develop and use forms to track maintenance of street sweeping equipment (e.g. equipment adjustments, parts replacements, etc)				
1G Staff and contractor	Annually train municipal staff and contract sweepers on O&M standards, measurable goals, implementation plans, and record keeping. Use pre and post survey to gauge staffs knowledge of O&M standards and record-keeping practices.	**PM** All relevant staff and contractors trained annually. **EM** Staff understanding of O&M standards and record-keeping practices.	**Contract Sweepers:** Comply with terms of contract in order to assure maximum removal of pollutants from streets. **Municipal staff:** Comply with implementation plans.		**All Local Programs**
1H Parked and abandoned vehicles	Assess which areas have high numbers of parked cars reducing street sweeping effectiveness.	**PM** Assessment completed.	Help ensure clean streets by parking cars outside of street sweeping areas on sweeping days.	Businesses and residents	**Local Programs** City of Napa County of Napa
1M Leaves during Leaf Season	Assess which areas have high volume of leaves during Leaf Season	**PM** Completed assessment.	Excessive leaves reduce sweeping effectiveness.	Street sweeping department and residents	
1N	Investigate and evaluate at least two appropriate leaf handling methods. Prioritize methods for pilot programs.	**PM** Evaluation and prioritization of leaf handling methods.			
1R Trees near streets	Assess the miles of streets that have trees interfering with street cleaning.	**PM** Assessment completed.	Trees interfering with sweeping operations.	Street sweeping department	
1S	Investigate and evaluate at least two appropriate methods to reduce tree interference with street cleaning. Prioritize methods for pilot programs.	**PM** Methods evaluated and prioritized.			

Note: Modifications in Italics.

Activity/Best Management Practices		Implementation Plan	Quantifiable Target/Evaluation Tool	Message(s) and Pollutants Addressed	Targeted Audience(s)	Implementers
2. Storm Drain Maintenance						
2B	Training	Train municipals staff on use of BMP's.	**PM** All relevant staff trained annually	Leaves, trash, sediment, oil	Municipal staff	**All Local Programs**
2C	Routine Inspection and Cleaning	Inspect and clean SD's according to Table 8.	**PM** Review records quarterly to ensure compliance to schedule in Table 1 80% of the time.			
3. Stormwater Pump Stations						
3B	Train municipal staff	Educate all personnel responsible for SW pump stations about these maintenance standards.	**PM** All relevant staff trained annually	Sediment and oil	Pump station maintenance crew	**Local Programs** City of Napa
3C	Visual Inspections	Inspect wet wells and forebays for oil spills or other pollutant discharges.	**PM** Once in June and once in August; Once/month Oct - April.			
3D	Maximize pollutant removal prior to discharge.	Conduct comprehensive cleaning of wet wells.	**PM** Pump stations cleaned annually; prior to wet season.			
4. Litter Control						
4A	Services	Provide litter receptacles in litter source areas and empty regularly to prevent spills.	**PM** Receptacles provided and maintained.	Litter	Public	**All Local Programs**
4B	Assessment	Document areas targeted for litter removal and assess the need for additional/better trash receptacles or more frequent collection.	**PM** Assessment completed **EM** Recommendations made.			**Local Programs** City of Napa County of Napa
4C	Education	Label litter receptacles with anti-littering message	**PM** 25% of receptacles by 2nd year; 50% by 4th year.			
5. Corporation Yards						
5A	Prepare SWPPP	Develop a map that shows all facilities, potential sources of pollution, and direction of drainage	**PM** Map and inventory developed	Sediment, oil, paints, chemicals, litter.	Municipal staff	**All Local Programs**

Note: Modifications in Italics.

Activity/Best Management Practices	Implementation Plan	Quantifiable Target/Evaluation Tool	Message(s) and Pollutants Addressed	Targeted Audience(s)	Implementers
6. Road Maintenance					
6A *Education and Outreach*	*Conduct public workshop on designing and maintaining roads to reduce pollution.*	*PM Public workshop held. Attended by at least one planner and one PW supervisor from Napa County.*	*Sediment.*	*Municipal staff, planners, contractors, and landowners.*	***County-wide Program*** NCFCWCD
6C Training	Train employees on O&M standards for roads. Post survey used to evaluate staff understanding of BMP's.	**PM** All relevant staff trained annually.	Sediment, asphalt	Municipal staff	**County-wide Program** Napa County PW
7. Creek and Ditch maintenance					
7C Training	Train all relevant staff and contractors on maintenance standards.	**PM** All relevant staff trained annually.	Sediment, gas, oil, leaves	Municipal staff and contractors	**County-wide Program** NCFCWCD
8. Parks and Recreation Facilities					
8A Assessment	Assess the condition of parks and related facilities (e.g. erosion, chemical use, etc.)	**PM** Assessment completed for one park/agency per year	Pesticides, nutrients, sediment, organic matter, fuels, oils	Maintenance crews	**All Local Programs**
8B Develop maintenance standards	Develop O&M standards for park and recreation facility maintenance.	**PM** O&M standards developed			**County-wide Program** NCFCWCD
8C Training	Train all appropriate employees on O&M standards and use of BMP's. Use a post-training quiz to ensure staff understand use of BMP's.	**PM** All relevant staff trained annually. **EM** Staff understanding of O&M standards and use of BMP's.			

Note: Modifications in Italics.
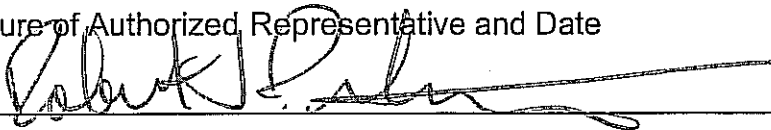
SIGNATURE PAGE

Napa County

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print Name of Authorized Representative

Bob Peterson, Public Works Director

Signature of Authorized Representative and Date

_9-14-04_

Town of Yountville

"The Heart of the Napa Valley"

The Town of Yountville is in substantial compliance with the second year measurable goals of the Napa County Stormwater Management Program.
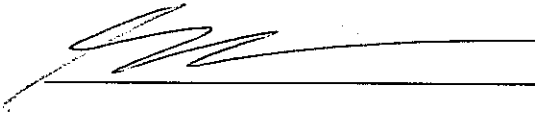
Myke Praul, Enforcement Official

SIGNATURE PAGE

City of Calistoga

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print Name of Authorized Representative

Stanley Townsend, Public Works Director / City Engineer

Signature of Authorized Representative and Date

9/14/04

SIGNATURE PAGE

City of St. Helena

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."
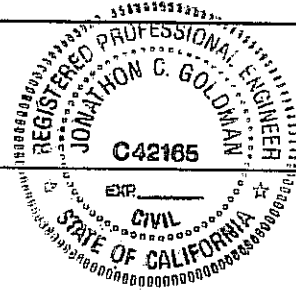
Print Name of Authorized Representative

Jonathon Goldman, Director of Public Works

Signature of Authorized Representative and Date

SEALED   14 SEP 04

Exp   31 MAR 06

SIGNATURE PAGE

City of Napa

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Print Name of Authorized Representative

Patricia Thompson, City Manager

Signature of Authorized Representative and Date