

StreamKeepers in Your Community

A Manual for Starting a StreamKeeper Program



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The StreamKeepers Program

Coyote Creek Riparian Station's Streamkeeper Program was initiated and funded by the Santa Clara County Nonpoint Source Pollution Control Program in 1993. The StreamKeeper program trains volunteers to recognize and properly report incidents of runoff pollution and illegal dumping. The Nonpoint Program established the program in order to achieve the following goals:

- ◆ **Seek the involvement of citizens, private businesses and public agencies in cooperatively addressing surface water runoff and watershed management issues.**
- ◆ **Educates watershed residents on the linkages between behaviors and water quality and the health of a watershed.**
- ◆ **Protect water from contamination at its source.**
- ◆ **Protect and enhance the watersheds surrounding reservoirs, creeks, rivers, streams and their surrounding habitats.**
- ◆ **Reduce hazards to public safety and property caused by major floods.**

StreamKeepers are assigned to specific creeks where they:

- ◆ **Monitor rivers, creeks and streams for stormwater pollution and dumping incidents.**
- ◆ **Report pollution incidents in a timely manner.**
- ◆ **Change their own behavior as deeper knowledge and appreciation of the watershed increases.**
- ◆ **Share with neighbors the impacts of stormwater pollution and solid waste dumping and provide alternatives to these behaviors.**
- ◆ **Protect their neighborhood natural resources for long-term preservation and for future generations to enjoy.**

StreamKeepers in Your Community

"Eventually, all things merge into one, and a river runs through it." - Norman Maclean

A Streamkeeper Program in your Community?

In this day of budget cutbacks, government and citizen-volunteer partnerships are not unique. Many communities have established programs that give their citizens opportunities to improve their neighborhoods. King County Surface Water Management in Washington State runs a Community Stewardship Program where volunteers participate in stream clean-ups, planting projects along creeks, and stormdrain stenciling, among a variety of other projects. Closer to home, the City of San Jose's Adopt-a-Park program, engages residents in removing graffiti, picking up garbage, and planting trees in neighborhood parks.

These types of government-citizen partnerships enable government to save money during times of tight budget constraints and gives local government a core group of educated, involved citizens. Conversely, citizens involved in these partnerships see projects important to them come to fruition and know that it was their input and actions that created a better situation. The StreamKeeper Program differs from most conventional citizen volunteer programs, in that, it brings the volunteers out of the library, schools, and parks into the wilds of the city, the urban creeks.

The StreamKeeper Program helps local governments meet their goals and requirements of their Storm Water Management Plan by enlisting the help of people to monitor creeks, stormdrains, and neighborhoods for stormwater pollution, dumping incidents, and erosion problems. The ultimate goal of the StreamKeeper Program is to foster an understanding of and an appreciation of streams and their watershed, then take "ownership" and responsibility for protecting these resources by changing behaviors that adversely impact the water quality of streams and the Bay. In turn, having volunteers working on creeks and watershed issues will enable local governments to tackle a variety of problems that occur in their watersheds.

I. Establishing a StreamKeeper Program in your Community

1. The Watershed Approach:

A watershed is an area of land drained by a particular stream or an entire river system. It is usually defined by the mountains or hills that surround it and the lakes, rivers, streams and all of their tributaries found within. A watershed includes many different land uses and may cross many human created boundaries. What flows through a watershed eventually drains into a single outlet such as the ocean, lake or a bay.

Watersheds encounter many problems and because of this it is important to be aware of what volunteers may encounter when they are surveying the creek. These problems may require the intervention and action of several different departments. Therefore as many different departments as possible should be involved in the development of the StreamKeeper program's goals and objectives.

2. Identify your mission by finding a common goal:

When only one department seeks to develop a StreamKeeper program for its city, it may attempt to give it a single function, one that addresses that department's concerns. An Environmental Enforcement department sees volunteers in creeks as a way of reducing nonpoint pollutants or protect drinking water. Public-works wants to reduce the man hours required in picking up trash dumped on streambanks. Flood control needs extra eyes to locate flood hazards. Streams and therefore the StreamKeeper volunteers will encounter all of these problems and more. In order to get the most from the volunteers who will be the eyes on the creeks, meet with all departments whose work occurs on or near the creek before volunteers are recruited. Create a set of problems that StreamKeepers can help identify. Each department can receive benefits from having their citizens actively involved in maintaining the health of the watershed.

3. Listen to your community:

Once all departments realize the benefits of having volunteers in creeks and have a set of goals and objectives, it is now time to take this message out to the public. However, now that the Environmental Enforcement Department has decided that StreamKeepers will monitor neighborhoods to reduce illegal dumping into stormdrains, they find that the StreamKeepers want that sofaded out of the creek. Flood control is happy to hear about the tree that fell down and is backing up the creek but the Health department is getting repeated calls about people living in the creek. The Health department has quickly responded to the leaking septic system reported by a StreamKeeper but the Planning department is perplexed by someone reporting a house being built on the edge of the streambank. Be prepared to respond to a variety of issues addressed by people whose job it is to care for the creek. To prepare, review previous complaint records. Plan how you will address the calls and complaints that you will be receiving in higher numbers than before.

Trash, the lone dumped object, shopping carts, homelessness, "we want protection from floods, but we don't want flood control channels", "we want/don't want a trail next to the creek", invasive plants, erosion, loss of creekside habitat due to development, and private home ownership rights versus public access are just some of the concerns that may need to be addressed in your watershed.

These concerns may be tough to tackle but the benefits to the creek are real.

4. Reaching the Community:

StreamKeepers come from a cross-section of people, people who are interested in serving their community, people with a love of natural history and the outdoors, existing "Friends of the Creek", people who live or lived next to creeks, and people who already keep an eye on their neighborhood. These are just some of the organizations and individuals who can be recruited to become StreamKeepers and how to find their addresses.

Organizations:

Addresses can be found at:

Neighborhood Associations/Watch Groups

City Council District Offices
Libraries
Planning Office

Streamside Residents

Tax Assessor's Office
Local Water District

Service Organizations
Business Associations
Audubon Society
Reptile Society

Chamber of Commerce
Chamber of Commerce
Telephone Directory
Local Junior Museum
Bay Area Reptile Society
Local School Districts and
Community Colleges
Local Stables in Yellow Pages
Cal Trout, Silicon Chinook

Science or Environmental teachers

Horse Associations
Fish Associations

5. Streamline reporting:

Reporting problems on the creek can be handled in one of two ways. One person could channel all incoming pollution reports and serve as the ombudsman for a variety of creek-related problems. This could be staffed by the volunteer coordinator of the program or by a staff person who already does environmental enforcement. Another method is to have each different type of report go directly to the department that handles that type of problem.

Develop a pollution report form for StreamKeepers so they know what kind of information is needed in order to make an accurate and thorough report. See Appendix 1.

If one does not already exist for your city, develop a telephone directory for reporting problems that StreamKeepers may encounter in monitoring the watershed. Include

public works, environmental enforcement, planning office, animal control, flood control and public information numbers. A sample can be found in Appendix 2. After StreamKeepers are on board, these same departments should keep a list of the StreamKeepers in their watershed should city staff need to reach the volunteers.

In addition, a telephone directory of all the city's disposal and recycling options is needed. Nearby commercial recycling businesses should be included as well. StreamKeepers will use this information in assisting neighbors locate places to recycle or dispose of material. The development of this directory also gives the city an assessment of what recycling opportunities exists or does not exist in your community. See Appendix 3.

Develop a map of the creek with outfalls and corresponding stormdrains that flow into each outfall. See Appendix 4.

6. StreamKeeper Training:

StreamKeeper training can take several forms from a four hour Saturday morning training session to a one hour outreach presentation. The more extensive training covers background information on the water quality in the Bay, describes common pollutants, and clarifies the city's mission and goals. All material that StreamKeepers will be using are reviewed. Safety issues are discussed such as water-borne contaminants, possibility of encountering used needles, poison oak, stinging nettles, homeless people, and banks that give way. In addition to the safety discussion, all volunteers must sign a liability waiver.

Private property rights are also discussed. StreamKeepers should not walk behind peoples' houses; outfalls and the creek should be observed from open, public access points such as parks, streets and bridges. In most circumstances, private property lines extend to the center of a creek. Riparian water rights are also discussed. See Workshop Agenda in Appendix 5.

In a one hour outreach program, citizen action groups already in place are asked to include the creek and stormdrains in their neighborhood watch and improvement activities.

7. Communication:

A biannual or quarterly newsletter is an important communication tool. The newsletter can be a way to acknowledge the work done by volunteers, lists creek highlights such as fish or amphibian sightings, gives updates on new problems, welcomes new volunteers, and provides safety reminders.

II. Typical StreamKeeper Reports

StreamKeepers will encounter a variety of problems that are handled in a variety of ways. Six incident reports are given for examples of the kinds of problems that StreamKeepers find on the creeks.

Outfall Discharge: Water was flowing out of an outfall creating a small pool of water in a dry creek bed. An iridescent sheen floated on the surface. Water was black with a hydrocarbon smell. Algae growth and iridescent sheen was seen below outfall pipe.

Staff used a storm drain map to trace the flow to a restaurant. Runoff from landscape water collected in parking lot which contained car oil and other fluids before entering a storm drain. Another storm drain immediately outside the kitchen and dumpster area had water and kitchen grease in it. Staff talked to the manager about what was flowing to the creek. Restaurant will be installing a grease trap dumpster in the near future. (Restaurant BMPs not yet established.)

Dumped asphalt: Workers repairing a street allegedly dumped leftover asphalt into the creek. City official said that it would damage the creek more if the asphalt, now melted into the steep streambank, was removed. A report was made to the local representative of the Regional Water Quality Control Board who reprimanded the City Engineer.

Yard Clippings: Homeowner dumped yard clippings behind property fence on top of streambank which is causing erosion. Difficult to determine address of home owner. Staff sent out creek brochures to several homeowners near dump site.

Dumping: Dumped palm tree prunings and tiles were thrown into creek in an area behind a business. Palo Alto Inspector inspected site and found similar tiles near the business's dumpster. Inspector asked business to clean up dumped tiles, however, SCVWD cleaned up the palm tree prunings.

Swimming Pool Discharge: Swimming pool used for exercising horses was seen being discharged directly into a creek. A report was made to San Mateo County Environmental Health Department. They inspected the site and determined that this was a raw sewage discharge and have ordered owner to hook up his pool to the sanitary sewage line that runs under his property.

Oil Leak: A tractor overturned at a construction site on Los Trancos Creek. Oil leaked into the creek but was contained in a pre-construction containment cache by workers. However a workman removing the oil out of the cache accidentally dumped it on the bank two feet above the water line. A StreamKeeper called 911 immediately. The Fire and Sheriff departments came to the scene right away and took charge of the situation. An Environmental Clean-up van came to the site soon afterwards.

III. Resources and Costs

1. Time Allotment for Performance of Tasks*

Task	Program Coordinator	Staff Associate	Volunteers	Materials
Development of Training Materials	120 hours	80 hours	30 hours	35-40 page manual
Community Outreach	60 hours	100 hours		500-1000 piece mailings
Training of Volunteers	20 hours	20 hours	5 hours	Slide show, video, handouts, posters, food and drinks
Pollution Report Management	200 hours	200 hours	650 hours	Polaroid Camera
Writing and Distribution of Twice Annual Volunteer Newsletters	120 hours	80 hours		50-100 piece mailing (first year)
Program Evaluation	60 hours	40 hours	15 hours	
Total	580 hours	520 hours	700 hours	

*an estimate for a 7 - 12 mile creek

2. Value to the Program

	CCRS 1996-97 rates	
Program Coordinator	580 hours @ \$50 per hour ¹	\$ 29,000
Staff Associate	520 hours @ \$42 per hour ¹	\$ 21,840
Volunteers	700 hours @ \$20 per hours ²	\$140,000
Supplies and postage		\$ 1,500

3. Cost to a City

Total Value of Project	\$192,340
Less Volunteer Contribution	\$140,000
Cost to a City	\$ 52,340

Notes

1 Includes overhead

2 Does not include overhead

IV. Other Opportunities for Watershed Improvements

Volunteers will be discovering a host of problems out on the creeks and will also be offering a number of solutions and requests for help. City staff should be prepared for and available for these solutions. Ways that government can get a jump on these problems is to:

- ◆ Adopt a resolution recognizing your local creek or watershed as a protected resource.
- ◆ Establish a local ordinance that establishes setbacks in the riparian corridor and then make sure the planning department adheres to it.
- ◆ Assist neighborhoods in improving local riparian habitat by sponsoring non-native removal and tree planting days.
- ◆ Establish free garbage pick up days and advertise it. Give people time to clean out their garages.
- ◆ Establish annual or biannual Tire Amnesty / Car Part Amnesty Days where people can come and drop off tires, car batteries, oil filters or other automobile related hazardous materials. Or incorporate these programs in the Household Hazardous Waste Program.
- ◆ Work with store owners in getting them to pick up shopping carts. Some cities have created ordinances which fine stores for not picking up shopping carts within 24 to 48 hours of being reported.

Appendix (please call for copies)

1. Incident Report Form
2. Coyote Creek Pollution Report Telephone Directory
3. Coyote Creek Disposal Options Directory
4. Coyote Creek Outfall Map
5. Workshop Agenda
6. Liability Waiver