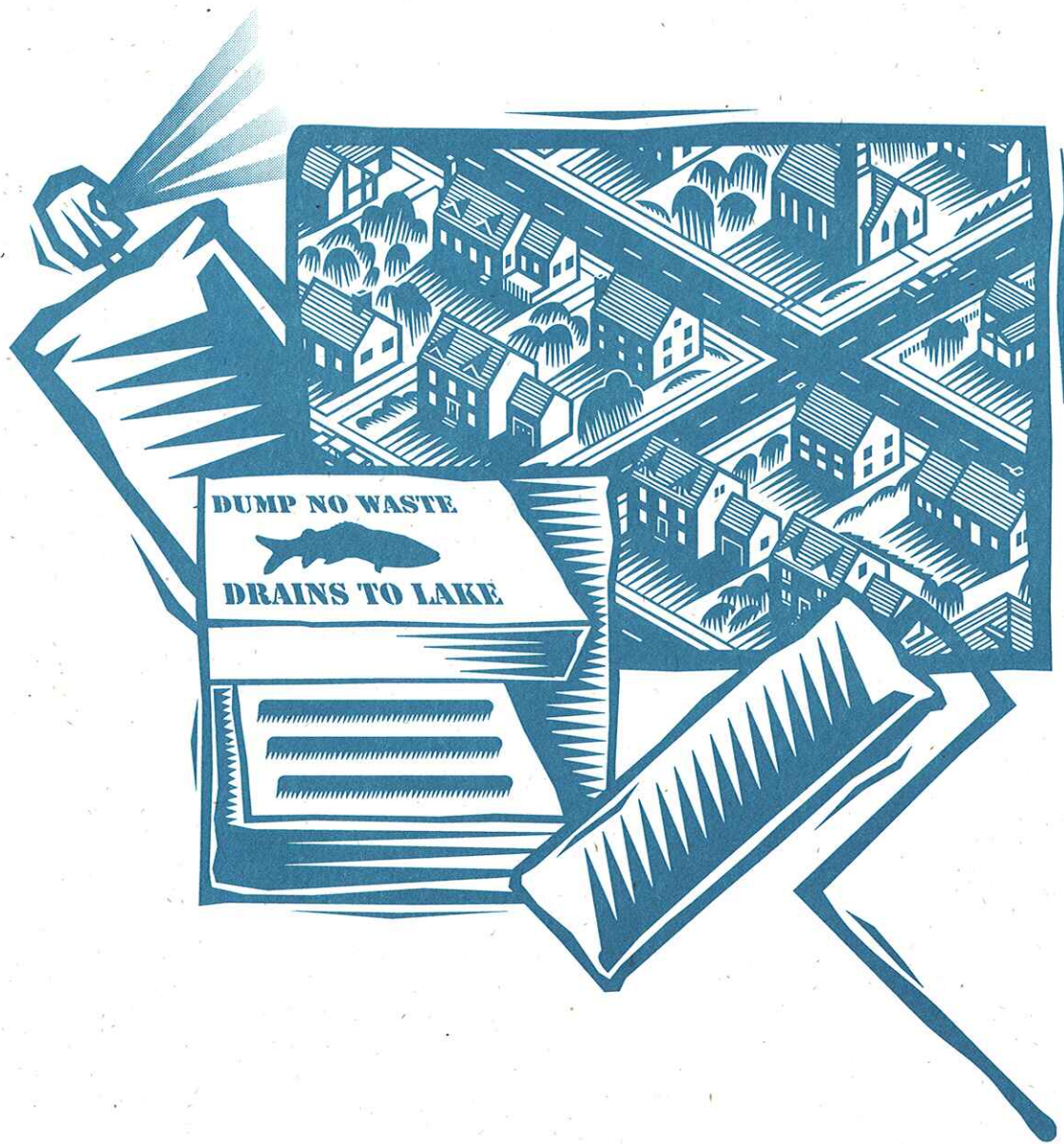


STORM DRAIN STENCILING



A MANUAL FOR COMMUNITIES

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Please evaluate this manual and let us know about your storm drain stenciling projects.

INTRODUCTION

This manual is a how-to guide for communities interested in starting a Storm Drain Stenciling Program to reduce nonpoint source pollution. It was developed by the Texas Natural Resource Conservation Commission's CLEAN TEXAS 2000 program under a pollution prevention grant from the U.S. Environmental Protection Agency (EPA). The manual covers a range of methods for labeling storm drain inlets and offers examples of programs operating in selected Texas cities. The Texas Natural Resource Conservation Commission (TNRCC) does not endorse one labeling approach over another, and the manual does not represent a complete catalog of programs in Texas. Its purpose is to give cities and community groups the tools to launch a successful citizen-education effort to reduce dumping and protect local water supplies.

WHAT IS NONPOINT SOURCE POLLUTION?

Nonpoint source (NPS) pollution is caused when rainfall carries pollutants from a wide variety of sources into surface water or ground water. The term distinguishes pollution that is diffuse in its origins from pollution that is traceable to a single "point source," like a factory or wastewater treatment plant.

WHAT ARE NONPOINT SOURCE POLLUTANTS?

Many products and materials we use in daily life become nonpoint source pollutants when they reach a body of water. NPS pollutants can be chemicals, like pesticides and fertilizers. They can be automotive products like gasoline, motor oil, antifreeze and road salt. They might be common household items like paint and solvents. They can even be natural materials like soil, animal wastes, grass clippings and fallen leaves.

HOW DO NPS POLLUTANTS REACH WATERWAYS?

Sometimes NPS pollutants wash directly into a creek, river, lake or bay. Construction activity, for example, can send soil and debris directly into nearby creeks and streams. Agricultural activities also may generate NPS pollutants, when fertilizers, pesticides, livestock wastes and eroded soil are not managed properly and are allowed to wash directly into nearby surface waters.

In urban areas, though, the most common route for NPS pollutants is the network of storm drains that carry excess rain water away from streets and directly into waterways. NPS pollutants can be washed by rainfall from lawns and streets into the storm drains, or they can be dumped there deliberately by people who are careless about the environment or who mistakenly think the storm drains flow to a water treatment plant.

HOW DO NPS POLLUTANTS AFFECT WATER QUALITY?

Just as the nature of NPS pollutants varies widely, so do their effects on water quality. Pesticides, antifreeze and motor oil contain toxic chemicals that are harmful to humans,

animals and plants. Just one quart of motor oil can ruin the quality of 250,000 gallons of water. The phosphorus and nitrogen in fertilizers, pet and livestock wastes and decomposing leaves and grass can cause large amounts of algae to grow, which depletes the oxygen level in the water and can lead to fish kills. Animal wastes also introduce harmful bacteria and other pathogens into water supplies. Sediment from soil erosion or construction activity can reduce the clarity of water and block sunlight needed by aquatic plants and fish. Litter and debris, particularly plastic items that float, spoil the beauty of lakes, rivers and bays and can be harmful to fish and birds who mistake them for food.

WHAT IS THE STATE DOING ABOUT NONPOINT SOURCE POLLUTION?

The TNRCC receives funding each year from the EPA to support state and local programs to control and prevent nonpoint source pollution. Since 1990, the TNRCC has funded more than 60 pollution prevention and abatement projects across the state.

Grant projects target water quality problems in both surface and ground water. Some control pollution through the design, building and testing of *structural* improvements, like an artificial wetland or a new type of sedimentation basin. Others focus on *non-structural* management practices, which include such things as replanting roadside ditches with vegetation to better filter storm water runoff and mapping potential pollution sources to protect drinking water wells.

In addition to the NPS grant program, the TNRCC administers programs that encourage **voluntary citizen action** to reduce nonpoint source pollution. These include a household hazardous waste collection program; a used motor oil and filter collection program; "Texas Watch," which trains citizen volunteers to monitor local water quality; an agricultural waste pesticide collection program, which collects canceled or banned pesticides; the Texas Country Cleanup project, which organizes events in rural areas to collect empty pesticide containers, batteries, scrap tires, and used motor oil and oil filters; the Lake and River Cleanup program, which organizes volunteers to remove litter from public waters and shorelines; and the Source Water Protection Program, which assists communities in developing and implementing site-specific programs to protect drinking water.

WHAT IS STORM DRAIN STENCILING AND WHY IS IT NECESSARY?

Many people mistakenly believe storm drain inlets empty to water treatment facilities, so they pour chemicals or sweep debris directly into storm drains. This dumping greatly increases the level of nonpoint source pollutants (leaves, soil, litter, fertilizers, pesticides, street residues) already present in urban storm water runoff and can contribute substantially to a decline in water quality.

More communities are working to reduce nonpoint source pollution by labeling storm drain inlets with messages warning citizens not to dump polluting materials. These storm drain stenciling projects usually are conducted by volunteer groups in cooperation with local authorities. The stenciled messages—usually a simple phrase like "No Dumping! Protect

Our Water"—remind would-be dumpers and passersby that the storm drains connect to local water bodies and that dumping pollutes those waters.

In recent years, as states and local governments have learned more about how nonpoint source pollution degrades water quality, storm drain stenciling efforts have sprung up in communities across the country. The Center for Marine Conservation (CMC), a nationwide environmental organization dedicated to protecting marine life, estimates that 97 groups in 33 states and Canada now are involved in storm drain stenciling. In 1992, the CMC launched its "Million Points of Blight" campaign to educate people about the connection between storm drains and local waterways and to involve them in stenciling efforts. Today, the CMC acts as a clearinghouse for information on storm drain stenciling, referring interested organizations to existing community programs or providing instructions on how to start new programs. The CMC's headquarters in Virginia can be reached at 804/851-6734.

WHAT ARE THE BASICS OF STORM DRAIN STENCILING?

This section describes a range of storm drain stenciling approaches. Projects vary widely from community to community in terms of the materials used, the message conveyed and the physical placement of the message.

MATERIALS

Most communities use stencils and paint to label storm drains. The city of Houston uses a single stencil to imprint its slogan, "You Dump It, You Drink It. No Waste Here," directly onto the concrete above the inlet. Some communities use a two-phase stenciling process. They first paint a rectangular area white to create a background for the message. When this layer is dry, they stencil the message on top of it in a contrasting color. Corpus Christi, for example, uses white paint for the background and green paint for the message "No Dumping! Drains to Bay."

The most commonly used stencils are made of Mylar, a flexible plastic material that can be cleaned and reused many times. Stencils also can be made from cardboard, aluminum or other metal.

Paint (or ink) can be sprayed on or applied by brush or roller. Spray paint is quickest and probably the easiest to apply neatly. However, cities that do not meet federal air-quality standards ("non-attainment areas") may wish to avoid spray paints, since many contain air-polluting propellants. Houston (a non-attainment area) uses rollers and ink pads for this reason. Many Texas cities use special "environmentally friendly" paint that contains no heavy metals and is low in volatile organic compounds (VOCs). Empty steel aerosol cans and paint cans can be recycled in many communities.

Not all communities use stencils and paint to label their storm drains. Some have opted for permanent signs made of aluminum, ceramic, plastic or other durable materials. The city of Plano uses a 6" x 6" ceramic tile. Fort Worth uses a 4" x 8" aluminum plaque. These signs last longer than stenciled messages (Plano expects its tiles to last five to 10 years) and they require only glue to affix them to storm drain inlets. This ease of application is particularly important when volunteers provide much of the labor.

Many city officials prefer the permanent signs because they are neater than stencils, which sometimes look smeared and may be hard to read from a distance. Plano now requires contractors who build storm drains to place the city's storm drain tiles on new and replacement storm drains. On the down side, permanent signs can be more expensive than painted stencils. Ceramic tiles cost \$5 to \$6 each. A Mylar stencil, by contrast, costs about 45 cents per linear inch and can be used for 25 to 500 stencilings, depending on whether paint is sprayed on or applied with a brush or roller. In addition, tiles or plaques can be dislodged by pedestrian traffic if they are disturbed before the glue dries.

CONTENT OF THE MESSAGE

Nearly all signs and stencils used on storm drain inlets discourage deliberate dumping. Some communities focus on a particular material such as motor oil while others warn against the dumping of chemicals.

Regardless of the materials, the most important idea to get across is that storm drains lead to open waterways. Often communities will specify which water body the inlet drains to, saying for example, "drains to creek" or "drains to lake." Some even name the river, lake or bay. The following are examples of possible messages:



NO OILS OR CHEMICALS



DRAINS TO BAY

(Bay City)



(North Central Texas COG)

NO DUMPING



DRAINS TO RIVER

(Houston-Galveston Area COG)

NO DUMPING. DRAINS TO WATER SOURCE.

**NO DUMPING. DRAINS TO BAY
(CREEK, STREAM, RIVER, LAKE, OCEAN).**

**DON'T DUMP. DRAINS TO CREEK
(STREAM, RIVER, LAKE, BAY, OCEAN).**

DON'T DUMP. PROTECT OUR WATER.

YOU DUMP IT, YOU DRINK IT. NO WASTE HERE.

SI USTED LO TIRA, USTED LO TOMA.

**DUMP NO WASTE. DRAINS TO BAY.
(CREEK, STREAM, RIVER, LAKE, OCEAN)**

NO OIL OR CHEMICALS. DRAINS TO BAY.

**DO NOT DUMP. FLOWS TO BAY
(CREEK, STREAM, RIVER, LAKE, OCEAN) .**

DO NOT DUMP. FLOWS TO TRINITY RIVER.

Communities often combine words and pictures to convey their message. The graphic portion may reinforce the verbal message by depicting the pathway from storm drain to water body in some stylized fashion. Graphics also may refer to some topic of local interest. For instance, Houston uses a picture of a shrimp on one of its stencils to remind passersby that the Galveston Bay shrimping industry can be hurt by pollutants dumped in Houston. Fort Worth superimposes its anti-dumping message against the silhouette of a largemouth bass, one of the most popular game fish in the southern United States. Others use pictures of windsurfers or sailboats to remind people that dumping pollutants affects the recreational value of local waterways.

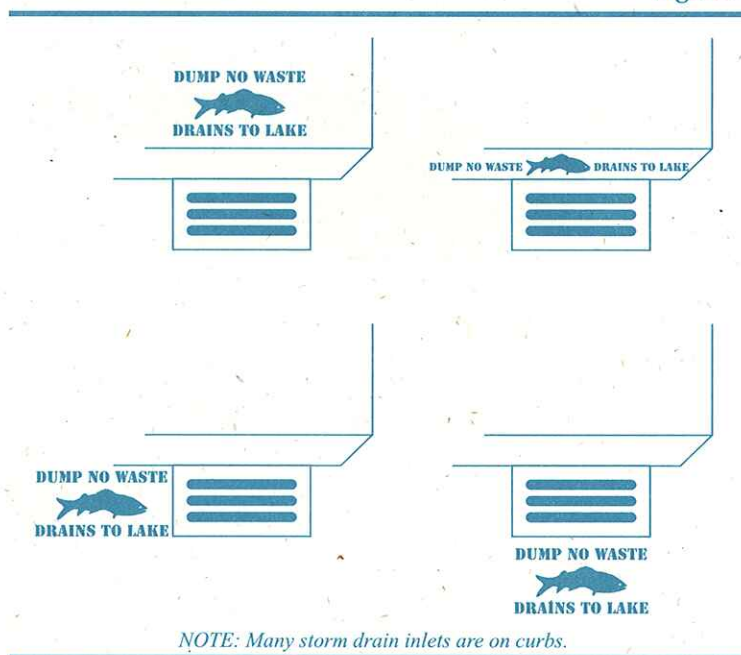
Communities with large numbers of Spanish speakers may wish to develop signs or stencils in both English and Spanish. Houston has done this with its "You Dump It, You Drink It" message. Some communities opt for a simpler approach, using a graphic alone, without words. The North Central Texas Council of Governments offers cities such a stencil. It shows an oil can in a circle with a slash through it.

PLACEMENT OF THE MESSAGE

Messages may be positioned in several ways. Some are placed flat against the sidewalk surface just above the storm drain inlet. Others are placed on the curb facing the street. Still others are located on the street itself, either just upstream of the storm drain or on the street in front of the drain. However, messages placed on the street may wear out sooner. (See Figure 1.)

Potential dumpers will see the message in any of these locations. The decision about where to place the message also should take into account who *else* will see it. Signs facing the street will be seen more easily by motorists; signs aligned with the sidewalk or with the street itself are more likely to be seen by pedestrians. It's important that even those who would not dump motor oil down a storm drain be exposed to the stenciled messages. Because the signs raise awareness about the connection between storm drains and water bodies, they help deter littering, overfertilizing and other practices that contribute to nonpoint source pollution.

Figure 1



HOW DO STORM DRAIN STENCILING PROGRAMS OPERATE?

Storm drain stenciling programs are carried out in a variety of ways. In some cases, cities use their own public works staff to do all labeling. The city of Hurst, Texas, (population

30,000) took this approach and has labeled all 1,200 of its storm drain inlets. Plano has used its own crews to place 1,200 ceramic tiles, and Fort Worth has done most of its storm drain labeling in-house as well. Some cities feel that having their own crews do the work produces better results and eliminates liability and safety concerns. Recently, though, Fort Worth sponsored a neighborhood association to label some drains. Both Fort Worth and Plano plan to work with volunteer groups in the future.

A more common arrangement for storm drain stenciling programs is for volunteer groups to provide the labor and the city to provide supplies, safety equipment and other forms of support.

This public-private partnership may be initiated by either side. If a civic association or local environmental group initiates the project, it must be sure to obtain the support and cooperation of local authorities. Storm drains are city property and local ordinances or policies may prohibit marking them without permission. Most cities also will want certain safety measures in place before volunteers set to work.

SAFETY

Since stenciling projects take place on city streets, volunteer safety is of utmost importance. The city may wish to designate lower-traffic residential areas as targets for volunteer stenciling and provide safety equipment and training. Most programs require that stenciling be done in teams, with at least one person designated to watch for traffic. Adult supervision is needed when the volunteers are school children or members of a youth group. Most cities also require participating volunteers (or their parents) to sign a waiver of liability. (See Appendix A for examples of waivers.)

THE CITY'S ROLE

In many cities, the public works or water quality department will designate a person to coordinate stenciling projects by volunteer groups. Coordination may mean any of the following:

- ✍ Providing stenciling kits containing all materials and tools needed to carry out a stenciling project. (See Appendix B for examples of the contents of kits.)
- ✍ Furnishing a list of locations or a map of storm drains to be stenciled.
- ✍ Training volunteers on safety procedures and on the technique for using stencils or affixing signs.
- ✍ Providing safety equipment: traffic cones, safety vests, masks and/or goggles (if spray paint is used) and gloves (if glue is used).
- ✍ Providing incentives and rewards for volunteers (badges, T-shirts, certificates).
- ✍ Providing pollutant tracking forms to collect data on serious instances of dumping.

WORKING WITH VOLUNTEERS

Since most storm drain stenciling programs depend heavily on volunteer labor, organizers or coordinators must be skilled in the art of recruiting, training, managing and recognizing volunteers. This section focuses on how to work successfully with volunteers.

RECRUITING VOLUNTEERS

Cities can spread the word about storm drain stenciling to volunteer organizations through many channels. The North Central Texas Council of Governments distributed a pamphlet on the program to area service organizations. Cities can mail information on the program to civic groups, youth groups, schools, environmental clubs, chambers of commerce or volunteer centers. The city of Houston distributed a brochure to local organizations, placed articles in local magazines and took out newspaper ads to publicize its program. Houston and Corpus Christi both included information about storm drain stenciling in an environmental insert placed in the local newspaper. Program coordinators can make presentations at community meetings and encourage word-of-mouth communications about the program. The city of Plano developed a public service announcement about its program.

Most volunteer groups do their storm drain stenciling projects on a Saturday morning. The program has been popular with Girl Scouts, Boy Scouts, 4-H clubs, environmental clubs, church youth groups, neighborhood associations, grade school classes and a wide range of civic and service organizations.

TRAINING VOLUNTEERS

Before participating in a stenciling project, volunteers need training in three areas: technique, safety and information tracking.

TECHNIQUE

Instructions on how to stencil a storm drain vary with the materials the city uses. Spray painting requires a different technique than rolling or brushing paint onto a stencil. Most projects have certain elements in common as listed below.

- ✍ First, the area to be labeled must be cleaned with a wire brush.
- ✍ Volunteers are warned against applying too much paint, which can make a stencil unreadable.
- ✍ Wait a few minutes before the stencil is removed to avoid paint smearing.
- ✍ Volunteers are advised to wear old clothes.

Appendix C contains sample stenciling instructions.

SAFETY

Storm drain stenciling is normally conducted in teams of two or more people. The following are common safety guidelines.

- ✍ Groups of young people must have an adult supervise each team.
- ✍ One person on each team is assigned to watch for traffic.
- ✍ All participants should wear safety vests provided by the sponsoring city.
- ✍ If spray paint is used for stenciling, participants also should wear goggles or masks.
- ✍ If glue is used to affix permanent signs, participants should wear rubber gloves.
- ✍ If volunteers are working in the street, they must use traffic cones and/or barricades provided by the city.

Sample safety instructions are included in Appendix D.

INFORMATION TRACKING

Storm drain stenciling projects provide cities with valuable information about nonpoint source pollution. Cities typically have thousands of storm drain inlets in their jurisdictions and public works staffs cannot inspect them all. Most cities ask participants in storm drain stenciling projects to note storm drains that are clogged with debris or show obvious signs of dumping. This enables city crews to target cleanup efforts. Volunteers should be instructed on what kinds of pollutants to look for and how to fill out data cards:

Volunteers also should list the locations of all storm drains labeled during the project, so the city can keep track. Sample data cards are included in Appendix E. Regardless of whether tracking forms are used, it is a good idea to assemble the participants after the event to talk about what they have found. Their reactions and impressions can help organizers improve future stenciling projects.

RECOGNIZING VOLUNTEERS

For any volunteer project to be successful, volunteers must feel they have done something worthwhile. Communities active in storm drain stenciling have developed a variety of ways to recognize volunteers. The following are a few examples:

- ✍ Provide each participant with a certificate of appreciation and/or letter of thanks signed by the mayor. (See Appendix F for a sample certificate.)
- ✍ Distribute T-shirts, hats, badges or other gifts to each participant after the event. The city of Austin distributes plastic water bottles to participants *before* the event so they can have a supply of water while they're working. "I helped curb pollution" is the message on the bottles.
- ✍ Hold a picnic or small party after the event, with refreshments donated by a local business.
- ✍ Provide free coupons for pizza, hamburgers, ice cream or movies donated by local merchants.
- ✍ Take pictures of stenciling teams before, during and after the event to create a pictorial record of volunteers' activity.

STENCILING AS AN EDUCATIONAL TOOL

A storm drain stenciling project affords many opportunities for public education. The labeled storm drains themselves become public education tools, reminding potential polluters, motorists, pedestrians and area residents that storm water runoff flows to area water bodies. The knowledge that whatever enters a storm drain enters the nearby creek, river or lake makes people more conscientious about littering, overfertilizing, sweeping grass clippings into the gutter and other practices that aggravate nonpoint source pollution.

Corpus Christi and other cities have volunteers distribute door hangers in the targeted neighborhoods to notify residents that storm drain stenciling is taking place. The hangers also explain the purpose of the project and offer tips on how citizens can reduce nonpoint source pollution. (See Appendix G for a sample door hanger and brochure.)

Cities or community groups can notify daily and weekly newspapers to get advance coverage of the planned stenciling event. A news release issued for the day of the event can

draw TV and/or daily newspaper coverage. (See Appendix H for sample news release.) Newspapers may choose to cover the event itself as an environmental feature story to further heighten public awareness. Public service announcements (PSAs) distributed before the event also will help reinforce the message. Sample PSAs may be found in Appendix I.

It is important to remember that to be effective a city does not have to stencil every storm drain. Large cities have thousands of inlets and it would be impractical to cover all of them. In fact, to do so might defeat the public education purpose because if people see the message on every drain, it may cease to register with them.

It is also important to view storm drain stenciling as one part of a larger educational campaign to reduce nonpoint source pollution. For the message on a storm drain to sink in, people need to hear it explained in other forums. Cities may want to develop TV, radio and print ads or public service announcements to reinforce the idea that storm drains lead to local waterways and that dumping pollutes those waters. Community groups could approach a local television station about producing and running a free PSA on storm drains and nonpoint source pollution. One reason the Texas Department of Transportation's "Don't Mess With Texas" anti-littering campaign succeeded was that the department conveyed its message through TV and radio ads and reinforced the slogan by printing it on the trash barrels located along the highways.

The city of Houston used "You Dump It, You Drink It" as one of its storm drain messages in part because the slogan had already been used in a joint city/TNRCC public education effort to encourage motor oil recycling. The TNRCC can make available to any interested community a television PSA, radio scripts and print ads featuring this slogan (call 512/239-3159).

ASSESSING THE EFFECTIVENESS OF STORM DRAIN STENCILING

By raising public awareness of nonpoint source pollution, storm drain stenciling programs should discourage practices that generate nonpoint source pollutants. As with any public education project, however, it is difficult to precisely measure the effect storm drain stenciling programs have on human behavior. Nor is it easy to measure reductions in certain components of nonpoint source pollution, which by definition is diffuse in origin.

Some cities attempt to assess the effectiveness of storm drain stenciling programs by periodically examining water samples from targeted storm drain *outfalls* (places where storm drains empty into a body of water). If the storm drains leading to a particular outfall have been labeled, and if the level of pollutants from that outfall declines over time, one can assume the labeling has had some deterrent effect.

The city of Fort Worth plans to track pollutant levels at 600 storm drain outfalls over the next five years to determine whether storm drain labeling and other pollution prevention efforts have improved water quality in local creeks. The city of Plano is now collecting baseline water quality data from targeted outfalls and will take periodic samples to measure program results in the future.

Monitoring outfalls is time-consuming, and periodic testing for component NPS pollutants can be expensive. Some cities infer success from increases in the volume of used

motor oil delivered to used-oil recycling centers. Others measure success in terms of how many drains are stenciled and the number of requests received by volunteer groups to participate in the program. They can also take into consideration the number of cleanups conducted by the city as a result of reports made by volunteers.

TEXAS WATCH

The TNRCC's Texas Watch program educates individuals about the causes and effects of pollution by training citizen groups to monitor water quality. Currently, there are more than 300 volunteer-monitoring groups in Texas. Each volunteer undergoes training in sampling techniques approved for the Texas Watch program by EPA.

In addition to training citizens in water quality monitoring, Texas Watch seeks to improve communications and resolve conflicts by coordinating partnerships among citizens, businesses, industry, and local and regional authorities.

Texas Watch is an ideal project for science clubs, Boy Scouts, service organizations and citizens interested in preserving water quality in their communities. Since volunteer monitoring efforts are targeted to locations not monitored by the TNRCC field staff, data collected by Texas Watch volunteers is extremely useful to the TNRCC. It helps fill in gaps in the agency's knowledge of local water quality and thereby assists the agency in making environmental decisions.

Citizen groups can be trained to monitor water quality in local waterways through the TNRCC's *Texas Watch* program.

PROFILES OF FIVE TEXAS PROGRAMS

CORPUS CHRISTI

Message: Do Not Dump. Drains to Bay.

Graphic: Windsurfer, fish

Method: Aluminum stencil; message spray painted in green paint against a white background

Program Start Date: October 1993

Corpus Christi has stenciled about 800 storm drains out of a total of 13,000. The city relies entirely on volunteers to do the stenciling. It coordinates 10 to 12 volunteer stenciling projects each year, working with organizations such as the Girl Scouts and Boy Scouts, the AT&T Telephone Pioneers, the Southwestern Bell Telephone Pioneers and local environmental science clubs.

The city uses metal stencils and spray paint to print the message "Do Not Dump. Drains to Bay" in green letters against a white background. Graphics include a fish and a windsurfer. The stencils cost approximately \$100 each and are paid for through the water department's operating funds. The city has six stenciling kits available for volunteers and provides door hangers for distribution to residents of the neighborhood where stenciling takes place.

Before each event, the city's project coordinator provides volunteer training, which includes an orientation to the program, directions on how to use the stencils and instruction on safety procedures. After the event, each volunteer is given a T-shirt, designed especially for the storm drain stenciling program, and the volunteer group receives a framed certificate of appreciation.

In addition to the stenciling kits, the city provides volunteer groups with safety vests, traffic cones and a traffic flag.

HOUSTON

Message: You Dump It, You Drink It. No Waste Here.

Dump No Waste. Drains to Bay.

Graphic: Shrimp (on "Dump No Waste" message)

Method: Message rolled in ink across Mylar stencil

Program Start Date: Spring 1995

About 300 storm drains have been labeled in Houston by groups like the Serve Houston Youth Corps, Boy Scouts and Girl Scouts and grade school students.

The city uses a Mylar stencil and ink to roll onto inlets its anti-dumping messages. The "You Dump It, You Drink It" message was also part of an extensive citywide public education campaign to encourage motor oil recycling that had included outdoor billboards and paid radio PSAs.

Ten stenciling kits are available along with safety vests and traffic cones for each event. The Mylar stencils were donated by the Gulf Coast Waste Disposal Authority through the Houston-Galveston Area Council of Governments. HGAC was instrumental in developing the Houston stenciling program and others in the area.

The city distributes an English/Spanish brochure to promote its storm drain stenciling program. It also publicizes the effort through newspapers, magazines and community meetings. Each participant receives a thank-you letter and a certificate of appreciation from the mayor.

FORT WORTH

Message: Don't Dump! Drains to Creek.

Graphic: Large mouth bass

Method: Aluminum plaque glued onto inlet

Program Start Date: July 1993

Fort Worth recently switched to reflective aluminum plaques (the material used for highway signs), which are neater, more durable and easier to apply. So far, about 500 storm drains have been labeled.

The 4" x 8" plaque shows the silhouette of a large mouth bass in white against a bright blue background. Superimposed on the image of the fish in blue letters is the slogan "Don't Dump! Drains to Creek." The plaque is placed on top of the storm drain inlet and attached with adhesive glue.

For the most part, Fort Worth has used its own public works staff to mark storm drains. The city sponsored one neighborhood association project in 1995 and plans to use more volunteers in the future.

Fort Worth has developed a sophisticated method for evaluating its program. The city plans to track pollutant levels at 600 storm drain outfalls over the next five years to determine whether storm drain labeling and other pollution prevention efforts have improved water quality in local creeks.

PLANO

Message: No Dumping. Drains to Water Source.

Method: 6" x 6" ceramic tile glued to inlet

Program Start Date: Summer 1995

Plano attaches to the top of its storm drain inlets a bright blue 6" x 6" ceramic tile bearing the message "No Dumping. Drains to Water Source." Plano had these tiles specially designed and manufactured for its storm drain program. The city wanted a marker that would be easy to apply and maintain, durable and aesthetically pleasing. Tiles are paid for through the city's municipal drainage fee program.

Plano has used its own public works crews to label more than 1,200 inlets. No volunteers have been used to date, but the city plans to work with Eagle Scouts and other service groups beginning in the spring of 1996.

The city works closely with Keep Plano Beautiful to educate the public on storm water management practices, composting, and proper disposal of household hazardous waste and motor oil. Plano public schools focused on storm water education for Earth Week 1996, and the city addresses storm water management through newsletters, presentations and exhibits.

The city of Plano now collects baseline water quality data from targeted storm water outfalls and will take periodic samples to measure program results in the future.

NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS

Message: Don't Dump. Protect Our Water.

Graphic: Fish, oil can

Method: Spray-painted message using Mylar stencil

Program Start Date: May 1993

The North Central Texas Council of Governments (NCTCOG) has been a major catalyst for community storm drain stenciling programs in the north central Texas region since 1993. The stenciling projects were part of the region's water-quality and pollution-prevention objectives for the Trinity River Basin.

NCTCOG developed two stencils for the regional program. One says "Don't Dump. Protect Our Water" and the other is a stand-alone graphic depicting spilled oil trailing a fish under water. An estimated 7,500 storm drains in 22 communities throughout

the region have been labeled with one of these logos. NCTCOG also developed sample press releases, fact sheets and tracking cards for use by participating communities.

One innovative feature of the NCTCOG program is its use of a state used oil grant to give community groups incentives to stencil storm drains. Under the program, volunteer groups could earn \$140 for stenciling a minimum of 15 storm drains. The program proved very popular with youth groups and other organizations as a means to raise funds.

APPENDICES

STORM DRAIN STENCILING PROJECT

I am authorized to act on behalf of _____
(called the "Sponsor"). I have carefully read and understand the guidelines for the
Storm Drain Stenciling Project, (called the "Project"). In order to participate in
the Project the Sponsor assumes the following responsibilities:

1. Participants in the Project are solely under the supervision of the Sponsor.
2. Waivers of Liability will be signed for each participant prior to commencement of the Project.
3. Sponsor will train each participant in pedestrian and other relevant safety rules. All participants will be evaluated by Sponsor to determine if they are responsible individuals who will be able to abide by the rules of the road and use due caution while participating in the project.
4. Sponsor will use stencil kits and instructions as provided by the City of Houston only for the purposes intended.
5. Sponsor will consult with the City of Houston in the selection of Project sites.

Signature_____
Date_____
Print Name_____
Organization_____
Office or capacity of person signing

LIABILITY WAIVER

I, the undersigned, being of lawful age or the parent or legal guardian of the volunteer involved in the Storm Drain Stenciling Project (Project), in consideration of being allowed to participate in the Project, I hereby release, discharge and forever acquit the City of Houston, a municipal corporation, and its officers, agents, and employees from any and all actions, causes of action, claims or any other liabilities whatsoever, known or unknown, or may arise in the future, on account of or in any way related to or arising out of my participation in the Project.

Further, I assume liability for any non-participants who accompany me.

PARTICIPANT'S NAME: (Please print)

AGE:

SIGNATURE OF PARTICIPANT OR LEGAL GUARDIAN:

DATE:

APPENDIX -B-

SAMPLE MATERIALS LIST

BORROWING STENCILS

ORDERING STENCILS

Center for Marine Conservation

MATERIALS

Many cities and organizations make it easy for individuals to stencil neighborhood inlets by providing kits which include all the materials needed. Before incurring the expense of assembling these materials, contact your Public Works Department to see if they sponsor a storm drain stenciling program and can provide these kits. If not, contact the Center for Marine Conservation (CMC) to find out if there is a state agency, municipality or organization in your area that is participating in their "Million Point of Blight" program which can loan you at least the stencils.

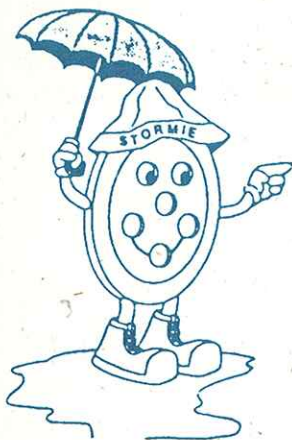
- ✓ Stencil(s) (see enclosed ordering or borrowing information)
- ✓ Paint that meets your state's standards. Make sure the paint meets any standards (color, type) set by the agency that gave you permission to stencil. In some areas, oil-based traffic or highway paints can be purchased at local paint stores. Some areas require a flat water-based latex. CMC recommends either white or green depending on the surface being painted. Read the label/instructions and ask if you can return any unused cans of paint before purchasing.
- ✓ Paint brushes (3") and stirrers (unless you are using spray paint)
- ✓ "WET PAINT" signs
- ✓ Masking tape
- ✓ Drop cloths
- ✓ Trash bags (2) - one for dirt and debris cleaned from the storm drain area and one for soiled stenciling supplies
- ✓ Wire brush
- ✓ Whisk broom and dust pan
- ✓ Paper towels or old rags
- ✓ Traffic safety vests and flags
- ✓ Orange traffic cones, if available
- ✓ Pencil/paper/clipboard/CMC's standardized data card for recording observations and activities
- ✓ For cleanup:
 - Newspaper and rags
 - Coffee cans and lids
 - Mineral spirits or paint thinner (small amount)

IMPORTANT:

Remember to bring written approval from the agency that gave you permission to stencil.

BORROWING STENCILS

Center for Marine Conservation



Susan Macleod/Laurie Halperin
Center for Marine Conservation
306-A Buckroe Avenue
Hampton, VA 23664
(804) 851-6734
(804) 851-4183 FAX

The Center for Marine Conservation has a list of 89 groups (states, municipalities, and organizations) in 32 states and Canada which are participating in their *Million Points of Blight* Network. Please contact CMC about your stenciling project to find out if any groups in your area have stencils or other materials for loan. If not, mylar stencils (DON'T DUMP - DRAINS TO WATERWAY) can be borrowed from CMC via the STORM DRAIN STENCIL ORDER FORM below.

-----CUT HERE-----

STORM DRAIN STENCIL ORDER FORM

Name _____

Name of Group _____

Street Address _____

Number of Participants Expected _____

City/Town, State, Zip Code _____

City/Town, State of Stenciling _____

Phone Number - work or home? _____

Date of Stenciling _____



Center for Marine Conservation

Date Received _____

Stencil Number _____

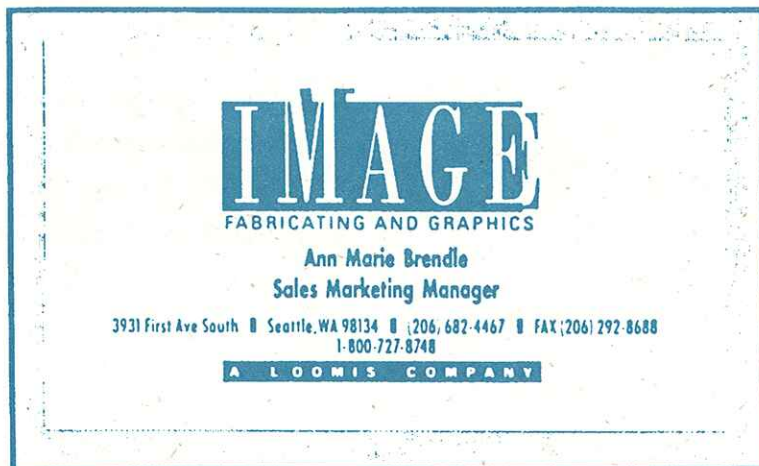
Date Shipped _____

Comments _____

For Office Use Only

APPENDIX B (CONT.)

ORDERING STENCILS SAMPLE



Storm Drain Stencils

Available From: Image Fabricating and Graphics

Material: 10 Mil Mylar

Size: 15" x 26"

Versions: DUMP NO WASTE - DRAINS TO LAKE
DUMP NO WASTE - DRAINS TO RIVER
DUMP NO WASTE - DRAINS TO STREAM
DUMP NO WASTE - DRAINS TO BAY
DUMP NO WASTE - DRAINS TO GROUND WATER

• available with Small Mouth Bass or Salmon •

| | | |
|-----------------|-------------------|--------------------|
| Pricing: | 25 @ \$10.25 each | 750 @ \$3.95 each |
| | 50 @ \$9.57 each | 1000 @ \$3.60 each |
| | 100 @ \$7.95 each | 2500 @ \$2.95 each |
| | 250 @ \$5.75 each | 5000 @ \$2.50 each |
| | 500 @ \$4.50 each | |

• Minimum order of 25 quantity must be placed •

NOTE: CLEAN TEXAS 2000 does not endorse any particular stencil vendor. This page is included as an example of an order form. Please contact CLEAN TEXAS 2000 at 512/239-3156 for information about other stencil vendors and ordering information.

HOW TO STENCIL STORM DRAIN INLETS

STENCILING INSTRUCTIONS

SAMPLE STENCILING INSTRUCTIONS

1. Use a wire brush to remove any dirt or scum by scrubbing briskly.
2. With a whisk broom sweep surface free of dirt.
3. Lay the stencil above the face of the storm sewer, bending the stencil over the beam of the storm sewer. By doing this the first line of the stencil will be on the TOP of the storm sewer and the second line will be on the BEAM. If the stencil does not fit this configuration due to a small beam, use either side of the storm drain. Experiment with how the stencil will best fit and look. Do not stencil the bottom of the storm drain.
4. One or two people should hold the stencil securely in place or tape the stencil in place with heavy tape. Be careful not to move the stencil once in place.
5. If using spray paint or ink – shake can for one minute, hold spray can inverted about five inches from stencil. In a series of wide sweeping motions, spray one line at a time using a side to side motion until letters are uniformly covered. Do not spray too much – paint or ink will run under stencil making the words unreadable.

If using a brush – stir contents well, brush over stencil being careful not to use too much paint or ink as it will run under stencil making the words unreadable.

If using a roller – test that it is well inked by rolling on the pad and then testing on a newspaper. Do not put too much ink on the pad. A roller with too much ink will run making the words unreadable. It is best to roll over the stencil in a back and forth motion a number of times using a constant pressure until the words are legible.

6. When finished carefully lift the stencil.
7. If stenciled message turns out unreadable, do not try to clean it off again. The mess will only get bigger. Go to another storm sewer and learn from your mistakes. It's O.K.
8. Thank You.

**SAMPLE
SAFETY
PROCEDURES
FOR
VOLUNTEERS****SAFETY PROCEDURES AND TIPS
FOR STORM DRAIN STENCILING TEAM LEADERS**

- Prior to stenciling ALL waivers must be signed and returned.
- Stenciling is a group activity, requiring a minimum of two people.
- There should NEVER be any stenciling done alone.
- Remember to wear clothing you do not mind getting permanent ink or paint on.
- All participants must wear safety vests.
- Bring paper towels or a rag to wipe up.
- Two plastic bags have been included in the stencil kits. One is for the used stencil, and is not garbage. The other is for the paper towels, gloves and any garbage picked up along the way.
- One person must be on the look out for on-coming traffic at all times.
- Traffic cones are used to alert vehicular traffic.
- All storm drains stenciled should be recorded on the Tracking Sheet and returned to the captain upon completion.
- Any storm drain with oil, paint or any other hazardous substance should be noted and reported to the captain.
- If there is a vehicle or other private property too close to the storm drain and stenciling would risk getting ink or paint on it -- do not stencil that storm drain.
- Orally review these safety procedures with your volunteer groups.

STORM DRAIN DATA CARD

Please fill out one card for all of the drains that you stencil using this kit.

City of Stenciling Project _____

Name of Organization _____

Contact Person _____

Street Address _____

Daytime Phone _____ Number of Storm Drains Stenciled _____

Number of Participants _____ Date(s) of Stenciling _____

Please return completed data cards to your city contact person.

Non-Point Source Pollutants

Please keep track of the items found within six feet of each side of the storm drains you stencil by making tick marks in the areas below:

Grass Clippings _____

Leaves _____

Motor Oil _____

Paint _____

Pet Wastes _____

Street Litter/Plastics, including:

Beverage Bottles _____

Beverage Cans _____

Caps/Lids _____

Cigarette Butts _____

Clothing/Scraps _____

Fast Food Containers _____

Foam Plastic Pieces _____

Newspaper/Magazines _____

Paper Bags _____

Plastic Bags/Wrappers _____

Plastic or Foam Cups _____

Plastic Pieces _____

Street Litter/Plastics, cont:

Six-Pack Holders _____

Straws _____

Other _____

Potential Non-Point Sources

Mark the number of storm drains that you stencil near each of the following:

Residential Area _____

Shopping Center/Parking Lot _____

Golf Course _____

Business District _____

Service Station _____

Farmland _____

Other _____

APPENDIX -E-

SAMPLE DATA COLLECTION FORMS

STORM DRAIN DATA CARD

STENCIL TRACKING RECORD

APPENDIX E
(CONT.)

STENCIL TRACKING RECORD

Location

Street stenciled _____

Between streets _____ & _____

Number stenciled _____

Street stenciled _____

Between streets _____ & _____

Number stenciled _____

Street stenciled _____

Between streets _____ & _____

Number stenciled _____

Street stenciled _____

Between streets _____ & _____

Number stenciled _____

Street stenciled _____

Between streets _____ & _____

Number stenciled _____

Street stenciled _____

Between streets _____ & _____

Number stenciled _____

Total Number Stenciled _____

**APPENDIX
-F-**

**SAMPLE
RECOGNITION
CERTIFICATE**

THANK YOU!

(recipient's name here)

*has made an important contribution
to the protection of (waterway here), by painting
the openings of (community here) storm drains.*

NO DUMPING



FLOWS TO BAY

(Recognizing Agency Name Here)

Date



Based on city of
Palo Alto, California,
certificate.

APPENDIX -G-

SAMPLE PUBLIC EDUCATION MATERIALS

DOOR HANGER

CORPUS CHRISTI FLIER

GRAND PRAIRIE FLIER

Neighborhood Partners for clean water

The storm water drain inlets in your neighborhood have been stenciled with the message, "DO NOT DUMP - FLOWS TO BAY". Volunteer organizations, interested in community projects, are helping to make a difference to protect our local environment. The message is important for several reasons. Storm water drain lines are located throughout the city. They serve to carry rain water off urban streets, parking lots, construction sites, neighborhoods and agricultural lands where it is then channeled into our city's storm drains and ditches. Its final destination is our creeks, bays, lakes and oceans. Often times, such things as trash, grass clippings, hazardous waste and oil are carelessly dumped into the storm water lines. This causes not only pollution to our coastal waters, but results in the clogging of storm water lines that lead to street flooding.

To prevent storm water pollution from occurring in your neighborhood, follow these tips.



* Take hazardous waste products, such as batteries, tires, petroleum oil, grease and like items to the City of Corpus Christi Household Hazardous Waste Facility. For more information, call 857-6284.

* Recycle products whenever possible.

* Prevent grass clippings from floating into storm drains by starting a compost pile. Grass clippings can be used for mulch around flower beds.

* Collect trash in your yard and neighborhood that may float into storm water drain inlets.

* Report illicit dumpings immediately to the Storm Water Hotline number.

For more information on storm water pollution or on how your organization can participate in the City's Storm Water Stenciling Program, contact the City of Corpus Christi Water Utilities.



Storm Water Hotline
880-3800



City of
Corpus
Christi

(back)

City of Corpus Christi

DOOR HANGER

Do Not DUMP Flows To BAY



A community project
to create awareness on
storm water pollution.

⊘ TRASH

⊘ MOTOR OIL

⊘ GRASS CLIPPINGS

⊘ GREASE

⊘ PESTICIDES

⊘ ANTIFREEZE



(front)

Storm Water Stenciling Program . . . a solution to the pollution.

The City of Corpus Christi Storm Water Stenciling Program was developed in 1992 and funded by the City of Corpus Christi Water Division, the Texas Department of Transportation and the Port Authority of Corpus Christi. Through the assistance of volunteers, such as yourself, we are able to stencil a simple message on storm water drain inlets to prevent illegal discharges of pollutants into the City's storm water sewer system. The message, "DO NOT DUMP, FLOWS TO BAY" is important for several reasons.

Things you should know about

Storm Water

Storm water drain lines are located throughout the city. Storm water drain inlets are openings in the street curbs that allow **rainwater runoff** to enter. They serve to carry rain water off urban streets, parking lots, construction sites, neighborhoods and agricultural lands, where it is then channeled into our city's storm drains and into our ditches. However, **nonpoint source pollution (NPS)** is washed by rainfall off the land and into our creeks, bays, lakes and oceans.

Examples of NPS Pollution

| | | |
|-------------------------------|------|---|
| Oil and grease | from | roads, highways, used motor oil dumped into yards. |
| Dirt and sand | from | lawns, streets, new construction, and farms |
| Phosphorous | from | fertilizers, phosphate detergents |
| Nitrogen | from | fertilizers, decaying plants, and leaking sewage |
| Coliform bacteria | from | feces of wildlife, domestic animals and humans |
| Other contaminants and litter | from | paint, other chemicals poured into gutters or tossed on yards |

Preparing for your Stenciling Program

The City of Corpus Christi Storm Water Stenciling Program is made possible through the help of volunteer organizations. A presentation will be made by a representative of the City of Corpus Christi Water Division to help you understand your duties. Your team leader or group organizer will be your primary contact person, in case a change of events is made. Your team leader and the City representative have agreed to stencil a specific neighborhood, perhaps your very own.

Helpful tips

If you've never participated in the Storm Water Stenciling Program, we recommend that you follow these tips on the field day.

- Arrive at the designated meeting place by 8:00 a.m.
- Wear old clothes and comfortable shoes. You may get a bit of paint on them.
- Wear a hat and sun screen.
- Tie a string to a recyclable cup and wear it on a belt loop. Water Division drivers will deliver water to you.
- Let your team leader know if you have a wagon (i.e., Radio Flyer). They are useful for carrying all the supplies.
- Ask your parent(s) or friend(s) to participate in the program with you. The more help we have, the faster we finish our designated stenciling area.

What will you be doing?

There are plenty of assignments for all volunteers. Your team leader will rotate assignments. One of the primary assignments includes painting a message on the City's storm water drain inlets. Volunteers will be separated into a white team and a green team. The white team

will paint a white stripe on the drain inlet, using a template. After the white paint has dried, the green team will stencil the message, "Do Not Dump, Flows to Bay", using a template. We will designate additional white and green teams depending on the number of volunteers attending.

Doing the job right.

There are over 13,000 storm water drain inlets in the city. City crews cannot inspect all of them in one year. Often times, such things as trash, grass clippings, plastic bags, and hazardous waste are dumped carelessly into storm water drains. This causes not only pollution to our coastal water, but result in the clogging of storm water lines that lead to street flooding.

You can help be part of the solution to the pollution. Your team can inspect the inlet for trash. This can be done by looking at the storm water drain inlet while standing in front of it. Please report storm water drain inlets that are over polluted with trash and debris. City crew workers will follow-up on your report.

Prevention is the best medicine.

You will find that the Storm Water Stenciling Program stirs the interest of residents who see you painting on their street curb. For this reason, we ask volunteers to hang a notice on the door to advise residents of the prevention of pollution in their neighborhood. You will not be required to knock on any door or speak to anyone about the program, simply leave the brochure on the door.

Because you cared enough to help.

We think that you will find the time rewarding and enjoyable. You will have dedicated one Saturday morning to help improve the quality of our waters. In return, we have a special gift for you.



**Of all Americans
who change their own oil,
only 10% of them dispose
of their waste oil
in the proper manner.
Recycle used oil.**

Last year in the United States alone, roughly 180,000,000 gallons of used motor oil were dumped on the ground or into sewers. That's almost 16 times the amount spilled by the Exxon Valdez. And according to the EPA, one gallon of used oil can ruin 1,000,000 gallons of fresh water!

Oil is insoluble, persistent and it can be very dangerous. Used motor oil often contains toxic chemicals and heavy metals - frequently lead, which has been linked to mental disorders and other serious health problems.

We cannot afford to have our drinking water contaminated. Everyone of us has to share the responsibility for transforming used oil from a national liability into a major asset.

Don't forget:

You can make a difference!
If you change your own oil,
don't dump it. Recycle it!



**You can make a
difference!
If you change
your own oil,
don't dump it.
Recycle it!**



For more information please contact:



City of Grand Prairie
Recycling Coordinator
214-660-8061

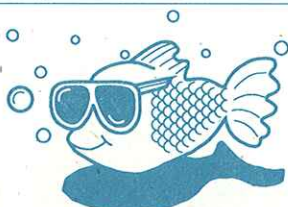
Please don't burn, spill or pour.

**Look for this
message**

**Protect Our Water.
Don't Dump!**
Recycle Used Oil.



**being
stenciled
on your
neighborhood
storm drains.**



Why not dump oil?

Because first of all it's against the law! Texas law prohibits dumping used oil for many good reasons. Used oil is also banned from disposal at area landfills. Did you know:

- ✓ The amount of oil in an oil change can ruin a day's water supply for a small city.
- ✓ One oil change from one car engine poured into a storm drain can create an eight-acre oil slick, harming aquatic life and stunting or killing aquatic plants.
- ✓ Oil stays in the environment a long time. It may take decades to biodegrade.
- ✓ Many small oil spills can be as harmful in the long run as one big spill.
- ✓ Used motor oil contains toxic substances such as lead and additives. Through improper disposal, both oil and additives can enter the food chain at any point and be carried into our food.
- ✓ Oil can be reprocessed and reused at a big energy savings.

Remember:

Recycling conserves our resources
and protects our environment.

How is used oil recycled?

Reprocessing. Most used oil in Texas is reprocessed into industrial grade fuel oil. Prior to blending with virgin oil, it is treated to remove oil and sediments.

Re-refining. Through re-refining, used oil can be used over and over without losing its lubricating quality. Whereas producing 2 1/2 quarts of lubricating oil requires 42 gallons of crude oil, only one gallon of used oil is required! Plus, the waste by-products and remaining oil from the refining process can be used as an asphalt extender and fuel oil.

**Recycling Centers are
conveniently located throughout
Grand Prairie. Check this list
for the center nearest you.**

| | |
|---|--|
| Chief Auto Parts 2505 S.E. 8th 642-1261 | Nineteenth Street Mobil 1402 N.W. 19th Street 641-2861 |
| David's Exxon 701 W. Tarrant Road 262-3303 | N. Carrier Parkway Texaco 602 N. Carrier Parkway 237-0085 |
| Gateway Auto Parts 405 W. Highway 303 642-6666 | Parkway Exxon 2502 S. Carrier Parkway 641-8000 |
| Harrington's Texaco 1702 W. Main Street 262-8066 | PEP Boys 424 E. Highway 303 262-0003 |
| HRB Automotive 1009 Hill Street 237-0084 | Warren's Texaco 1713 Dalworth 262-4840 |
| Lynn's Exxon 802 E. Highway 303 264-8822 | Western Auto 209 N. Carrier Parkway 642-0084 |

**Recycling is as easy as 1, 2, 3!
Here's how it's done.**



Drain your oil into a reusable, sealable (screw top) container, such as a milk jug, a water jug or a specialized oil drainer.



Take it to a recycling center. The center has agreed to help out by accepting used oil from do-it-yourselfers. There the oil is picked up for recycling. (If you don't find a collection center near you, ask your full service station if they will take your oil.)



When buying motor oil, ask your dealer for re-refined motor oil. - Buying recycled products is an important part of recycling.

Important:

Don't mix other wastes with used oil. Such mixtures can create a hazardous substance and make recycling more difficult.

(city or organization letterhead)

FOR IMMEDIATE RELEASE
(Date)

APPENDIX -H-

SAMPLE NEWS RELEASE

STORM DRAIN STENCILING PROJECT AIMS TO REDUCE WATER POLLUTION

This (Saturday) (INSERT DAY OR DATE), you might see a group of people painting a _____ (INSERT APPROPRIATE DESCRIPTION, i.e., "green and white") sign on the storm drain inlets in your neighborhood. These volunteers are participating in a project to alert residents that dumping in storm drains pollutes lakes, rivers, bays and streams. The city of _____ (OR, _____ ORGANIZATION) is sponsoring this project as part of its effort to reduce nonpoint source pollution.

Much of the pollution in areas streams and lakes comes from common, every-day materials, like household chemicals, fertilizers, pesticides, gasoline, used motor oil and antifreeze and litter. These substances are washed by rainwater from our streets, yards, driveways and parking lots into storm drain inlets. Contrary to what many people think, these storm drains don't lead to wastewater treatment plants. They carry untreated storm water directly into area lakes and streams.

Deliberate dumping of hazardous materials into storm sewers makes the pollution problem worse. Motor oil is often dumped down storm drains, yet just one quart can ruin the quality of 250,000 gallons of water. Dumping oil and other hazardous substances is illegal in Texas. Residents are encouraged to recycle these materials instead.

The stenciled message _____ (SAY WHAT THE MESSAGE IS) is there to remind citizens not to dump waste into storm sewers or contribute more pollutants to ordinary storm water runoff by littering, overfertilizing or sweeping yard debris into the street.

_____ (CITY OFFICIAL OR SPOKESPERSON FOR COMMUNITY ORGANIZATION) pointed out that storm drain stenciling has been used successfully in others cities to reduce nonpoint source pollution.

"Every citizen has a role in preventing pollution," he (she) said. "These kinds of projects work because they get government, volunteer groups and businesses working together to solve a common problem."

The _____ (VOLUNTEER GROUP) will be stenciling storm drains in the following neighborhoods on _____ (DATE): _____ (LIST NEIGHBORHOODS)

Several businesses and government agencies are cosponsoring this event. They include (LIST SPONSORS, DONORS, ETC.)

For more information, call _____.

APPENDIX

-I-

SAMPLE PUBLIC SERVICE ANNOUNCE- MENTS

STORM DRAINS AND WATER POLLUTION

:30 Radio PSA

ANNCR: Contrary to popular belief, the storm drains on our neighborhood streets do not lead to a water treatment plant. They lead to nearby creeks, which flow into the _____ River. (Substitute _____ Lake or _____ Bay.) If hazardous materials like motor oil and antifreeze get dumped into a storm drain, they end up in the (river). And that's bad for all of us. So don't dump waste down your neighborhood storm drains. Help keep our waterways clean. For more information, call _____.

Announcement courtesy of _____ and this station.

STORM DRAINS AND WATER POLLUTION

:60 Radio PSA

ANNCR: Contrary to popular belief, the storm drains on our neighborhood streets do not lead to a water treatment plant. They lead to nearby creeks, which flow into the _____ River. (Substitute _____ Lake or _____ Bay.) So when hazardous materials like motor oil and antifreeze get dumped into a storm drain, or when street trash and garden chemicals wash into the sewer after a rain, they end up in the (river). And that's bad for all of us. You can help keep our waterways clean. Don't litter and don't use fertilizers and pesticides before a rain. And never dump any kind of waste down your neighborhood storm drains.

The _____ is looking for volunteers to label storm drains with the message "_____." If you can help, call _____.

This message brought to you by CLEAN TEXAS 2000 and _____.

Volunteers initiate anti-littering program with stencil message

By **JEFF BRAY**
ThisWeek Correspondent

Volunteers met just before the downpour Saturday, Oct. 15 to begin stenciling an anti-littering message, "You Dump It, You Drink It - No Waste Here," on Washington Avenue storm drains.

"We just got one done when it started pouring," said Lilly Wells, a staff member with the Texas-Houston-Galveston Council of Governments. "This is an ongoing project, though, so we'll be continuing it."

Wells said the project is sponsored by a collaboration among the city of Houston Department of Health and Human Services and Department of Public Works and Engineering, the Houston-Galveston Area Council, the Gulf Coast Waste Disposal Authority, the Texas Natural Resource Conservation Commission.

"Different programs, such as the Texas Clean Rivers Program have public participation requirements to be eligible for funding," said Wells. "The purpose is to involve the public so that they can become more educated about water quality, pollution

problems, and how public behavior affects water quality."

Wells said that the different departments and organizations that came together for the storm sewer project "dovetailed" in their goals.

"Many people don't realize that when you throw something down that storm drain, it doesn't go to a treatment plant like regular sewerage," she pointed out.

'You Dump It - You Drink It.'

Campaign message

"It goes directly into the water system, the bayous, and eventually into the (Galveston) Bay and the Gulf (of Mexico)."

Wells said that the Oct. 15 gathering featured more than 25 children ready to paint their message on more than 100 storm drains. It was a not so amusing coincidence that the terrible floods came along and

See **DRAINS** on Page 4.

Drains

Continued from Page 1.

stopped their efforts.

"Another stencil part says, 'Dump No Waste, Drains To Bay,'" Wells said. "You might just end up eating it from fish in the Bay or the Gulf, but it's not meant to be literal. It's really just a way to get people to think about what they're putting down there."

Wells said people dump everything from toxic chemicals such as motor oil, to leaves and lawn clippings.

"The lawn clippings help block the sewers and the bayous," she said. "The blockage helps create worse flooding, not that anything could have prevented the floods we've had recently. I just think people are unaware."

For example, Wells said one quart of motor oil creates an oil sheen on the water the length of a football field.

"There are approximately 2.9 million gallons of oil annually dumped from Houston into the Gulf," she said. "People aren't being malicious, although it is illegal. But it's no wonder the shell fish are tainted."

Wells said the project will continue on Washington Avenue from Wilcrest to Houston Ave. All volunteers are supplied with colorful vests, protective gloves, stencils and paint. They also receive training from a city of Houston employee in how to stencil, and are given protection from cones and barriers in the street.

Those interested in participating in the storm drain stenciling project can call the city of Houston Household Hazardous Waste Department, 247-8589.



Mark Sterkel photo

Mary Ellen Whitworth, left, environmental advisor for environmental policy to Mayor Bob Lanier, makes the first stencil in the anti-littering campaign. She is assisted by Carlo Monticelli and Demetra Dixon, members of the Serve Houston Youth Corps. Other Serve Houston members hold the banner.

APPENDIX
-J-

SAMPLE
NEWSPAPER
CLIPPINGS

Youth group helps clean up Houston

Houston Post--October 15, 1994

By SCOTT HARPER
POST ENVIRONMENTAL REPORTER

An estimated 2.9 million gallons of used oil are dumped illegally into Houston streams and bays every year, according to state statistics.

But beginning today, officials will launch a small but indelible program to help curb such pollution.

Armed with paint cans and stencils, volunteers with Serve Houston Youth Corps will begin printing no-dumping messages on many of the 45,000 storm drains in Houston that are the primary

conduits for used oil and other contaminants getting into area waterways.

"YOU DUMP IT, YOU DRINK IT — No Waste Here" is one not-so-subtle message that officials hope will deter would-be polluters from discharging their motor oil, yard clippings, trash and debris into storm drains.

The stenciling has been a hit in other U.S. cities and towns, not only because of its simplicity and effectiveness but also because it's cheap.

City officials estimate that a \$2,500 investment from state, local and private sources should be

enough to paint 30,000 storm drains in Houston.

The first drain on the list, which volunteers will coat this morning after a ceremony and news conference, is at 3811 Washington Avenue at Waugh Drive.

The program is a collaborative effort between the city Department of Health and Human Services, the Department of Public Works and Engineering, the Texas Natural Resources Conservation Commission, the Houston-Galveston Area Council and the Gulf Coast Waste Disposal Authority.

2 The Daily Tribune Friday, June 25, 1993

Volunteers to man drain project

Bud Chambers
The Daily Tribune

If you see a group of people huddled around a downtown storm drain Saturday morning, it isn't likely that they have spotted a big alligator or "a swamp thing."

More likely, you'll be witnessing part of a major effort by local 4-H Club volunteers to a cooperative pollution prevention project between the City of Bay City and the Houston-Galveston Area Council.

The mission, according to Matagorda County Water Resources Council Chairman Haskell Simon, is the stenciling of an important anti-pollution on 65 curbside storm drains in and around the downtown area.

While it is recognized that there

are many other storm drains and many open stream areas that are vulnerable to this damaging oil and chemical pollution, Simon says, "These 65 storm drains are most important as a symbol and the start of a vital educational process."

For instance, Simon noted that a single vehicle's waste oil dumped into a storm drain can pollute "more than a million gallons of water in our bay system."

Meanwhile, Matagorda County Marine Extension Agent Willie Younger had words of praise for these 4-H volunteers who'll be out early Saturday in three person crews stenciling the anti-pollution warning on storm drains.

"These young people are contributing their time and efforts to a project that is particularly

important in this county," Younger said.

Also, the Bay City Public Works Department has painted a new yellow background on more than one-third of the drains that will be stenciled with this warning.

This background, according to Simon, should make the stenciled wording which reads, "No Oil or Chemicals; Drains Into Bay" especially noticeable to thousands of citizens passing by these prominent locations. The stencil also features the likeness of a shrimp.

Younger's "Marine Memos" column elsewhere in today's *The Daily Tribune* has additional information on this environmentally important subject, including details as to how other communities in the county and area can become involved in this program.

Austin American-Statesman

Pilot program targets rainwater runoff

■ Campaign shows the dangers in everyday activities to the environment

By ERICA D. SHAFFER
American-Statesman Staff

A simple act such as washing a car in the driveway, fertilizing the lawn or tossing a cigarette butt could seriously damage environmentally sensitive areas.

It's called nonpoint source pollution — untreated hazardous materials carried into creeks and

lakes by rainwater runoff.

The Watershed Protection Pilot Program, developed by the City Program, Environmental and Conservation Services Department, is aimed at fighting nonpoint source pollution by targeting residential areas. The program targets the 3,000 households in the Fort Branch Creek, Shoal Creek and East Bouldin Creek watersheds, said

Fatima Paiva, an environmental quality specialist and coordinator of the program.

"In the past, we had done a lot of citywide campaigning," Paiva said. "We also targeted commercial establishments," particularly car repair shops where oil is discarded regularly. "This year we are targeting residential areas."

The campaign, which is budgeted for \$80,000 and will run through August, will focus on lawn care and educating residents on how their activities

could harm people and wildlife downstream. Some workshops already have been held, and the response generally has been positive.

"There are some people who don't understand the value of prevention," said Nancy McClintock, manager of the Environmental Resources Management Division of the city's environmental department. "Prevention is so much cheaper than going in and spending money on water quality problems later."

The campaign includes a storm drain stenciling program scheduled for April 21. Volunteers armed with stencils and environmentally friendly paint will mark storm drains to notify the community that serious damage can occur if pollutants are washed down a storm drain.

"It's a meaningful area," McClintock said. "Everything that happens in a watershed affects the creeks. Watersheds do respect property lines."

CITY & STATE

Monday, April 10, 1995

B3

WE WANT TO HEAR FROM YOU

We'd like to know if this manual was helpful to you. Please rank the content of each of the following sections on a scale of 1 to 5, with 1 being not helpful and 5 being very helpful.

Circle the appropriate number:

- | | | | | | |
|--|---|---|---|---|---|
| 1. Introduction and discussion of Nonpoint Source Pollution | 1 | 2 | 3 | 4 | 5 |
| 2. Description of storm drain stenciling (materials, content, placement) | 1 | 2 | 3 | 4 | 5 |
| 3. How storm drain stenciling programs operate (safety, the city's role) | 1 | 2 | 3 | 4 | 5 |
| 4. Working with volunteers | 1 | 2 | 3 | 4 | 5 |
| 5. Stenciling as an educational tool | 1 | 2 | 3 | 4 | 5 |
| 6. Assessing the effectiveness of storm drain stenciling | 1 | 2 | 3 | 4 | 5 |
| 7. Profiles of Texas programs | 1 | 2 | 3 | 4 | 5 |
| 8. Appendices (liability forms, materials list, stenciling instructions, safety procedures, data tracking forms, recognition certificate, public education materials, sample news release, sample PSAs). | 1 | 2 | 3 | 4 | 5 |

Please tell us about your city.

1. Did your city have a storm drain labeling program in place before you received this manual? ☐ Yes ☐ No
2. Did you use this manual to start a storm drain labeling program? ☐ Yes ☐ No
3. Did you use this manual to change or add to an ongoing storm drain labeling program? ☐ Yes ☐ No
4. If there is a storm drain labeling program in your city:
What method is used?
☐ Ceramic tile
☐ Aluminum plate
☐ Spray-painted message using stencil on painted background
☐ Spray-painted message applied directly to inlet (no background)
☐ Stencil using ink roller with painted background
☐ Stencil using ink roller on inlet (no background)
☐ Other (describe) _____

When did the program start? _____

How many drains have been labeled (approximately)? _____

What message is applied to the inlets? _____

Who does the storm drain labeling? ☐ City workers ☐ Volunteer groups

SURVEY

Please fax this form to
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 or mail it to CLEAN
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 Texas 78711-3087.

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