Service and Fundraising Projects Focused on Protecting Water Quality in the Twin Ports

A Guide Brought to You by The Regional Stormwater Protection Team

“It all comes down to your water.”

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Introduction

We know you want to get busy fundraising for your next big trip or getting your hands dirty on your next community service project, but before you do, if you want a little background on who in the world the Regional Stormwater Protection Team is and why in the world they put this guide together, read on! Otherwise, skip right to the projects, gather up some friends, and get out and do some good!

The Regional Stormwater Protection Team (RSPT) was formed in 2002 by 21 local municipalities, organizations and agencies interested in sharing resources and educating the public about the importance of protecting our region’s lakes and streams from stormwater pollution. “What the heck is stormwater pollution?” you may ask? Pollution from stormwater runoff is the biggest threat to our nation’s waters today. Stormwater, by itself, is not the problem; the problem occurs when raindrops (collectively, “stormwater”) hit the ground and begin flowing across parking lots, streets, roofs, playgrounds, and anywhere else where there are impervious surfaces (surfaces that don’t allow water to soak into the ground) before reaching their receiving water (the lake or stream a raindrop eventually ends up in). On its journey from the sky to the earth, a raindrop will pick up a whole lot of unpleasant things like dirt, oil, grease, fertilizer, litter and organic wastes that become pollutants when they enter a river, lake or stream. Unlike wastewater (the water that goes down the drains at your house) stormwater is usually not treated at a treatment plant. Nope, it goes right into a storm drain or ditch, which lead right to the nearest stream or river, which, in our region, eventually all drain into Lake Superior.

Storm drains were originally built to keep our streets from flooding, but as modern cities developed, people began paving over more and more naturally open areas, filling wetlands and cutting down forests. These natural areas were the pre-modern city version of flood control — they took on rainwater and allowed it time to soak into the ground, filtering out any impurities before it reached ground or surface waters. Modern cities introduced a lot of new things like spilled gasoline and oil, road salt and sand, lawn fertilizer, and pesticides that rainwater had never encountered before. Today, with all of the chemicals, trash and debris that accompany modern civilization, these drains are delivering more than just pure rainwater to our streams and lakes, they are delivering everything that fast-moving
rainwater comes into contact with. Nobody wants to harm any of the beautiful water resources in our community — we want them to remain healthy so that fish and other animals can thrive, kids can safely swim in “the deeps” on a warm summer day, and the scenic character of the Twin Ports region remains intact. **That’s where you can help!** This guide will give you ideas for fundraising and service activities that are focused on protecting and maintaining the high quality of our region’s waters. Inside, you will find the information you need to insure that the activities you and your friends participate in are environmentally friendly.

Each activity in this guide is divided into three sections: the **Water Quality Implications** of the activity (how your activity is helping to keep pollution out of our lakes and streams), **Planning and Logistics**, and **Safety Considerations**. We also provide a list of supplies and other guidelines. The activities are mainly focused on cities that have sewer infrastructure (storm drains leading to underground pipes), but you can adapt the activities to rural areas quite easily. For example, the guidance provided for “stream clean-ups” can also be used for “ditch clean-ups” for those groups working in rural areas where stormwater is conveyed above ground, through ditches, instead of underground, through pipes.

You can educate more people and get the recognition you deserve for your efforts if you can get the media interested in covering your event. It is always an attractive human interest story when people volunteer their time to do good work in the community! Send a quick e-mail or formal press release to the newspapers and news channels in your area. Include when and where the event will take place, who you are, and why you’re doing it. Make sure to take a lot of pictures too — reporters may ask for them, or you can use them to solicit donations for future activities. They will also allow your group to look back on your project and remember all of the good work you did!

Are you ready? Then jump right in! See how you can make a positive impact on the environment while having a ton of fun and even making a little money.
Car Washes

Supplies you will need:
- A site with a nearby grassy area or sanitary sewer drain.
- sponges
- hoses or pressure washer
- vegetable or citrus-based soap
- pails
- signs
- drying rags/towels
- Clothesline to dry towels.
- Shop vac, water pump, sand bags or some other way to keep dirty washwater from getting into any nearby storm drains.
- Holder to keep money dry.
- Squeegee(s) for cleaning windows.
- Homemade window cleaner (five parts distilled water to one part alcohol) in spray bottles.
- A radio/music (optional).

How long it will take:
- 2 to 3 hours.

How many people you will need:
- At least six: sign-holder, traffic-director, two washers, two dryers, and a money-taker.

Best times to do it:
- A warm sunny day!

How to make a little $$:
- Charge by the car.

Clean water benefit:
- Keeping detergents, dirt, metal, oil and other pollutants out of our natural waterways.
Car washes are extremely popular fundraising events in the summer. After all, you get to cool off and have a ton fun while making a little extra cash for your cause! Sometimes in the middle of having all that fun, however, we don’t think about the impact we are having on the environment.

**Water Quality Implications**
The detergents and chemicals we use to wash and wax a car become pollutants once they become mixed with water, flow across a parking lot, enter a storm drain and run through underground pipes to the nearest body of water. In addition, the washwater contains all of the dirt, oil, and metal that you just washed off of the car. While in almost all cases car washes are carried out in good faith, and for worthy causes, many organizations are unaware of how harmful they can potentially be on the environment. And although the washwater from a single car would not likely cause significant harm, a summer’s worth of car washes can collectively have a severe impact on local water quality.

**Planning and Logistics**
So, how does all of this relate to the car wash you have planned for next Saturday at the Mall? Fear not! There are a number of things you can do to make this popular activity more environmentally friendly. In fact, today’s environmentally-conscious consumers may be more apt to use your services if you advertise your eco-friendliness! To ease your conscience (and possibly make more money), take these steps to minimize your impact on local water quality during your event:

- Use phosphate-free, vegetable or citrus-based soaps.

- Vacuum car mats or shake them into a garbage can instead of onto the ground. This will keep some of the dirt off the ground and out of the washwater right from the start.

- Use a pressure washer instead of a regular garden hose. You can clean fifty cars with a pressure washer using the same amount of water that it would take you to clean one car with a garden hose. Try finding a local painting contractor or property maintenance department that will lend you a pressure washer instead of buying one. If you must use garden hoses, you can save a lot of water by simply remembering to turn them off or kink them between cars.
• Wring sponges into a bucket and dump the bucket onto a grassy (infiltration) area — not onto the ground.

• Walk around the site before and after the event and pick up any litter so it does not get swept away to the storm drain by stormwater.

Car washes are such great fundraisers because the most they require is a group of volunteers who are vibrantly enthusiastic and who don’t mind getting a little wet. However, with traffic, lots of kids or volunteers, and other peoples’ property involved, this activity requires a lot of planning. It’s a good idea to contact your local City Water Department and your local Police Department beforehand so that a.) they can offer help and advice if they have it and b.) everyone knows what’s going on. If your car wash is so popular that you cause traffic problems, you don’t want to upset your local authorities, or spend all of your hard-earned cash on a ticket! Seek out other local organizations that have conducted car washes for advice, too.

Finding a suitable place for your event is an important part of your pre-event planning. Your location should meet the following criteria:

• An area that is visible to a lot of passing traffic. If you can’t make the actual car washing visible to traffic, make sure there’s at least a safe place where one of your volunteers can stand with a sign.

• An area with a safe entrance and exit for cars and plenty of space for a line if it forms. You don’t want to cause traffic back-ups or a dangerous traffic situation.

• An area that will keep washwater out of the storm sewers, such as a grassy, open lot where the washwater can immediately soak into the ground; an enclosed location that has a drain to the sanitary sewer system such as a public works garage; or a place with a grassy area downslope or near your washing area where you can direct your washwater to infiltrate (soak) into the ground (if plain old gravity won’t get it there, you can pump the water to the infiltration area). If none of these options exist, protect any nearby storm drains by placing sand bags around them and using a shop vac to vacuum up the pooled water at the end of the event. This will keep dirty water from entering the storm sewers and polluting the nearest ditch or stream.
Another part of your pre-event planning will be setting up the layout of your operation. In order to get the most out of your efforts, you need to make sure that **cars keep moving**. If a line starts to form, unless people **really** want to support your cause or get their car washed, they will drive by, and your profit will be cut. In order to keep things flowing smoothly, make sure you have enough room for three or four cars to wait between the washing and the drying areas. That way, if your dryers are a little slow, they won’t hold up the washing line. Also, make sure you **clearly identify** the entrance and exit to the car wash. If you have drivers coming in the exit or unsure of where to go, you may end up with chaos on your hands.

You’ll need plenty of helping hands for this event, including people to do the following tasks:

- advertising/holding signs
- collecting donations
- washing
- drying
- hanging up towels
- filling up buckets
- directing traffic

**TAKE NOTE:** It is important to remember that you are dealing with other peoples' property. Your “dryers” should be the most conscious of this — if they drop their towels or sponges on the parking lot or other dirty surface and then use them again, they could unintentionally scratch or otherwise damage a car’s finish with sharp stones or other material that stuck to the towel. Emphasize the need to pay attention to this!

Once you’ve made all of your arrangements, you’re ready to have fun (and get a little wet), while still being valiant protectors of our area’s lakes and streams. For more in-depth information on the environmental issues relating to car washes, see the “How to Run a Successful Car Wash” link in the “Resources” section of this guide.

**Safety Considerations**

The primary safety concern with this activity relates to traffic. In order to get a lot of customers, you’re going to need to be in an area with a lot of traffic. Make sure that all of your volunteers are in a safe area, away from moving traffic, so they can concentrate on their jobs. If you have sign-holders standing at intersections, make sure that they all have safety vests and safe places to stand.
Spring Sand Sweep

Supplies you will need:

- rakes
- large brooms/sweepers
- Large dustpans, shop vac, or some other way to pick up the sand.
- A pick-up truck to carry the sand to a disposal location, if needed.
- Buckets for collecting sand for disposal or to give to homeowners.

How long it will take:

- 1 to 7 hours.

How many people you will need:

- At least 1.

Best times to do it:

- As soon as lawns dry out in the spring.

How to make a little $$$:

- Ask for donations by the lawn or container of sand collected.

Clean water benefit:

- Keeping sand and sediment (smothers aquatic habitats and reduces water clarity) out of our area’s cool, clear streams.
Every winter, City and County road crews diligently salt and sand our roads in an effort to keep them safe for driving. When spring arrives, the city sends out street sweepers to re-claim all of the sand left over from the winter before spring rains pick it up and carry it to the nearest storm drain. Unfortunately, the sand sweepers have a lot of ground to cover in a short amount of time — you can help by sweeping up some of that sand yourself!

Water Quality Implications
Plows and sand trucks can kick up a lot of sand and dirt into your yard when they drive by. When the warm winds of spring finally come after a long winter here in the Twin Ports, we all get excited to do some spring cleaning — inside and out! The first thing you might notice when you start thinking about sprucing up your yard for spring is getting rid of all that sand. Although it may be tempting, resist the urge to rake, sweep, hose or blow it all back into the street. If the sweeper doesn’t get there in time, the next rain storm or even the first really warm day (enough to cause the snow to melt) will carry all that sand and dirt down the street, into the nearest storm drain, through the pipes and into the scenic north shore stream that is closest to your house! This sort of pollution is called “sediment pollution.” Sand and dirt damage habitats and cause normally clear water to become muddy and dirty. The Brook Trout that live in the myriad trout streams along Minnesota’s North Shore are especially sensitive to this sort of pollution because sediment can smother their spawning beds and their food source (insects). We can keep sand and sediment from polluting our streams and lakes by keeping it out of the gutter.

Planning and Logistics
This activity won’t take a lot of coordination — sweeping up sand is just like sweeping the kitchen floor, except you might have to coax the sand out of the lawn and your broom will be a lot bigger. Telling people about your upcoming event is an important part of your pre-event planning. For example, you could advertise your services in a church bulletin or other newsletter that won’t charge you to advertise. Another option is to leave “door hangers” that indicate when you’ll be there, what service you’re offering, and why, on all of the houses in a neighborhood a couple of days before your event. People might be more willing to donate, and might plan to be home, if they know you are coming. On the day of your event, fan out in a large group, or smaller groups, into the pre-designated neighborhood and do
some old-fashioned door-knocking.

Once you’ve completed some successful sweeps, you can re-use the sand on site in several ways. For example:

- Offer to fill in holes in the homeowner’s lawn or garden.

- If a homeowner has a pothole in their driveway, offer to fill that in.

- Provide a free bucket to the homeowner with the sand you collected and suggest that they save it and use it on their icy sidewalks next winter.

If none of these options are available, throw it in the homeowner’s garbage. If the homeowner doesn’t want you to do this, identify a place to dispose of the sand before-hand. For example, if there is a church or school with a dumpster nearby, ask if you can dispose of the sand in there. The City of Duluth has also sponsored community sand sweep-ups in the past and may be able to give you some advice. Call the RSPT hotline at 730-4063 for more information.

**Safety Considerations**

This activity is relatively safe. The only precautions you might want to take is to watch out for traffic or unfriendly dogs in unfamiliar neighborhoods.
Fall Leaf Collection

Supplies you will need:
- Large, plastic garbage bags.
- Rakes
- Pick-up truck or other vehicle to haul the leaves away.

How long it will take:
- 1 to 3 hours is probably a good time frame for most people. Raking leaves can be quite tiring!

How many people you will need:
- At least 1.

Best times to do it:
- A cool, sunny day.

How to make a little $$:
- Charge by the lawn or bag of leaves collected.

Clean water benefit:
- "Leaf Litter" is a term that can be used to describe leaves that are left uncontained and make their way to streams and lakes via the wind or the gutter. Leaves contain a nutrient called phosphorus. By bagging leaves and keeping them on site, we keep excess phosphorus from creating nutrient imbalances in our water bodies.
Fall Leaf Collection are a wonderful way for your group to get out into the sunshine and crisp fall air. It’s also a great way to help others in our community by saving them the time and labor of raking their own yards. A few tosses in the leaf pile also make for some great fun.

Water Quality Implications
Three of the eight activities in this guide help to reduce excess nutrients in our lakes and streams: Fall Leaf Collection, Soil Testing, and Pet Waste Pick-up. When excess leaves and grass, fertilizer, or pet waste get into our waterways, they can cause an increase in nutrient levels (particularly phosphorus and nitrogen) that can cause water quality problems and essentially knock our waterways out of balance. Just think, when our lives are out of balance, (for example when we work too much), our natural cycles can get knocked off kilter. As a result, we become more stressed, and we might even get sick. The same thing happens to our natural water bodies when they are inundated by too much of a good thing. Phosphorus and nitrogen are naturally occurring elements that are essential for all living things, but an overabundance of these elements can trigger excessive algae growth, or “algae blooms,” in streams and lakes. Algae blooms can cause all sorts of problems including taste and odor problems in our drinking water, decreased oxygen that can lead to fish kills, loss of habitat, food web changes, and decreased water clarity. In addition, when our lakes are full of algae, they are not much fun to swim in! Fixing these problems is expensive, so it’s best to be aware of the consequences of our actions, be pro-active, and keep this stuff out of the water in the first place.

Planning and Logistics
This activity is relatively easy to do and is similar in nature to the Spring Sand Sweep. Plan on doing some pre-event advertising to make sure that your event is as successful as possible. See the Spring Sand Sweep “Planning and Logistics” section for guidance.

TAKE NOTE: You won’t be able to simply throw the leaves in the garbage when you’re done. It is illegal to place yard waste in a landfill in the State of Minnesota. One option is to take it to the Western Lake Superior Sanitary District’s (WLSSD) yard waste composting site. WLSSD allows residents from its service area to drop off their yard waste for free from late April through late November.
Call the WLSSD hotline at 722-0761 for more information or see the “Resources” section for a link to the their yard waste web page.

**Safety Considerations**
This activity is relatively safe to do. Watch out for traffic and unfriendly dogs in unfamiliar neighborhoods.
Stream Clean-ups

Supplies you will need:
- Large, sturdy, plastic garbage bags.
- A pair of sturdy work gloves for each person.
- Water and snacks.
- Hand sanitizer
- First aid kit (one for each team if applicable).
- Safety vests (if near high-traffic areas).
- A pick-up truck if hauling trash yourself.
- Wheelbarrows (optional)

How long it will take:
- 4 hours is a good length of time for this activity, otherwise, your group may lose its motivation to fatigue, hunger or cold! The time will also depend on how much and what kind of trash you’re dealing with (paper cups vs. tires).

How many people you will need:
- At least three (for safety and camaraderie).

Best times to do it:
- Fall is best because the vegetation is sparse and you can easily see hazards and trash. Spring is also okay, just make sure the stream isn’t too high or fast due to snowmelt or rain.

How to make a little $$:
- Ask for donations by the pound or bag of trash collected.

Clean water benefit:
- Improved habitat for aquatic animals.
- Improved aesthetics now and into the future (people are less likely to degrade an area that’s already clean).
- Improved water quality (getting all of that yucky unnatural stuff out of the water).
A stream clean-up is a great event for groups seeking a team-building, hands-on activity that allows volunteers to see immediate results. Because of safety concerns and the type and amount of trash that is typically located along streams and rivers, this is probably the most logistically challenging activity in this guide. The following information applies to small groups; if you want to plan a community-wide clean-up, you will need to do additional planning. See the “Resources” section for a link to a site that can guide you in planning a larger event.

**Water Quality Implications**
Stream clean-ups help improve water quality, stream aesthetics (the natural beauty of the stream) and stream habitat.

**Planning and Logistics**
Your first step in planning a stream clean-up is finding a stream in need of your help. If you don’t have one in mind, contact your City Water or Parks Department, your County Soil and Water Conservation District, the Minnesota Pollution Control Agency ([www.pca.state.mn.us/about/regions/ne.html](http://www.pca.state.mn.us/about/regions/ne.html)), Departments of Natural Resources in Minnesota or Wisconsin ([www.dnr.state.mn.us](http://www.dnr.state.mn.us) or [www.dnr.state.wi.us](http://www.dnr.state.wi.us)) or a streams-related non-profit like the St. Louis River Alliance ([www.stlouisriver.org](http://www.stlouisriver.org)). These organizations can likely advise you on an accessible, relatively safe stretch of stream that could use some cleaning up. They might even send staff to go with you or ask you to record data for them like illegal dumping areas, clogged channels, beaver dams or eroding stream banks. They will also be able to help you identify ownership if you will be working on private property and need to get permission.

As you start planning your event, try to get everyone in the group involved. Giving people ownership of this project will increase their enthusiasm and motivation come the day of your event. Cultivate a sense of ownership by researching the history of the stream together, identifying potential pollutant sources to the stream, and studying current water quality data for the stream. [LakeSuperiorStreams.org](http://LakeSuperiorStreams.org) has a plethora of information about our local streams and about water quality in general. It is also the RSPT’s home base on the web.

Once you identify the area you’re going to clean, set a date (and a rain date). Then, about a week or two before your event, go out to
your clean-up site with a clipboard, pen, paper, a map of the stream (or draw your own) and flagging tape and “scout” the site. Identify and mark good access points, steep banks, deep water, patches of poison ivy, heavily littered areas, and locations of potentially hazardous trash such as “mystery” barrels, dead animals, car batteries and sharp objects. Small groups are likely not equipped or prepared to deal with hazardous materials, so it is good to know where they are beforehand. (Emphasize to your group that no one needs to be a stream clean-up superhero and try to un-earth these items.) Other things to make note of during your scouting visit include: the traffic situation/busy roads, restrooms (get permission to use nearby indoor restrooms), a good meeting place, and places where trash piles can be easily seen and picked up by you or a hauler. Use the flagging tape (tie to trees or brush) to identify these areas and mark them on your map.

A major component of this activity is identifying what you’re going to do with the “evidence” of all your hard work — the trash! A stream may not look that messy from afar, but once you get right into the thick of things, you will likely find a lot of garbage. You will need to decide whether you will haul the trash bags away yourself or if you will need a hauler. You also need to identify a disposal site and make arrangements for separating and collecting recyclables (WLSSD does not allow recyclables to be thrown away with regular trash). You can make the separation of recyclables easy on your yourself by assigning one person to collect recyclables only during your event. Contact a local waste management company for more help with arranging for the disposal of your trash. If there is a church or a school nearby with a dumpster, you can also ask them if you can throw some or all of your trash in there. Make sure to tell everyone you talk to that you are doing a volunteer clean-up and you will likely get a lot of assistance and/or discounts (such as discounts on trash hauling or disposal fees).

Once you have everything arranged, it’s time to start cleaning up that stream! Gather everyone at the designated meeting place and, if desired, split the group into smaller teams of three or four and assign them to a certain stretch of the stream (give them a copy of your scouting map with their area highlighted). Provide an adult supervisor for each group if working with children. Take some time to review the items of interest you found during your scouting trip with the larger group. Make sure everyone knows where they can find restrooms, where to drop off their trash, the safety precautions that must be taken, and what time you’re going to gather back at the meeting.
site. Then, divvy up the supplies, and start restoring the natural beauty of that stream! **TAKE NOTE:** The natural beauty of the stream includes all of the fallen branches and other natural detritus that helps to create habitat in the stream. Remind your volunteers to leave these natural stream components as they are.

When you’re done, have replenishing snacks and drinks available and give prizes for the ugliest, oldest, and weirdest pieces of trash found. (Ask a local grocery store and discount store if they will donate food and prizes.) Weigh the trash or record how many bags you collected and make sure to take lots of pictures. If you have time, send all of this information to the agencies that provided you with assistance. After you’re done celebrating your efforts, make sure that all of the trash is hauled away.

**Safety Considerations**
This activity requires you to take several safety precautions. Because of the nature of this event, you may need to consider liability. The “Resources” section has a link to a sample liability form you can use.

Consider the following safety issues when planning your event:

- **Traffic:** Make sure your access points and meeting place have plenty of room for people to safely walk and park.
- **Hazardous items:** Unless you are otherwise equipped, stay away from hazardous items.
- **Deep or swift water:** Avoid periods of fast snowmelt or heavy rains — stream levels can rise very quickly. It is best to stay out of the water all together and just focus on the stream banks.
- **Steep and/or slippery banks:** Identify these beforehand and avoid them. This activity is supposed to be fun, not dangerous.
- **Patches of poison ivy, wild parsnip or other poisonous weeds:** Make sure you and your volunteers know what these plants look like and to avoid them. Include anti-itch cream in your first aid kit.

**TAKE NOTE:** If your group has so much fun doing this event that you want to do it on a regular basis, the Minnesota DNR runs an “Adopt-a-River” program that you can participate in. Participants in this program receive free supplies and other useful information from the DNR. Go to [www.mndnr.gov/adoptriver](http://www.mndnr.gov/adoptriver) for more information.
Soil Testing

Supplies you will need:
- soil test kit
- small, clean spades
- clean collection containers

How long it will take:
- 1 to ? hours.
- 4 to 5 days if sending to a lab for results.

How many people you will need:
- At least 1.

Best times to do it:
- Anytime the ground is not frozen.

How to make a little $$:
- Ask for donations by the lawn tested. If you pay someone to do the tests for you, make sure you ask for enough to make a profit.

Clean water benefit:
- Keeping excess nutrients such as phosphorus and nitrogen out of our lakes and streams by reducing the amount of fertilizer that homeowners apply to their lawns.
Soil testing can help both homeowners and the environment. It can save homeowners money on fertilizer if they know the exact amount they need, and it can help the environment by keeping excess nutrients from being washed into lakes and streams during rain storms.

Water Quality Implications
When you look at a fertilizer bag, there are three letters: N (nitrogen) - promotes blade growth, forms proteins and chlorophyll; P (phosphorus) - helps root, flower, and fruit development; and K (potassium) - helps stems and roots grow and aids in photosynthesis. The numbers next to each of the letters tell you how much of each nutrient is in the fertilizer mix. As we discussed under Fall Leaf Collections, the lower the nitrogen and phosphorus, the better. Phosphorus is such a problem that, in 2005, the Minnesota legislature made it illegal for homeowners to apply phosphorus to their lawns (unless a soil test indicates that it is needed or the homeowner is trying to establish a new lawn). Phosphorus naturally binds to the soil, however, it becomes a problem when it takes the form of carelessly applied fertilizer on the driveway or other hard surfaces. Without any soil to bind to, this phosphorus is free to be picked up by raindrops during the next storm, be carried to the storm sewer, and eventually be deposited into the nearest stream or lake, contributing to nutrient imbalances. Soil tests are an easy way to help us determine how much of what nutrients our lawns need, if any.

Planning and Logistics
This activity is similar in nature to the Spring Sand Sweep and Fall Leaf Collection. You’ll need to advertise your event to insure that your activity is as successful as possible. See the Spring Sand Sweep “Planning and Logistics” section for more guidance.

You’ve got a couple of options for actually testing the soil — you can buy your equipment and test the soils yourself, or send samples to a lab for more sophisticated results.

Suggested Procedure for Do-It-Yourselfers: You can buy your own test kit online (www.acornnaturalists.com is a good source - $48 for 15 tests) or from a garden store. Take several small samples from at least five separate areas on the lawn, about 2-3 inches below the surface. Combine these into a larger, “composite” sample (about a cup) for
each of the five areas. This will ensure that the soil is representative of the entire area to be fertilized. Give names or codes to your areas such as “west side of house” or “north side of garage,” so you can keep track of where the samples came from. This is important because different areas of the lawn may have different nutrient make-ups.

If you want someone else to do the testing: Take your own samples and then send them to the University of MN Extension Soil Testing Laboratory (http://soiltest.cfans.umn.edu/). Each of these tests cost $15 plus shipping. The website tells you exactly how to collect a soil sample and how and where to mail it. The Soil Testing Laboratory will evaluate the make-up of the samples and give fertilizer recommendations for the lawn area associated with each sample.

Once you have the results of your tests, convey the information to the homeowner and use the opportunity to educate them about how they can prevent water pollution in their everyday actions.

Safety Considerations
This activity is relatively safe. Watch out for traffic and unfriendly dogs in unfamiliar neighborhoods.
Storm Drain Stenciling

Supplies you will need:
- storm drain stencils
- A couple of cans of spray paint for each group. They can be any color but white shows up best.
- Wire brush and/or broom to clean the area to be stenciled.
- A safety vest for each person and traffic cones. Your City may be able to lend you these.
- Old clothes and shoes that are okay to get paint on.
- Five-gallon buckets to tote all of the equipment from drain to drain.
- Garbage bags to collect used gloves, used stencils, used spray cans and litter found in the street.
- A map showing the locations of the drains. Ask your City Public Works Department for help with this.
- Old newspapers (for practicing).
- Goggles and plastic gloves (optional).

How long it will take:
- 2 to 4 hours is a good amount of time for this activity. A group of kids with one adult can typically paint about 3 to 4 drains per hour.

How many people you will need:
- At least 4, plus 1 adult supervisor per group if working with children.

Best times to do it:
- A warm, dry day. Warm, dry pavement is necessary for the paint to stick. Non-windy days are preferable too.

How to make a little $$:
- Ask for pledges by the drain.

Clean water benefit:
- Reducing the amount of oil, fertilizer, antifreeze, pet waste and grass clippings in our public waterways by reminding people that whatever they pour down the drain leads directly to the nearest stream or river without being treated.
Storm Drain Stenciling

Storm drain stenciling is another great activity for groups searching for a hands-on, team-building activity that has immediate results. Storm drain stenciling involves the stenciling of a message such as: “Dump no Waste — Drains to Lake” next to the storm drains in our streets and parking lots in an effort to inform people that whatever goes down that drain ends up in the nearest ditch, stream or lake.

Water Quality Implications
As we previously discussed, the purpose of storm drains is to prevent flooding, however, when anything besides rainwater flows into these drains, they actually become a gateway for pollution. The purpose of stenciled messages is to raise awareness of this issue and, it is hoped, deter the littering and dumping practices that cause pollution in our public waterways.

Planning and Logistics
Consult the list of items you will need and start assembling them a couple of weeks before the event. There are several reputable companies, mostly on-line, that sell stencils. See the “Resources” section for some suggestions. This activity is most often done on City streets, so you will need to contact your City Public Works Department for permission. They should be able to provide you with a map and suggested stenciling locations (e.g. streets that have less traffic or have a lot of storm drains). They might even offer to accompany you. If you want to stencil drains on private property such as a business parking lot, you will need permission from the property owner. If you are working with a classroom or large group, divide your storm drain map up into routes for smaller groups. This will give people ownership of their route and you won’t waste time overlapping areas. Plan to give each group a map with their route highlighted and all of the equipment they will need in a bucket or some other tote. Also make sure to give each person a task — this will help keep your volunteers (especially children) focused. For example, assign two people to hold the stencil down, one to spray paint, and one to watch for traffic. Other tasks include carrying the equipment and cleaning the stencil area. Switch off jobs and make sure that everyone gets to paint at least one drain.

Before dispersing, gather everyone at a designated meeting place and explain the water quality benefits of storm drain marking. Then
demonstrate the technique and let the participants do a few practice stencils on newspaper first (it does take a bit of skill). Note that a couple of light applications of paint work better than one heavy one. Also, the paint will last longer if you place the stencil on the curb or sidewalk or downstream of the drain. Remind on-lookers to stand upwind of the painter and not to get paint on cars parked nearby.

Safety Considerations
Traffic is the main concern with this activity — make sure that there are plenty of adult supervisors if working with children, everyone wears a safety vest or bright clothing, and each group has at least one traffic cone.
Tree Planting

Supplies you will need:
- trees/seedlings
- spade-shaped shovels
- Picks or pry bars for hard soils or rocks.
- work gloves
- A water source (stream or hoses).
- Wheelbarrow(s) to carry trees, topsoil or mulch to the planting area.
- extra top soil (optional)
- wood mulch (optional)
- tree protector tubes (optional)
- protective fencing (optional)
- deer/critter deterrent (optional)

How long it will take:
- 1 to ? hours.

How many people you will need:
- At least 2.

Best times to do it:
- Spring (before the buds break) or fall (after the leaves drop) when the trees are dormant (sort of like sleeping).

How to make a little $$:
- Ask for donations by the tree planted.

Clean water benefit:
- Trees help stabilize shorelines and prevent erosion.
- Trees provide shade to keep water cool enough for cold-water fish species such as Brook Trout, found in many streams along Minnesota’s North Shore.
- When trees are planted along a stream, they can help filter pollution out of stormwater before it runs into the stream.
Tree planting is an extremely rewarding activity that both children and adults can enjoy. The most difficult part of this project is making sure that all of your hard work is not for naught! Seedling mortality is quite common, so you’ll want to do everything you can to make sure that your trees survive. By asking yourself a few important questions during the planning of this event, you’ll increase the likelihood that several years after your activity, you and your fellow tree-planters will be able to return to your planting spot and see your young seedlings reaching their full potential.

**Water Quality Implications**

When planted in the *riparian area* (land that is adjacent to the body of water), of a stream or lake, trees provide many benefits to the water body. The shade they provide keeps streams cool (cool streams can hold more dissolved oxygen, which helps support aquatic organisms); they help reduce stream bank erosion by stabilizing soil with their roots; and they absorb nutrients such as nitrogen and phosphorus that would otherwise reach the water body and degrade water quality.

**Planning and Logistics**

There are several questions you can ask yourself to increase the likelihood that you will plant the right trees in the right spots, which will increase the likelihood that they will survive. The first question you’ll want to ask yourself is: “Where are we going to plant?” Answer: Riparian areas along streams and lakes are wonderful places to establish trees where they likely once existed (and served a purpose). You’ll need to get permission from the owner(s) of the property on which you’ll be planting. Contact your local Soil and Water Conservation District, City, or State Park Professionals. They will likely have some good suggestions for areas that are easily accessible and that would benefit from having additional vegetation. They might even be able to give you some supplies or a helping hand. Once you’ve identified a location, contact Gopher State One Call (1-800-252-1166) or a similar agency in Wisconsin at least 24 hours in advance to make sure you won’t be working near any utility lines.

The second question you’ll want to ask yourself is: “What kind of trees should I get?” Answer: Your local Soil and Water Conservation District Staff, DNR Forester, or Nursery Professional can help you answer this. Be prepared to answer some specific questions such as:
1. Does your planting area have wet soils or dry?
2. Are the soils primarily sandy (good drainage), or do they have more clay (poor drainage)?
3. Does your planting area get a lot of sun or is it more shady?
4. Is your planting area rural (more animals around) or urban (presence of road salts or other chemicals used in the urban environment)?
5. How much space is available for the seedlings (are there power lines above your planting area that would call for shorter trees)?

You can also find answers on-line. For example, the Arbor Day Foundation’s website (www.arborday.org) allows you to enter your zip code and receive recommendations for what trees will likely survive in your area’s temperature ranges (also called your area’s “hardiness zone”).

Your third question might be: “Where can I get trees?” Answer: Many County Soil and Water Conservation Districts sell bunches of seedlings in the spring (order forms come out several months before) for about $1.25 per tree. Private nurseries and greenhouses are also a good option, or you could try ordering on-line.

Your next question will likely be: “How do I plant a tree?” Answer: The basic steps to planting a tree are as follows:

1. The most common mistake when planting a tree is to dig a hole that is too deep or too narrow. Such mistakes prevent the tree roots from growing properly. Dig a hole approximately twice the size of the tree ball in width and at a depth that will prevent the roots from a.) curling at the bottom or b.) peeking out above the hole. If you are planning a large event, with large trees, it may be advisable to pre-dig your holes. Your City Parks or Public Works Department might have the equipment to help you do this.
2. Remove all wrappings like burlap or wire from the seedlings.
3. Carefully place the tree in the hole.
4. Backfill the hole. It’s a good idea to add some good quality topsoil if the existing soils are less than ideal (rocky or clayey).
5. Add 2 to 4 inches of wood mulch all around the tree (optional).
6. If you can, come back and water your seedlings about an hour after you plant them.

The final question you’ll need an answer to is: “What can I do to insure
that the trees survive?" Answer: The time between when the tree leaves the nursery and when the tree gets planted is a vulnerable time for a seedling. They are very sensitive — exposing roots to hot sunlight and drying winds for just three minutes can kill your seedlings. Their roots need to be kept cool and moist at all times, (but never soaked in a bucket of water). If seedlings are near the point of breaking dormancy (their buds are opening), they should be kept in the dark as well. You want them to be snug in the ground with all their needs ready to be met once their buds break open and they start growing.

Keeping critters away from young trees is also critical to their survival. The bark, needles and buds are like candy to critters, especially deer. Weeds are also a threat. If possible, make arrangements to keep your seedlings protected until they have some time to establish themselves. There are several options available to help you protect your trees such as:

- Installing wire fences or other fencing around each tree or group of trees. Make sure the fence is tall enough so that deer can’t jump over it.

- Purchasing seedlings that are already treated to deter deer and other pests (many greenhouses sell pre-treated trees).

- Applying deer/animal deterrent to the seedlings yourself. You can get a pre-made mix at greenhouses or garden stores or make your own.

- Placing protector tubes around your seedlings. Protector tubes are available in a couple of different materials and most of them are photo-degradable (sunlight breaks them down). The tubes protect the tree from critters and also create an ideal growing environment. Eventually, the young seedling grows out of the top of the tube and the tube falls away.

- Preventing weeds from out-competing your seedlings. If your seedlings are very small (the cheaper ones usually are) fast-growing weeds can steal their water and sun, resulting in stunted tree growth or dead seedlings. You can buy special weed prevention mats from a local greenhouse to address this threat, or you can spread about 2 to 4 inches of wood mulch around the base of the tree. The mulch will not only suffocate
potential weeds, but will also help hold in moisture and keep soil temperatures moderated. If you are in close proximity to your planting, you can carefully mow around the trees to knock down weeds over time.

All of these extra precautions cost money, so depending on your goals, this may or not be the best service learning activity for your group. Even with some tree mortality, however, every tree planted is a tiny step towards recovering an ecosystem.

**Safety Considerations**
Beware of poison ivy, wild parsnip and other hazards that might be present in heavily vegetated areas.
Pet Waste Pick-up!

Supplies you will need:
- A very strong nose!
- A trowel/spade for each participant or long-handled scoopers (about $25 at local pet stores).
- Plastic gloves for each participant.
- Plastic bags (recycle the grocery bags you already have at home).
- LOTS of hand sanitizer

How long it will take:
- 1 to ? hours.

How many people you will need:
- At least 2 - one to scoop and one to hold the bag (and provide moral support).

Best times to do it:
- Very hot or very cold, dry days - the waste will be more palatable after being baked in the sun or frozen.

How to make a little $$:
- Be creative with this one! You could charge by the pet, by the lawn, or by bags of waste collected.

Clean water benefit:
- Prevents waste from migrating into our waterways via stormwater run-off, reducing the threat of pollution from fecal coliform bacteria, excess nutrients and other harmful components of pet waste.
Oh boy. If you have young school age boys in your group — are they ever going to love this. The girls, well, not so much. Studies reveal that about 40% of Americans don’t pick up after their dogs. That means there’s a lot of opportunity for your group in this area!

**Water Quality Implications**

There’s no denying that poop is gross, but once it gets into our lakes and streams, it becomes a pollutant that can threaten not only water quality, but also public health. If you’ve ever been on the Lakewalk in Duluth, or on some other popular trails in the area, you will likely have noticed the free bags that are available for use by dog-owners to pick up after their pet. In many cities, including Duluth, this is the law. All of this pet waste does not magically disappear. It doesn’t fertilize the lawn either, (a misconception many people may use as an excuse). In fact, waste from any carnivore (meat-eater) is not usable as fertilizer. Waste from herbivores (plant-eaters), like cows, can be used as fertilizer because unused portions of their food can be returned to the soil and taken up again by plants. Pet waste contains bacteria called **fecal coliform bacteria**. Coliform bacteria are generally harmless and help humans and animals digest their food. However, the presence of fecal coliform bacteria can indicate the possible presence of disease-causing organisms — organisms that can make humans who drink or swim in that water sick. Pet waste is not the only source of fecal coliform bacteria in our area. Beaches that are in close proximity to sewage overflow points or large geese populations (such as the Minnesota Park Point beaches) are also prone to being closed due to high counts of fecal coliform bacteria. Pet waste can also contribute to excessive algae growth when the nutrients in the waste are released through decay.

**Planning and Logistics**

This activity is similar in nature to the Spring Sand Sweep, Soil Testing and Fall Leaf Collection in that you’ll want to advertise your services as part of your pre-event planning in order to insure that your event is as successful as possible. See the Spring Sand Sweep “Planning and Logistics” section for guidance. In addition, as with sand, trash and leaves, if you choose not to dispose of the waste from each homeowners’ property in their personal garbage container, you’ll have to make arrangements to dispose of the pet waste at an acceptable location such as a nearby dumpster at a school, business
or church, with permission, or at a sanitary disposal facility.

**Safety Considerations**

If working with children, make sure to supervise them closely or stress the importance of not getting any pet waste near their mouth. It could really make them sick. Have a lot of hand sanitizer available, and if possible, use a long-handled scooper to keep the kids as physically separated from the waste as possible.
Recommended Links:

1.) How to Run a Successful Car Wash Fundraiser:
From: Lance Winslow III & The Car Wash Guys
http://www.carwashguys.com/fundraisers/LAschools.html

2.) WLSSD yard waste site:
http://www.wlssd.com/compost_yardwaste.php

3.) Community Stream Clean-ups:
From: W.A.T.E.R. (Watershed Activities to Encourage Restoration)
http://www.watershedactivities.com/projects/spring/scleanup.html

4.) Liability Form Example:
From: W.A.T.E.R. (Watershed Activities to Encourage Restoration)

5.) Adopt-A-River Program:
MN Department of Natural Resources
http://www.dnr.state.mn.us/adoptriver

6.) On-line Storm Drain Stencil Sources:
www.crstencils.com
www.almetek.com
www.curbmarker.com/storm/index.html
www.acpinternational.com/stormdrain.php

Other Service and Activity Guides from Our Area:

1.) WaterShed Action Guide:
Hamline University, Center for Global Environmental Education and the WaterShed Partners
http://www.hamline.edu/cgee/watershed/action/

2.) Water Action Volunteers:
University of Wisconsin Extension
http://watermonitoring.uwex.edu/wav/index.html
The RSPT appreciates the efforts you’ve made in protecting our region’s water quality! Since 2002, the RSPT has been bringing workshops, seminars, educational displays, festivals and technical assistance to the public as part of its mission to protect and enhance the region’s shared water resources through stormwater pollution prevention by providing coordinated educational programs and technical assistance. For more information about any of the activities contained in this guide, contact the RSPT hotline at 218-730-4063. And remember: it all comes down to your water!

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MN Pollution Control Agency MN Sea Grant
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