



## STREAMKEEPERS MODULE 5

# Storm Drain Marking

### PROJECT APPROVAL

- Not required

### TRAINING

- Not Necessary

### TIME COMMITMENT

- Half day to ongoing

### NUMBER OF PEOPLE

- 2 or many

### TIME OF YEAR

- Spring through Fall

This module involves walking streets to mark storm drains with a yellow fish symbol while distributing information.

**REVISED 2023**



Pêches et Océans  
Canada

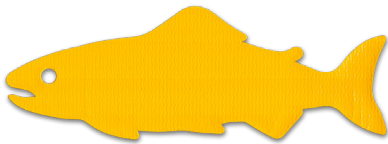
Fisheries and Oceans  
Canada

Canada

## Welcome to Streamkeepers

The Streamkeepers Program of Fisheries and Oceans Canada (DFO) Community Involvement Program provides these training modules. These modules encourage “hands on” environmental activities in watersheds in British Columbia. Volunteer groups, First Nations, schools, and individuals are using this material to monitor and restore local waterways. Your local Fisheries and Oceans Community Advisor can provide more information.

## Project Purpose



**The yellow fish symbol is an authorized image. Do not create your own symbol/template. Consistent imagery helps the public recognize that storm water drains to streams.**

The Storm Drain Marking program was developed by the Department of Fisheries and Oceans, Salmonid Enhancement Program working with a variety of other levels of Government. After completing Module 1: Introduction to Stream Mapping you may have observed the impact on streams from road runoff and pollution coming from storm drains. To help raise awareness of this problem you will put the authorized yellow fish symbols on the road beside storm drains and deliver door-hangers to homes and businesses along your route. Please do not make up your own template or symbol.

Information on the door hangers inform people that storm drains empty directly into a fish-bearing creek nearby without going through a clean up process. All water goes to fish bearing streams or to our oceans. Stream signs (Module 10) will put a name to the stream that may be affected by storm drain pollution and road run off.

Community organizations and supervised groups of school children, Guides, and Scouts mark storm drains in residential areas. Only adults should mark storm drains in commercial or industrial areas as traffic conditions are more hazardous. Obtain permission from property owners if you are planning to mark the drains on private

## Overview

In urban areas, storm drains along paved streets and parking lots collect rain and snowmelt water. Paved surfaces and rooftops prevent rainfall from going into the ground to undergo the natural process of filtration and evaporation. Water runs off these hard surfaces quickly and enters into storm drains along with





contaminants picked up along the way. Floods and droughts are more frequent in watersheds where buildings and paved surfaces cover much of the land.

Storm drains empty into an underground collection system that discharges untreated water into a nearby stream. Runoff does not go into the domestic sewage system. People who do not realize this might dispose of oil, swimming pool water, car wash detergent, and toxic household or industrial compounds such as concrete into storm drains. Road runoff contains sediment, animal waste, oil, and particles from tires and car exhaust. All these substances flow into the nearest stream and harm fish, wildlife, and plants.

Storm drain marking is an excellent way to raise community awareness about stream health. It involves community members, leaves a semi-permanent reminder on the street, and distributes information on stream health to residents and businesses. Please use caution when working with the road paint. It can be hard to get off your skin and clothes and may be toxic to wildlife if it is accidentally spilled into the drain.

Plans for new urban developments in some municipalities require that storm runoff flow into wetland retention ponds or rain gardens. These areas are planted with wetland plant species that remove toxins from the water. They can also help moderate flood and drought conditions in the receiving stream. You may wish to check on the stormwater collection system proposed for new developments in your area.

There are fewer storm drains in rural areas. However, domestic and agricultural pollution in drainage ditches can be a major threat to stream health. A solution that was developed is to build “fish sticks” and erect them along the ditches. Wooden fish cutouts, painted yellow and mounted on sticks, can be placed along the drainage ditch banks as a reminder that these ditches are fish habitat.

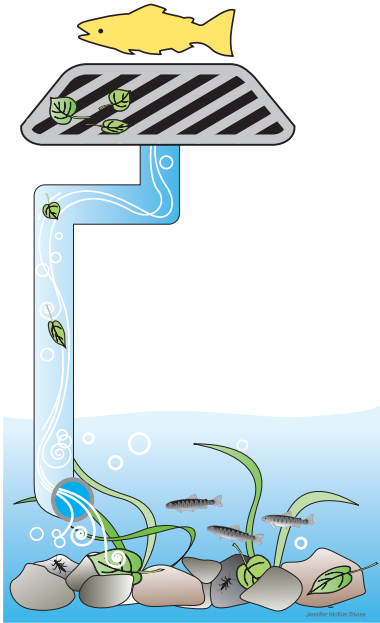
## Project Guidance and Approval

You need little or no training. In areas new to the program, the DFO Community Advisor will help set up the program. Always remember to obtain permission before painting drains on private property.

## Level of Effort

You may choose to PAINT a yellow fish using a stencil or you may choose to adhere vinyl DECALS of the yellow fish. You will be given a kit containing everything you need for the method of your choice.

You can adapt the project easily to a small group (minimum two) interested in a single outing or a large group interested in a longer term commitment. For those looking to take on a longer term commitment to this activity you may wish to collaborate with your Municipality using their road drainage maps to determine the most effective pattern to mark the drains. Take the maps with you as you mark the drains to record where you have completed Module 5 and to help update the Municipal maps. Communicate through social media and local papers to get the word out as to the significance of the Yellow Fish that are popping up next to the storm drains. Let others know where you are marking.



Groups of two to six children, supervised by one adult, work well with each kit. You can mark ten to fifteen storm drains in an hour when the drains are close together. You may choose to set either a time limit, number of drains marked or a specific area as your goal. On well-used roads, you may need to repaint drains after three to five years.

## Personal Safety

Traffic is the greatest hazard for anyone working at the roadside. Adults should supervise children and caution them about road safety. Wear a traffic safety vest and assign a traffic lookout. Leave dogs and very small children at home.

Be careful with the paint. It is lead-free, but try not to spill any, especially near a storm drain. Supervise children and follow the instructions in the kit. Wear appropriate clothing, high vis vest and rubber gloves. If you are sensitive to the smell of paint, you can deliver door hangers or watch for traffic instead.

As a part of your safety plan, let someone know where you are going and when you will return. Carry emergency phone numbers for police and ambulance, respect private property, and beware of dogs.

## Scheduling

Plan dates, start time, end time, meeting spot, and suggest participants bring water and a snack, dress for the task and weather. Plan your event with a back up date in case of poor weather. You can mark drains during spring, summer, and fall on any dry day. The road must be dry for the paint or decal to stick well. Very hot and cold temperatures interfere with paint drying and decal adhesion.

# STEP 1

## Determine Your Boundaries

You may wish to obtain municipal sewer and drainage maps for the area which your group has determined could most benefit from storm drain marking. These maps are useful in relating the storm drains to a particular stream or watershed. Usually, there are four or five houses between storm drains.

Many groups are recording where the drains are marked and coordinating efforts to mark in a grid pattern so as not to miss any streets. All are to use the fish template or decal provided in order to make it easy for people to recognize the symbol and if painting, to be able to refresh your marking, as the paint fades overtime.

## Preparations

Walk or drive the area to familiarize yourself with potential obstacles and the number of drains to be marked. Pick-up of the storm drain marking kit and familiarize yourself with the materials and equipment.

## Organizing Teams

For adults, teams of four to six people work well. For children, groups of two to six supervised by one adult, work well with each kit. For safety reasons, each team should work on one side of the street and not cross over, so send two teams out together. Use the task list to assign each member a job for the event or switch out at set intervals.

# STEP 2

## On Site Using PAINT



### MATERIALS AND EQUIPMENT for PAINTING

<b>yellow latex road paint</b>	<b>tweezers</b>
<b>squeeze bottle of paint</b>	<b>masking tape</b>
<b>paint brush</b>	<b>rubber gloves</b>
<b>fish template/</b>	<b>garbage bag</b>
<b>whisk broom</b>	<b>door hangers</b>
<b>safety vests</b>	<b>record form</b>
<b>fish-eye stickers</b>	<b>safety cones and signs</b>

A squeeze bottle of paint is enough for about 20 drains. You can make additional stencils for painting the fish. Use the template to cut out fish shape stencils from materials such as vinyl placemats or file folders.

### ORGANIZING

1. Explain the purpose of storm drain marking.
2. Go over procedure and give a task to each participant.
3. According to the tasks, distribute the marking equipment, safety vests, cones and door hangers.
4. Wear safety vests.

Each task is important, take a moment to explain that sweeping the area where you paint is important in ensuring the long term success of the image. Distributing door-hangers helps residents understand about keeping pollutants out of storm drains. Use this task list to determine roles for your team members.

### TASK LIST

<b>• Traffic Safety (adult)</b>	<b>• Eye Artist</b>
<b>• Whisk Broom Sweeper</b>	<b>• Painter</b>
<b>• Stencil Placer</b>	<b>• Door Hanger Delivery</b>

## PAINTING INSTRUCTIONS



- **Traffic Safety (adult)**

Post a lookout to watch for cars and other traffic such as bikes, scooters etc.

- **Whisk Broom Sweeper**

Use whisk broom to sweep dust, gravel and dirt from the pavement.



- **Stencil Placer**

Position stencil on the road (not the sidewalk) about 5 to 10 cm above the storm drain. The fish should look right side up when viewed from the sidewalk. Fasten each corner of the stencil in position with masking tape.

- **Eye Artist**

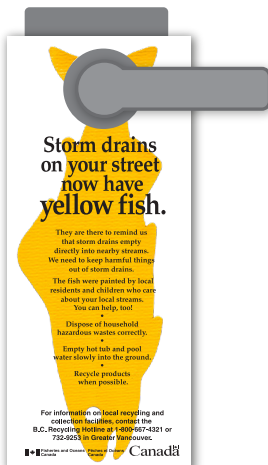
Position the dot sticker (for the eye) within the fish outline. After painting remove the eye sticker with tweezers and put into garbage



- **Painter**

Wearing gloves gently squeeze a line of yellow paint onto the road in the center of the fish stencil. Using the stencil brush dab into the paint and then dab up and down until you have filled the stencil cutout and the yellow fish is fully painted. Be careful around the edges of the stencil to ensure you don't accidentally get paint under the stencil. If using a foam brush dab it into the paint and then brush from the edges of the stencil towards the middle.

Place door hanger on door knob



- **Stencil Placer**

Lift the stencil from the edge and carry it carefully to the next drain. Check that the back of the stencil is clean before placing it at the next drain. The paint takes approximately 15 minutes to dry.

- **Door Hanger Delivery**

Do not knock on doors. Deliver the information to each house on the street where storm drains have been marked. Place doorhanger on doorknobs or place in mailboxes.

# STEP 2

## On Site Using DECALS



### MATERIALS AND EQUIPMENT for DECALS

<b>vinyl decals</b>	<b>garbage bag</b>
<b>mallet</b>	<b>door hangers</b>
<b>whisk broom</b>	<b>record form</b>
<b>safety vests</b>	<b>safety cones and signs</b>

### ORGANIZING

1. Explain the purpose of storm drain marking.
2. Go over procedure and give a task to each participant.
3. According to the tasks, distribute the marking equipment, safety vests, cones and door hangers.
4. Wear safety vests.

Each task is important, take a moment to explain that sweeping the area where you place the decal is important in ensuring the long term success of the image. Distributing door hangers helps residents understand about keeping pollutants out of storm drains. Use this task list to determine roles for your team members.

### TASK LIST

- **Traffic Safety (adult)**
- **Whisk Broom Sweeper**
- **Eye Artist**
- **Stencil Placer**
- **Decal Placer**
- **Decal Pounder**
- **Door Hanger Delivery**



## DECAL INSTRUCTIONS



- **Traffic Safety (adult)**

Post a lookout to watch for cars and other traffic (bikes, scooters etc.)



Sweep  
the  
pavement

- **Whisk Broom Sweeper**

Use whisk broom to sweep dust, gravel and dirt from the pavement.

Apply decal with  
rubber mallet



- **Eye Artist**

Pop-out the round eye on the decal and put into garbage bag.

- **Decal Placer**

Remove the backing on the decal and put into garbage bag. Do not touch the sticky side. Place the decal sticky side down on the road (not the sidewalk) 10 cm above the storm drain. The fish should look right side up when viewed from the sidewalk.

- **Decal Pounders**

Use the rubber mallet to firmly pound the decal onto the pavement. Begin in the middle and move to each side of the decal. Check that the edges are firmly stuck down before leaving. This takes approximately 50 firm hits.

Place  
door  
hanger  
on door  
knob



- **Door Hanger Delivery**

Do not knock on doors. Deliver the information to each house on the street where storm drains have been marked. Hang doorhanger on doorknobs or place in mailboxes.

# STEP 3

## Clean Up and Record Marking Information

Indicate marked drains on map.



## Public Relations

### CLEAN EQUIPMENT

When you are finished for the day, ensure the kit and equipment are clean and tidy. Make arrangements to return the kit to the DFO Community Advisor or coordinator once your marking event(s) are complete to allow them to be available for another group.

### COMPLETE SUMMARY SHEET

This is for your own records with information and number of drains marked to assist with planning community awareness and outreach.

### RECORD YOUR MARKED DRAINS ON MAP

Indicate on the map the streets where you have marked drains. Many volunteer coordinators keep a master database, to keep up to date on areas that need painting or repainting. You may wish to survey people in the area after you finish the project, to find out whether attitudes and behaviour have changed. Children and adults who help mark storm drains also become good teachers. If records are kept about stream problems related to storm drains, you can compare data on the frequency of problems before and after the project.

You can clean up streams, monitor their condition, and undertake enhancement projects, but you need the support of your community for these projects to succeed. Talk about your project with others whenever and wherever you can, including at schools and public meetings.

This activity is an engaging subject for social media sites (the volunteers wear colourful safety vests and the fish are bright yellow). Social media postings help increase awareness and information about the storm water system and the connection to our streams.

# MODULE 5

## Storm Drain Marking Summary Sheet (for your files)

Stream Name \_\_\_\_\_

Date \_\_\_\_\_

### Details of drain marking

number of drains marked \_\_\_\_\_

number of volunteers involved \_\_\_\_\_

number of hours spent \_\_\_\_\_

names of streets marked \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

how long does the marking last? \_\_\_\_\_

notes \_\_\_\_\_

\_\_\_\_\_

# Where the Water Goes

