

A scenic view of the Edmonton skyline featuring several tall office buildings under a clear blue sky. In the foreground, a river flows past a grassy bank with trees showing vibrant autumn foliage in shades of yellow and orange. A stone-lined embankment separates the river from the park area.

# SAFE DISPOSAL OF CONCRETE AND CEMENT-BASED PRODUCTS:

A GUIDE FOR BUSINESSES  
AND INDIVIDUALS

Protecting Edmonton's River and Stormwater Systems

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## EDMONTON'S BYLAW AND OTHER LEGISLATION:

Allowing the runoff from cement or concrete works into the storm sewer system is a violation of the City of Edmonton Drainage Bylaw 16200 and of provincial and federal environmental legislation. This can result in fines or penalties to the worker, the foreman and the company responsible for the release.

Report spills immediately to **311** and to the Alberta Environment's hotline at

## RUNOFF WASTEWATER FROM CONCRETE OR CEMENT WORK HAS THE POTENTIAL TO CAUSE A DETRIMENTAL EFFECT ON THE ENVIRONMENT:

Washing cement or concrete products or dust into Edmonton's stormwater system can have a devastating effect on our city's natural environment. This guide will help you learn how to contain and properly dispose of runoff from cement or concrete work.

The chemical content of cement and concrete – especially lime – can be lethal to fish, insects and plants.

Concrete wastewater has a pH of 12-13 and is as toxic as bleach. The pH of freshwater is 6-7. Concrete wastewater causes burns in a similar way to a strong acid. A single bucket of concrete wastewater could easily kill hundreds of fish. There is also concern about heavy metal concentrations in some cement products. Cement products can also cause obstructions of storm water pipes.

Storm catch basins lead directly to the river and are only meant for rainwater and snowmelt. At no time should you ever dump concrete or cement-based products into the storm sewer or allow runoff from worksites to run into drainage systems.





## [ YOU NEED TO KNOW THAT:

- Concrete wastewater **cannot** be adequately filtered to reduce its toxicity.
- Filtered wastewater that looks clear still has a high level of toxicity.
- You must have a plan in place to manage wastewater runoff before you start work.

## [ TIPS FOR PROPER HANDLING OF RUNOFF FROM CONCRETE OR CEMENT WORK (SLURRY):

### CONCRETE SAW CUTTING:

- Ensure you collect all dust to prevent it from being washed down into the City's stormwater system.
- Remember to look around to ensure the cuts and your work site have been fully washed out and the slurry has been properly collected.
- Use sandbags to divert slurry to a grassy or bare soil area where it can be vacuumed up.

### EXPOSING AGGREGATE:

- Don't place concrete if it is about to rain.
- Put slurry controls in place before your work begins.
- Make sure the controls you've set up can handle the amount of water you will be using.



What not to do.

Report spills immediately to **311** and to the Alberta Environment's hotline at

- If you're using an acid wash, **do not** divert it to the grass or an area of bare soil. Collect all acid wash wastewater for proper disposal.

### CONCRETE PUMPING:

- Place a tarp or containment under the pump to catch drips.
- Wash out the pump equipment in your designated slurry control area. Do not allow the water to drain onto the streets or into stormwater drains.

### DELIVERY TRUCKS:

- Wash out all concrete chutes at an area designated by your company as being a proper disposal site.
- Use chute covers while driving.
- Report any spill to company management and to the City of Edmonton by calling 311.
- Never wash the chutes onto driveways, roads or into any drain.

### WASHING EQUIPMENT:

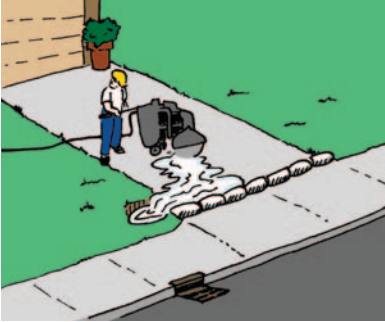
- All equipment that came into contact with concrete or cement must be washed in a designated area where wastewater can be held for disposal.
- If such an area is not available, wash the equipment over a spot of bare soil or grass. Make sure this area is far enough away from storm drains that the slurry cannot be washed into the drains by rain.
- Do not wash equipment in an area that could drain the wastewater into the river or the stormwater system.



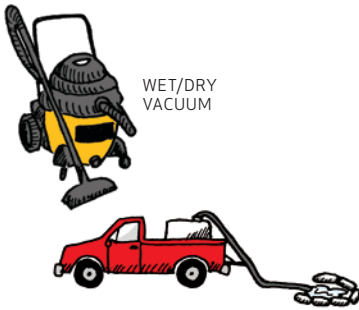
Using an enviro-bucket to capture residual concrete.

## IT'S UP TO YOU TO LEARN PROPER SLURRY CONTROLS AND TO FOLLOW THEM:

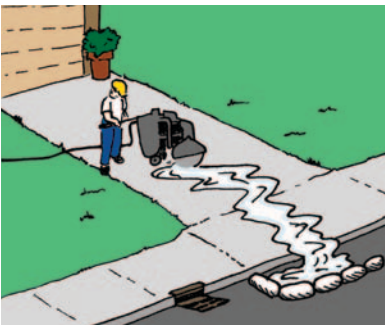
Make sure your slurry controls are in place BEFORE you begin concrete or cement works.



Use sandbags, soil or other materials to divert run-off to a grassy area, an area of exposed soil or into a pit. Make sure the area you have chosen is large enough to handle the amount of water you will be using.



Use a wet/dry vac or a vacuum truck to divert wastewater as it builds up.



Make sure no slurry or wastewater enters the city's stormwater system.

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There is no way to filter slurry to reduce its toxicity. Make sure you dispose of this wastewater properly.



Dilution won't prevent pollution. You cannot effectively dilute slurry wastewater. It would take about 100,000 litres of fresh water to dilute a bucket of concrete slurry to a safe pH level. Instead, dispose of slurry properly.



Sweep or shovel up all dust and slurry for proper disposal. Don't leave slurry to be washed away by rain or to set.



Do not drain slurry onto a grassy area or bare soil where a rainstorm could wash the slurry into a nearby storm drain.

REMEMBER, CONCRETE AND CEMENT-BASED PRODUCTS ARE A PROHIBITED SUBSTANCE IN THE CITY OF EDMONTON'S DRAINAGE BYLAW 16200

Proper disposal of concrete and cement-based products is your responsibility. In order to maintain a healthy environment here are some tips:

- Make sure any contractors working for you understand proper slurry disposal and follow your company rules for protecting the environment.
- Check the weather before you start the job. Don't place concrete or expose aggregate in the rain or if rain is expected soon.
- Put all slurry controls in place before you start the job.
- Vacuum or sweep up concrete and cement dust or slurry. Don't use a hose to wash it away.
- Vacuum or sweep up slurry or concrete or cement dust before it can be washed away by the rain.



Improper disposal of concrete slurry.

Report spills immediately to **311** and to the Alberta Environment's hotline at

**1-800-222-6514**