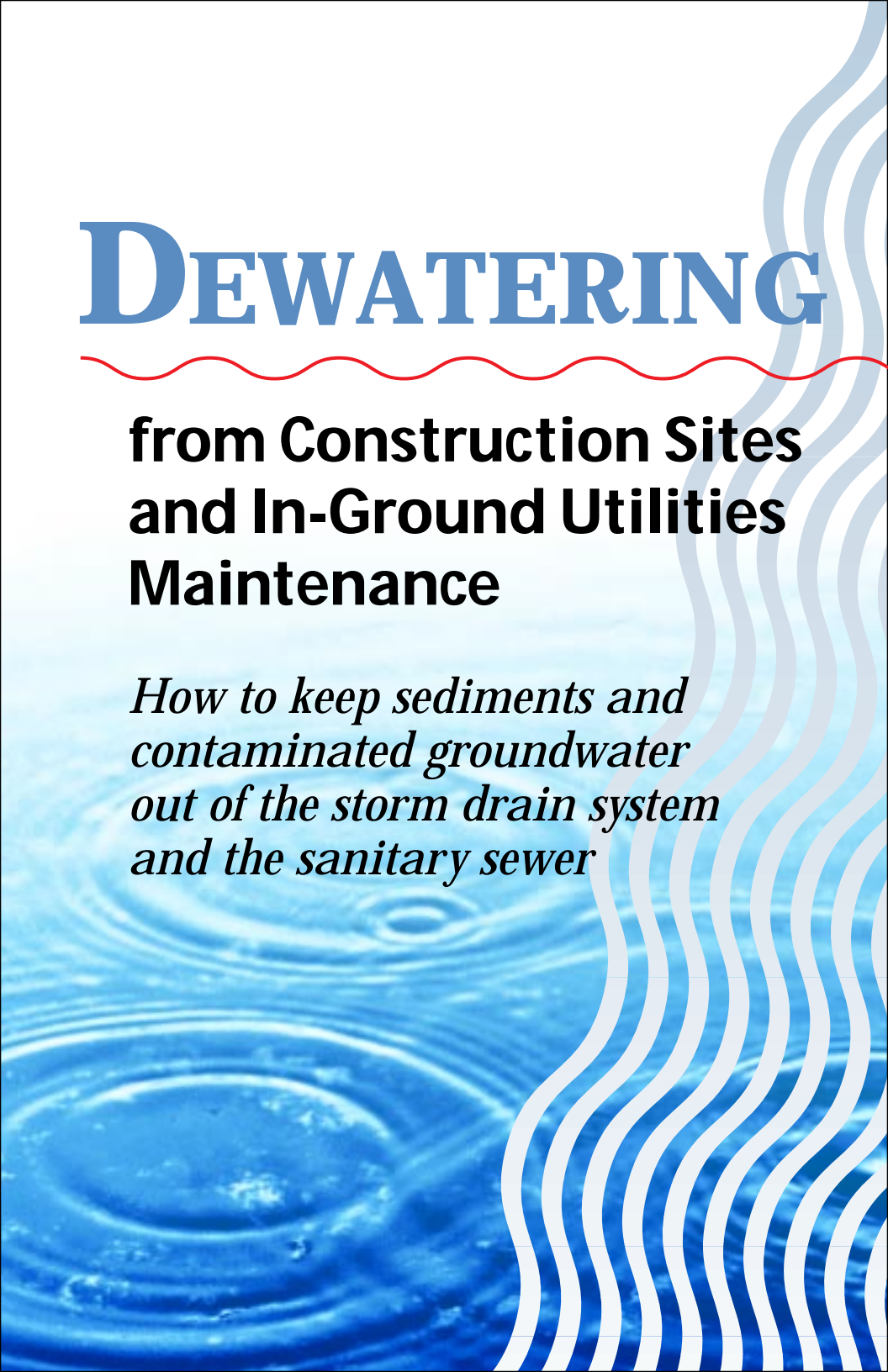


DEWATERING



from Construction Sites and In-Ground Utilities Maintenance

*How to keep sediments and
contaminated groundwater
out of the storm drain system
and the sanitary sewer*



“It’s just groundwater...” **Well, maybe not!**

In fact, it’s illegal to discharge any water containing sediments or contaminants into a street, gutter, storm drain, or creek.

Depending on soil types and site history, groundwater pumped from construction sites and utilities maintenance projects may be contaminated with toxics (such as oil or solvents) or laden with sediments. Any of these pollutants can harm wildlife in creeks or the Bay, or interfere with the operation of the local wastewater treatment plant.

It’s up to all of us to keep our waterways healthy!

Typical projects that require dewatering:

- New construction, both large and small sites
- Foundation work
- Utilities infrastructure installation and repair
 - Electrical conduits
 - Vaults
 - Sewer line and storm drain maintenance
 - Phone lines and cable TV installation and repair

If your site or project requires dewatering, you should be concerned about:

Toxic pollutants in soil or groundwater

To determine if contaminants are present, you must:

1. Check for odors, discoloration, or an oily sheen on groundwater.

For commercial projects, check site records for soil and groundwater test results.

AND

2. Call the Regional Water Quality Control Plant (RWQCP) and ask whether groundwater must be tested.

You may be able to discharge to the storm drain system, if sediments are not present.

Dealing with contamination:

If you or treatment plant staff suspect contamination, you must have the water tested by a certified laboratory. Sampling/testing requirements will be determined on a case-by-case basis by RWQCP staff, depending on site history or suspected pollutants. (The RWQCP can provide a list of local labs.)

After testing, discuss test results with RWQCP staff. Depending on results and the volume of water you will pump...

- You may be allowed to discharge to the storm drain system, if sediments are not present.
- You may be allowed to discharge pumped groundwater to the sanitary sewer.
- In extremely rare instances, you may be required to haul pumped groundwater off-site for treatment and disposal at an appropriate waste treatment facility.

Sediments that will clog storm drains or sewer lines, or smother aquatic life in local creeks or the Bay

Ask yourself the following questions:

1. Is the water clear?
2. Will you be pumping for less than 24 hours?
3. Will you pump less than 20 gallons per minute?

If you can answer YES to all three, you may pump to the street or storm drain.

If you will pump longer or faster than described above, call the RWQCP for guidance. You may be asked to pump to the sanitary sewer if the water could cause a slipping or traffic hazard.

If the water is not clear, there are solids in the water that must be filtered or settled out. Some combination of the options shown later in this brochure may solve the problem. If the water is still not clear after trying these techniques, call the RWQCP for assistance.

You may need to:

- Pump to a Baker tank or other settling tank,
OR
- Filter groundwater.

Depending on the quality of the water after filtering or settling, you may be allowed to pump to the storm drain. Or, you may be required to pump to the sanitary sewer. RWQCP staff will work with you to determine which is appropriate.

Disposing of filtered or settled solids

Return settled or filtered solids to the ground, or dry and dispose with trash.

If your site or project requires dewatering, you should be concerned about:

Toxic pollutants in soil or groundwater

For **commercial projects**, check site records for soil and groundwater test results

For **ALL projects**, check for odors, discoloration, or an oily sheen on groundwater

and

Call the RWQCP and ask whether groundwater must be tested

If **NO**, check for **SEDIMENTS** (see next page)

If **YES**, have the water tested by a certified lab (The RWQCP can provide a list of local labs)

Discuss test results with RWQCP staff. Depending on results and the volume of water you will pump...

You may be able to discharge to the storm drain system, if sediments are not present

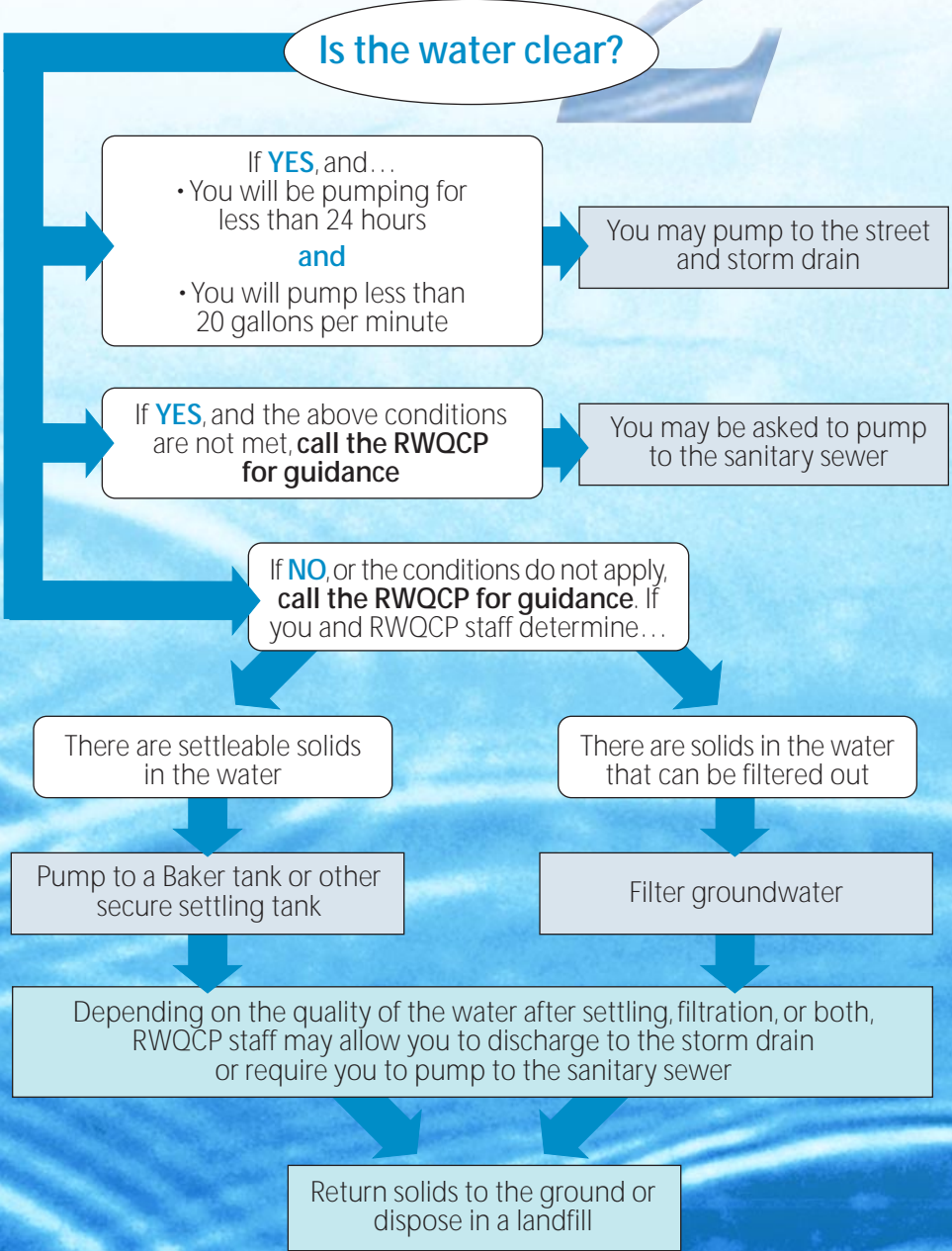
Check for **SEDIMENTS**

You may be allowed to discharge pumped groundwater to the sanitary sewer

Check for **SEDIMENTS**

In extremely rare instances, you may be required to haul pumped groundwater off-site for appropriate disposal

Sediments that will clog storm drains or sewer lines, or smother aquatic life in local creeks or the Bay



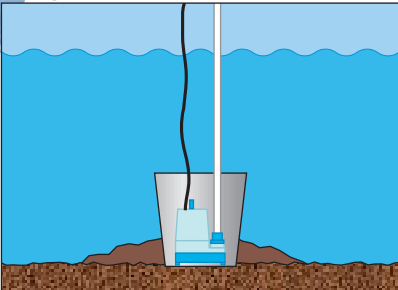
Removing sediments from groundwater

In general, you will need to follow two steps—source control and filtration—in order to remove sediments from groundwater before you pump it off your site. RWQCP staff recommends that you try source control measures before filtration. Use a combination of approaches described below for the best results.

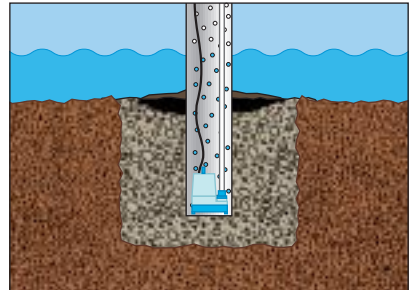
Remember to check sediment removal devices frequently to make sure they are unclogged and operating correctly. You may need to make adjustments depending on the amount of sediment in the water you're pumping

Step 1: Control sediment loading before pumping groundwater

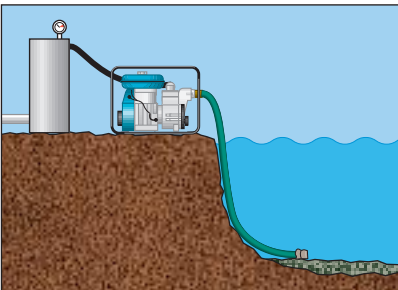
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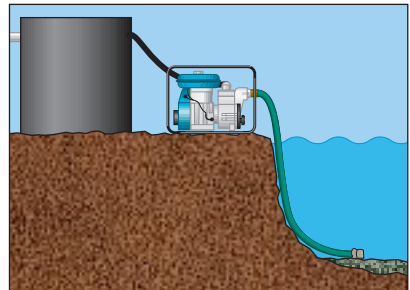
Using a submersible pump, pump from a bucket placed below the water level.



Pump from a settling pit: At the dewatering site, dig a small pit and fill with fine gravel. Pump through a perforated pipe sunk partway into the gravel.



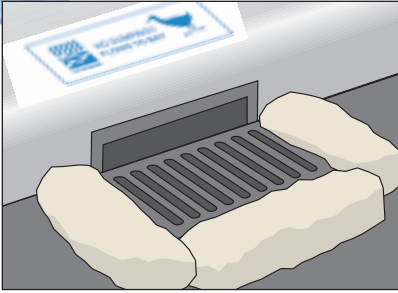
Pump through a filtering device such as a swimming pool filter.



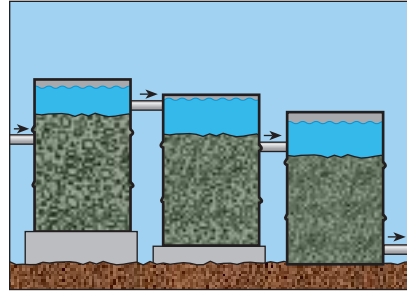
Pump from a Baker tank or other tank with sampling port(s).

Step 2 (if necessary): Filter groundwater before final discharge

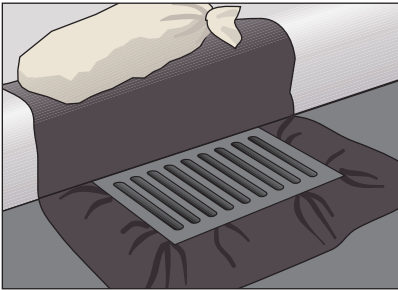
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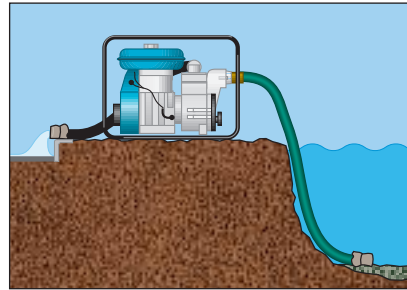
Place burlap bags filled with drain rock along the curb and around the nearest storm drain.



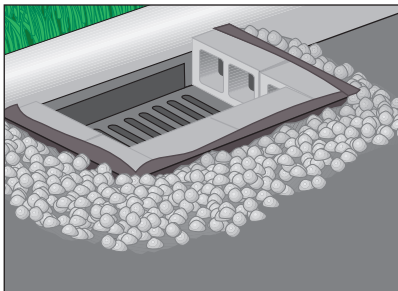
Direct water through a series of drums filled with successively finer gravel and sand.



Cover storm drain with filter fabric, anchored under grate and above drain.



Wrap end of suction and discharge pipes with filter fabric.



For large projects involving significant amounts of sediments or a steep slope, surround storm drain with a filtering dam. Water filters into storm drain through 1) crushed rock, surrounding 2) concrete blocks wrapped with filter fabric.

For information and assistance, call the Regional Water Quality Control Plant, (650) 329-2598.

For More Information

Regional Water Quality Control Plant

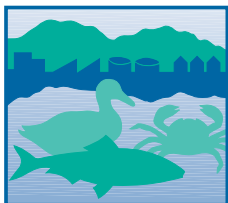
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**Regional Water Quality
Control Plant**

Operated by the City of Palo Alto for
the East Palo Alto Sanitary District,
Los Altos, Los Altos Hills, Mountain
View, Palo Alto, and Stanford