

19. City of Lake Forest Pollution Prevention

Sewers and Storm Drains Two systems, Two purposes

Two separate water drainage systems exist at every residence and business in Lake Forest: storm drains and sanitary sewers. These systems have vastly different purposes — sewers protect the public health by transporting human sewage and wastewater for treatment, while storm drains collect and transport rainwater to the ocean.

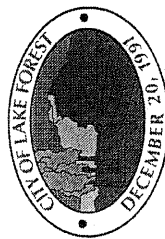
The sewer system handles wastewater from inside your house. This water, from your bathroom and kitchen, is sent via pipes to one of two treatment plants that clean and disinfect the waste before being recycled or released offshore into the Pacific Ocean. These sewer pipes can have blockages, often due to grease, and overflows can enter the street and storm drain and may cause local beach closures.

The storm drain system is designed for rainwater that flows into street gutters and then to storm drains before entering Aliso or Serrano Creeks and the ocean. Every neighborhood and street is connected to the storm drain system to rapidly move rainwater out of the City to prevent flooding. Rainwater mixes with fertilizers, chemicals or bacteria to create stormwater pollution. The stormwater runoff is not treated and can pollute the ocean and the local lakes, which is why curbs at catch basins are painted with signs reading, "No Dumping, Drains to Ocean" or "No Dumping, Drains to Lake," and swimming in the ocean is often banned after storms.

It's important to know the difference between the two systems and keep all sources of pollution from entering the storm drain to threaten human health and aquatic life.



Aliso Creek stormwater runoff ends up in Laguna Beach — Stormwater runoff in Aliso Creek can pollute the ocean because any water entering the creek flows untreated to Laguna Beach and the ocean.



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Focus on the Future Stormwater Pollution

An update on issues facing Lake Forest

January 2003



New Stormwater Permits will affect all residents, businesses, homeowners associations

Though new stormwater rules will require all residents, businesses and homeowners associations in the City of Lake Forest to increase their efforts to keep polluted urban runoff water from entering local creeks, which flow to the Pacific Ocean.

The Santa Ana and San Diego Regional Water Quality Control Boards have adopted new five-year Stormwater Permits for the City of Lake Forest, other Orange County cities and the County of Orange. The permits impose many new regulations and restrictions that will require stronger pollution prevention practices by residents and businesses, and will reduce runoff into gutters and storm drains.

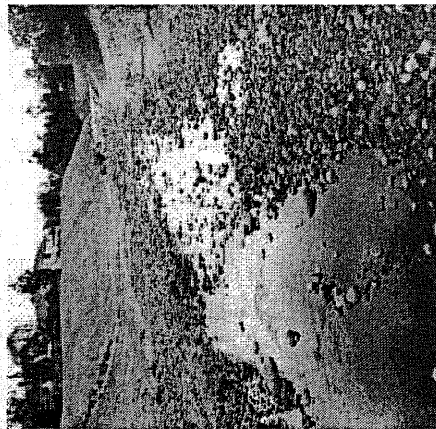
The new Stormwater Permits require the City of Lake Forest to:

- Take stronger water quality and watershed protection actions
- Prohibit the washing or hosing of driveways and sidewalks
- Impose pollution prevention and treatment requirements on new development projects
- Require existing businesses to prevent pollution
- Inspect construction sites, businesses and residential areas to ensure compliance with permit requirements
- Require homeowners associations to employ pollution prevention practices in the maintenance of private streets, street gutters, storm drains, parks and open space areas
- Expand public education programs about urban runoff and water quality
- Monitor storm drain discharges, and identify, measure and eliminate sources of water pollution

All residents and businesses will have to help prevent runoff pollution by carefully dealing with pollutants on their property, cleaning street gutters and not over-watering lawns. Failure to do so may subject the City, businesses, homeowners associations and residents to enforcement actions by the regional boards, including heavy fines.

The City is doing its part by sweeping streets on a weekly basis to reduce the amount of pollutants that could flow into the storm drains. To make sure the sweeping is efficient and effective, it is important that all residents move their cars off the street on their sweeping day, which occurs the day after trash collection. The better the City is able to sweep the street, the less time residents will need to spend cleaning their gutters and curbside.

We need your help to protect our creeks and ocean from pollution.



Lake Forest runoff — Serrano Creek is shown here with pools of city weather runoff from upstream and adjacent properties. Serrano Creek empties into San Diego Creek, then into the Back Bay in Newport Beach and eventually the ocean.

Residents urged to reduce over-watering to prevent runoff

Over-watering lawns is the main cause of urban runoff. Ideally, if it's not raining, there should not be any water in the gutter or storm drain to transport pollutants to local creeks and the ocean. However, City studies have found that excessive yard watering can send up to **100 gallons of urban runoff per household per day** into the storm drain system. That's a tremendous waste of precious water and money, plus it can pollute our waterways with pesticides and fertilizer!

Improperly setting or adjusting your home watering system is one of the major causes of lawn over-watering. Did you know that most home irrigation system controllers are pre-set to run for 10 minutes per station? Professional gardeners recommend that lawns be watered once or twice per day for as few as one to two minutes. This is particularly true for Lake Forest with our heavier, clay soil conditions. Please check your sprinkler system and watering practice.

ices. If the water flows from the lawn to your driveway or onto the sidewalk or street, the controller should be reset to reduce watering time. Here's a simple approach:

- ◆ **Time how long it takes before your lawn starts "shedding" water into the gutter.**
- ◆ **Set your timer to the last minute before the water started to run off the lawn.**
- ◆ **Check your controller on a regular basis. If water flows from your yard, the system is over-watering and your timer setting should be adjusted.**
- ◆ **Adjust sprinkler heads to water only landscape, not sidewalks or gutters.**

Remember: Our street gutters and storm drains are for rainwater, not lawn runoff!

Weekend project tips to stop pollution:

1. **Check your sprinklers to conserve water and prevent over-watering or runoff.**
2. **Do not over-apply fertilizer and pesticides.**
3. **Clean your street gutter with a broom.**
4. **Make sure construction materials do not enter the street gutter.**

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- **City Newsletters** — Receive a link to an electronic copy Lake Forest's three newsletters (The Leaflet, A View From the Arbor, and Focus on the Future) as soon as they are published.

- **City Council Meetings** — A recap of the decisions made by the Lake Forest City Council at its bimonthly meetings, along with a link to the official minutes and City Council Agendas.

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No Dumping, Drains to Ocean — Rainwater and urban runoff flow untreated from Lake Forest properties into local creeks before entering the Pacific Ocean in Newport Beach or Laguna Beach.

The problem with urban runoff

Urban runoff is a major source of pollution in our nation's rivers, lakes and oceans. Scientists have identified more than 160 chemicals as part of the urban pollution "toxic soup" that enters the storm drain systems. These pollutants and chemicals end up in creeks, beaches and the ocean, carrying potentially harmful viruses and bacteria along with litter, soap, cigarette butts, heavy metal particles, phosphorus, pesticides and other solids.

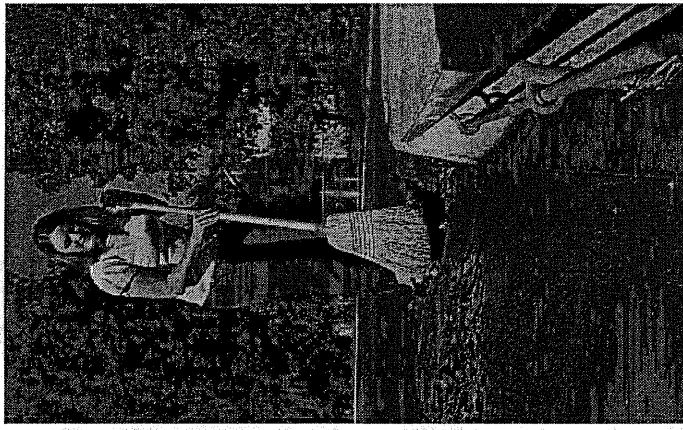
Bacteria may come from many sources such as oil, fertilizer, trash, leaves, yard clippings, pesticides and pet waste. Natural sources such as birds, rabbits, and other species also contribute to the pollution that eventually ends up in the Pacific Ocean. Also Creek has been declared an "impaired water body" by federal regulators due to high

bacteria levels. In addition, Serrano Creek is a tributary to the San Diego Creek and Newport Bay, which has high toxicity levels and a federal limit on the amount of sediments, toxics, nutrients, fertilizer and other materials entering the creek and bay. Bacteria levels are regularly monitored in these creeks and sometimes exceed federal and state water quality standards. When this happens, warning signs are posted at local beaches. Lake Forest neighborhoods generate a portion of the urban runoff that carries bacteria and other pollutants to the ocean.

The goal of all Lake Forest residents and businesses must be to stop urban runoff pollution dead in its tracks. Eliminating over-watering, hosing off of sidewalks or gutters and sweeping up gutter debris are critical but easy steps in stopping urban runoff.

Seven easy steps to stop stormwater pollution

1. **Shorten the cycles of sprinklers to avoid over-watering, which causes runoff into the street. Install a new controller, or if power goes out, reprogram sprinklers to minimize over-watering. Adjust or replace faulty sprinkler heads.**
2. **Don't wash down your sidewalk, driveway or paved surfaces. Clean these surfaces with a broom or shop vacuum instead. Keep your street gutter clean and free from muck, leaves, litter or dirt.**
3. **Pick up pet waste immediately and dispose of it in a toilet or trashcan.**
4. **Carefully follow directions on pesticides, herbicides and fertilizer. Do not over-use, and avoid washing chemical materials into the gutter. Avoid using when rain is predicted.**
5. **Maintain your cars to avoid leaks. Put a mat under cars to catch drippings. Use cat litter to absorb spills and dispose in the trash. Don't pour oil or automobile fluids into your yard or the gutter.**
6. **Clean paintbrushes, rollers and pans in your sink, tub or toilet. Do not dump paint down the storm drain or gutter.**
7. **Move your car off the street on street sweeping days.**



Sweeping your street gutters prevents pollution — This Lake Forest homeowner sweeps her street gutter to prevent yard clippings and leaves from entering the storm drain and contributing to urban runoff pollution.