



stormwater Connections *from raindrop to river*



happyivers.org

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The largest covered, lit skatepark in the country is open in Eugene and features wheeled recreational activities for all ages and skill levels

WJ Skatepark + Urban Plaza Abuzz with Excitement

On April 4, 2014, more than 1,000 thrilled riders experienced the inaugural skate at the brand new WJ Skatepark + Urban Plaza. The skatepark joined restored basketball courts and horse shoe pits under the cover of the I-105 bridge in Washington Jefferson Park, establishing a unique trio of active recreation options available year-round, rain or shine.

WJ Skatepark + Urban Plaza is no ordinary skatepark and this was no ordinary journey. It is the collective vision of thousands of local youth for more than a decade. A 2004 petition to the City Council was signed by 1,700 supporters advocating for a covered skatepark centrally located in Eugene. With that, a chain reaction was set into motion. After a decade of persistence, the resulting world-class sports facility is a destination skatepark and

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*Join us for the
WJ Skatepark & Urban Plaza
grand opening event on June 21
from 1-8 p.m.*



Amazon Creek : From Farmland to Flood Control

Amazon Creek has undergone dramatic transformations over the past 150 years. After emerging from its headwaters on the north side of Spencer Butte, Amazon Creek today flows through a diverse mix of land uses including forested headwaters, highly urbanized lands, parks, natural areas, and farmland on its 22-mile journey toward the Long Tom River. Although flood control was the primary driver for how Amazon Creek was managed for many decades, a major shift toward broader management for natural resource, water quality, and aesthetic values has occurred since the early 1990s, helping transform Amazon Creek into a valuable community asset.

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hangout spot for urban sports enthusiasts from all walks of life. It was designed and built by Dreamland Skateparks, with both beginner and expert wheels in mind. The half-acre skatepark features an iconic ribbon, a mini-snake run, and a blend of varied skate terrain.

With community insight and support, this project didn't stop with the public skatepark.

Before renovation, the 40-year-old Washington Jefferson Park was run down and plagued by social problems and illegal activities. It was also largely ignored by the rest of Eugene's residents. However, its central location and existing cover from the bridge beckoned as a home for the new skatepark and provided an opportunity to breathe new life into the area. Today, Washington Jefferson Park has gone from blight to a vibrant connector for the Whiteaker, 5th Street and Downtown neighborhoods—creating a strong urban core. The park's additional improvements include accessible pathways, new restrooms, bike racks, benches, drinking fountains, energy-efficient lighting, landscaping, free Wi-Fi, public art, and areas to accommodate food carts and special events.

The total renovation was a roughly \$2.5 million investment of public and private funds. The City of Eugene provided \$2.2 million in park system development charges (fees paid by developers when they construct a building or home) and received a \$175,000 grant from the Oregon State Park and Recreation Department. Skaters for Eugene Skateparks, Downtown Eugene Rotary and Eugene Parks Foundation raised over \$150,000 through private sponsorships, local art shows, concerts and more. Private investment continued beyond construction. This spring, more than 50 local businesses donated a percentage of sales to fund youth skate lessons, camps and equipment. Bringing these positive activities to the park will help ensure a welcoming and safe environment for everyone.

Next up is the Grand Opening Celebration on National Go Skate Day, June 21. It will be an opportunity for our community to gather and experience what is possible when we work together to create solutions. Bring the entire family and enjoy a full-day celebration from 1–8 p.m. with live bands, entertainment, skate competitions, basketball, kids games, food carts, community and retail booths, and more. Hop on LTD with a skate deck or bike for a free bus ride to the event. Come meet the new and improved Washington Jefferson Park.

More information: www.eugene-or.gov/wjskatepark
Instagram at [wj_skatepark](https://www.instagram.com/wj_skatepark)



Basketball courts and tournament-quality horse shoe pits (left) provide additional sport options at the WJ Skatepark + Urban Plaza.

Runoff from Skatepark Gets Special Treatment

This project presented unique challenges to treating storm water on site. We needed to find a way to use plants to help filter stormwater and allow for drainage with skate bowls that have a low elevation. By upgrading the drainage system that ties into the existing bridge drain pipes, runoff is treated at a manhole two blocks north on Jefferson Street. There a mechanical device filters out all the particulate and pollution before the water enters the Willamette River.

The bridge itself is the real star of the stormwater show. Using the cover provided by the bridge allowed construction of nearly half an acre of new skate terrain without creating additional stormwater runoff. Beyond the cover of the bridge, a rain garden is used to treat runoff from the roof of the new restroom. Stormwater is filtered in this area and then flows to the same storm drain pipes as the bridge deck and surrounding skatepark areas.



In the end, careful planning and the use of existing structures made an otherwise challenging stormwater treatment strategy successful at this site. 💧

A simple rain garden treats runoff from the roof of the new restroom. Stormwater is filtered in this area and then flows to the same storm drain pipes as the bridge deck and surrounding skatepark areas.

BEE AWARE



Bee awareness display at Sundance Natural Foods

Did you know that bees are responsible for pollinating roughly one third of our fruits and vegetables? Last summer, many businesses hosted an event where they covered over produce to illustrate how many of our favorite foods would be lost without bees as pollinators.

In February, the Eugene City Council was the first in the nation to pass a resolution banning the use of neocotoids on City property. The easiest way to help bees is by not using products containing neonicotinoids in your gayrd or garden. Learn more at www.beyondtoxics.org

If you'd like to help local bees, check out www.glorybee.com/SaveTheBee. Glory Bee's "Save the Bee" program supports bee research and education, and the site includes many good resources. 💧

Photo by Wayne Lottinville



Rain gardens can be a landscape asset in many ways (above) and may include trees, shrubs and flowers. The New England aster (below) is a colorful addition that tolerates the occasionally soggy conditions.



Rain Garden Workshops

The City of Eugene and the Upper Willamette Soil & Water Conservation District are teaming up to provide rain garden workshops for area residents. We are looking for homeowners who are interested in participating.

Why a rain garden? Rain gardens let stormwater soak in and decrease pollution reaching creeks and streams by up to 30 percent. A rain garden is a “sunken garden bed” in your yard where you can direct runoff from your roof, driveway, and other impervious surfaces on your property. The rain can then soak into the ground naturally rather than flowing untreated into storm drains where it can affect drinking water, aquatic habitats and wildlife.

To get more information or let us know that you are interested, call Sandi at 541-465-6443 x 102 or Kathy at 541-682-2739. We can also provide a short overview for your neighborhood or group meeting.

More information: www.uwswcd.org
www.happyrivers.org ♦

Clean and Safe Sidewalks

A clean sidewalk is not only attractive, it’s safe for pedestrians, people in wheelchairs, joggers, and others who use sidewalks to travel around town. Following the law (Eugene Code 7.375) by keeping sidewalks clean and free of tripping hazards also reduces liabilities for property owners, who can be held liable if someone is injured on the sidewalk in front of their property.

Most sidewalks are near the street, which means that debris and wash water from sidewalk cleaning can enter the gutter, flow down the street and into a catch basin and wind up in a nearby river or creek. Here are some sidewalk-cleaning tips that don’t pollute local waterways:

Scrape off thick accumulations of moss or other vegetation with a flat-bladed shovel or a stiff broom. The scrapings can be placed in a yard debris container for pick up by your garbage hauler.

Pressure washing is an effective way to remove dirt and grime from sidewalks, but care should be taken to prevent wash-off from getting into the stormwater system (go to happyrivers.org for pressure washing tips).

A low-intensity blow torch may help remove some stubborn vegetation. Be sure to keep the flame away from flammable materials.

Avoid the use of caustic soaps and solutions. Choose soaps, cleaners or detergents labeled phosphate-free and biodegradable. Vegetable- or citrus-based soaps are the safest products.

Always direct wash-off onto a lawn or vegetated area. If debris or other pollutants flow into the street, use absorbent cloths to blot them up, and put mats or covers on nearby downstream catch basins or curb inlets (remember to take them off when the pollutants have been cleaned up).



City facilities staff keep urban and park sidewalks clean, but residential sidewalks are the responsibility of the adjacent property owner.

Safe Sidewalks No Accident

Here are more tips for making sure your sidewalks are well-maintained and safe:

- ♦ Don’t park cars or other heavy equipment on your sidewalk.

- ♦ Sweep sidewalks to keep them free of leaves, snow, ice or debris. Don’t sweep materials into the gutter or street.

- ♦ Trim tree branches, shrubs, and other vegetation so they don’t obstruct the sidewalk.

- ♦ Watch for early signs of leaking water lines, tree roots, and other indicators of potential damage.

- ♦ If you have a tripping hazard, usually caused by a sidewalk panel that has cracked or been heaved up by roots, contact the Public Works Maintenance Division at 541-682-4800 to discuss options for repair.

- ♦ If you observe hazardous sidewalks, report them by calling 541-682-4800 or submit an online [Sidewalk Inspection Request](#).

More information can be viewed at: www.eugene-or.gov/index.aspx?NID=621

Is Your Home in a Special Flood Hazard Area (SFHA)?

The Special Flood Hazard Area (SFHA) is the area mapped by the Federal Emergency Management Agency (FEMA) that is sometimes referred to as the 100-year floodplain. A 100-year flood is more accurately described as a flood event that has a one percent chance of occurring in any given year.

Given the infrequency of major flooding events, people may underestimate the significant risk that floods pose. According to FEMA, people living within the Special Flood Hazard Area (SFHA) are 2.5 times more likely to experience a flood than a fire. Maps of Special Flood Hazard Areas in our community are available on the City's website.

Does flooding occur only within the SFHA?

Rainfall pattern changes, sudden snow melts at higher elevations, and higher density development can all affect the chance of a flood occurring. A clogged storm drainage pipe, catch basin, or culvert can result in localized flooding nearly anywhere.

What about flood insurance?

The typical homeowner's insurance doesn't cover damage from floods. Eugene has adopted standards that meet or exceed FEMA's minimum standards and our residents can obtain federally underwritten flood insurance. Coverage of up to \$250,000 is available for single family residences, and \$100,000 for contents.

Flood insurance can be obtained by owners and renters for property and contents located inside or outside the SFHA.

Flood insurance may be required by your lender if your home is within the SFHA.

An additional incentive due to Eugene's participation in an elective FEMA program called the Community Rating System, flood insurance premiums for Eugene residents are reduced by 15 percent for properties within the SFHA and 5% for properties outside the SFHA.

The United States Congress passed the Biggert-Waters Reform Act of 2012 and the Homeowner Flood Insurance Affordability Act of 2014, to address the financial stability of the National Flood Insurance Program (NFIP) and the affordability of flood insurance. More information about these changes can be obtained through FEMA at www.fema.gov/flood-insurance-reform or 1-800-621-3362.

What can be done to minimize risks from flooding?

You cannot rely on disaster assistance. Federal disaster assistance (when available) is almost always in the form of temporary living assistance and is not used to rebuild private residences.

Build responsibly. Choosing the location, construction type, appropriate elevation, and type of building materials (including utilities) is all important when building in or near the Special Flood Hazard Area. Building according to current code helps reduce the potential for significant damage but does not eliminate the requirement for obtaining flood insurance or lessen the chance that a larger flood could occur.

Protect our natural resources and understand that floods are a natural occurrence. Preserved floodplains allow water to spread out across a wide area, reduce erosion of stream banks and channels, and reduce water velocity. It also allows for sediments to be deposited higher in the watershed and allows more time for groundwater recharge. Floodplains can be scenic, valued wildlife habitat and fertile farm land. Poorly planned development in floodplains can lead to stream bank erosion, loss of valuable property, increased risk of flooding to downstream properties and degradation of water quality.

Don't dump debris, grass clippings or any other pollutant in the storm drains or streams. Storm drains connect directly to our open storm systems such as the Amazon Creek and the Willamette River. Trash and vegetation dumped into a stream degrades the water quality of the stream and its receiving waters. To report dumping, call (541) 682-4800.

Remove debris, trash, loose branches and vegetation in stormwater channels and streams. Keep banks clear of brush and debris to help maintain an unobstructed flow of water in these waterways, but don't remove vegetation that is actively growing on a stream bank. Streamside vegetation is tightly regulated by local, state and federal regulations.



Flood Safety Tips

Do not drive through water. Drowning within submerged vehicles is the most common cause of death during a flood. Sinkholes, washed out roadways, and hidden debris can lurk below the surface even in areas otherwise known by the driver. Use travel routes recommended by local authorities and do not travel on roads that are posted as closed.

Do not walk through flowing water. Currents can be deceptive. Six inches of moving water can knock you off your feet. Drowning is the number one cause of flood-related deaths.

Stay away from power lines and electrical wires. The second leading cause of flood-related deaths is electrocution. Electrical currents travel through water. For your safety, do not attempt to move a downed wire. Report any downed power lines to the power company.

Have your electricity and gas turned off by the power or gas company before reentering a flooded structure. Some appliances, such as television sets, keep electrical charges even after they are unplugged. Remember to unplug wet appliances or motors and do not use them unless they have been taken apart, cleaned, and dried.

Be alert for gas leaks. Pipes and housing foundations can be disturbed during a flood. Use a flashlight to inspect for damage. Don't smoke or use candles, lanterns, or open flames unless you know the gas has been turned off and the area is ventilated.

Look before you step. After a flood, the ground floor may be covered with dangerous debris. Remember that floors and stairs covered with mud can be slippery.

Look out for animals. Small animals are often displaced from their homes during a flood and may seek shelter in yours. Use a pole or stick to poke and turn things over and scare away small animals.

Learn more at www.eugene-or.gov/flood



Would you like more flood information?

Do you want to know if your property is located within a Special Flood Hazard Area? Ask us! Public Works staff at the City of Eugene's Permit and Information Center provides flood map determination services to owners, lenders and insurance agents. We can help determine whether a property is within the floodplain or floodway, the Flood Insurance Rate Map zone for the property, and whether a Base Flood Elevation has been determined. Elevation Certificates that have been obtained through a building permit process may also be available.

The Permit and Information Center is located in the Atrium Building at 99 West 10th Avenue. Staff are available at the counter Monday through Friday, 9 a.m. to 5 p.m. We can also be reached by phone at (541) 682-8400 or by email at cwepic@ci.eugene.or.us.

Stormwater and Wastewater: Different Systems, Same Goal

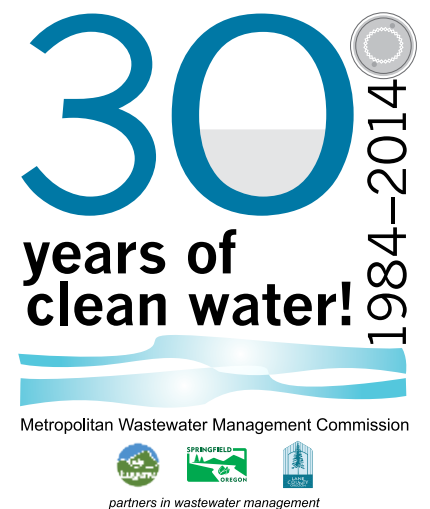
Do you know that in a recent survey, only 67 percent of the respondents were aware that Eugene's stormwater drainage system is separate from the sewage system? About 13 percent thought they were not separate, and 20 percent weren't sure. The correct answer is that the stormwater system is separate, and the water in the stormwater system empties directly into local waterways.

So where does sewage go? It's collected in a series of progressively larger underground pipes and transported to the regional wastewater treatment plant on River Avenue. There, what started as waste is processed until the resulting clean water can be safely discharged into the Willamette River.

The regional treatment system is a partnership of Eugene, Springfield and Lane County through a governing group called the Metropolitan Wastewater Management Commission (MWWC). The MWWC's goals are to protect the health and safety of the 250,000 people who live in the metro area and allow our area to thrive economically while protecting the local environment.

Wastewater service wasn't always provided with such modern, reliable and efficient facilities. In fact, the regional treatment plant, which represented an investment of more than \$100 million when it opened in 1984, is celebrating its 30th anniversary this year.

So, it's OK to think of wastewater when you think of stormwater. They go through different systems, but the desired outcome is the same: clean water.



wetlands & waterways



Volunteer Opportunities

Enjoy being outdoors and helping our environment? Here are three programs that are doing good work—rain or shine!

Amazon Creek Initiative: The Long Tom Watershed Council is leading the way to develop practical solutions to revitalize Amazon Creek. For more information, go to www.longtom.org or call Dana at 541-338-7055.

Friends of Trees in Eugene: Volunteers have planted over 3,000 trees since 1999 including many plantings along Amazon Creek. <http://www.friendsoftrees.org>

Eugene Park Stewards: Learn more about ongoing stewardship and volunteer-based leadership for parks and open spaces. www.eugene-or.gov/EPS or call Sandi @ 541-682-4844.



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History of Amazon Creek

Historically, Amazon Creek flowed freely onto the flat valley bottom and into a network of shallow braided channels, which frequently overflowed onto the adjacent lands.

Flood Control was a High Priority for a Growing Community

As the town of Eugene began to expand in the late 1800s, the flooding that frequented the lands surrounding Amazon Creek became problematic. The areas near present-day South Eugene High School (above), Civic Stadium, Lane Events Center, and much of west Eugene were frequently inundated following winter storms. Flood control became a high priority and the first recorded flood channelization project occurred in 1902. In the late 1940s, these flood control efforts were formalized and accelerated as the City requested federal assistance from the Soil Conservation Service and Army Corps of Engineers. During the 1950s, much of Amazon Creek was straightened, deepened, and even put into a concrete channel in an effort to improve movement of flood water. Although these modifications were highly successful at converting Amazon Creek into an effective flood control facility, much of the natural and aesthetic values of the creek were lost. Lack of shading vegetation and urban runoff caused significant water quality issues and the deepened channel banks were unstable, often eroding and slumping into the creek.

Rethinking Amazon Creek

Changing community values and the enactment of the 1987 Federal Clean Water Act, which mandated communities like Eugene to reduce the discharge of stormwater pollutants into receiving waters, have prompted significant action on how Amazon Creek is managed. In 1993, the City of Eugene adopted its Comprehensive Stormwater Management Plan that set ambitious policies aimed at improving water quality, habitat, and natural resource function of area waterways. Since that time, the City has partnered with various federal, state, and non-profit organizations to make major improvements to Amazon Creek, supported by hundreds of community volunteers. At the same time, numerous regulations have been enacted to improve water quality. Many restoration projects including Frank Kinney Park, Oak Patch Road and Meadowlark Prairie have been completed.

The City's stormwater program also includes measures that help protect and improve the quality of the water in Amazon Creek. Those measures include stormwater education and outreach, water quality retrofit projects, streamside setbacks, stormwater management regulations for new development that emphasize low impact development practices, erosion prevention for construction activities, industrial stormwater management, investigation and enforcement of illicit discharges, and water quality monitoring. Data shows improving water quality trends in Amazon Creek, except for zinc, which is a challenging issue that we are working hard to address.

Finally, The City of Eugene, Long Tom Watershed Council, Friends of Trees, and other organizations have directed hundreds of volunteers to clear invasive blackberry bushes, clean up trash, plant streamside vegetation and more.



Aerial photos this page courtesy of RaptorView



2014 marks the 20th anniversary of the West Eugene Wetland regional partnership dedicated to improving, protecting and enhancing the quality of life and land in our region!

Opportunities for Improvement

The past two decades have made a tremendous difference for this waterway. However, there are still great opportunities to continue this momentum. The City has identified seven other potential Amazon Creek restoration projects that would provide improved flood control, improve water quality, reduce bank erosion, and enhance habitat potential through riparian and native plantings.

Keeping the Big Picture in Mind

Residents living in the Amazon watershed can make an important contribution to creek health by being aware of activities on their properties that may contribute to polluted runoff. Debris or chemicals from pressure washing, lawn chemicals, moss removal products, pet waste, and soap suds from vehicle washing are just a few potential sources of concern. Learn more at www.happyrivers.org

Guest contributor: Jeff Krueger is a landscape architect who resides in the Amazon Creek watershed. He is currently working as a private consultant specializing in park and natural resource related projects.



Stormwater Connections is published by the City of Eugene Public Works Department to enhance awareness of stormwater and related surface water management issues.

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happyrivers.org



Hi folks! I'm Lily, the Pacific chorus frog, and I help the City of Eugene teach people about stormwater in our community.

Did you know that bird-watching is the second most popular hobby in the United States? Some people keep notes on all the different birds they have seen, while others can tell what birds are around by listening to their chirps and songs.

Teachers! If you would like free materials to teach about water quality and pollution topics in your class, visit happyrivers.org or call 541-682-8482.

Traveling Birds Count on Us!

As you may know, most of the stormwater that runs from our streets, rooftops and parking lots goes directly into our rivers or to Amazon Creek. But did you know that the Amazon Creek flows into the West Eugene Wetlands, an important bird habitat along the Pacific Flyway?

While our region is home to hundreds of bird species that stay all year long, we also have many visiting migratory birds that stop on their way to and from their summer and winter homes. Some stop simply to rest and feed, while others stay to nest and raise their young.

What makes the wetlands such an important place for birds?

Wetlands are some of the richest ecosystems on earth, with a great variety of plants for shelter, tons of yummy insects, and fresh water to swim in and drink. Birds often travel long distances over areas that don't have these comfortable rest stops—places where the climate is not as nice or where people have built cities and homes in place of natural areas.

Just as it is for us, finding a really nice rest stop when traveling can make the difference between a good trip or getting sick or hungry along the way.

How can we help traveling birds?

Water from storm drains and rainfall keep the wetlands wet. Plants, insects, reptiles and birds all need clean water to live. Keeping pollution out of storm drains requires some planning, but is really pretty simple. We all just need to remember to never put anything nasty in a place where it can run into the street and to the river. This includes soap, chemicals, bug spray, and automotive liquids.



On the Pacific Flyway

(which is like a highway for birds!)

Many birds fly the same route every year, along paths that scientists call flyways. Some birds in our area follow the ocean coastline, while others like fresh water rivers and wetlands. Knowing where to find water and food is important on a trip that may take weeks to finish.

Look for these birds that visit our area in the spring and fall, and wish them well on their journeys!



killdeer



swallow



osprey

Vocabulary words:

stormwater
wetland
habitat
migratory
ecosystem

The best places in Eugene to see migratory birds are Delta Ponds, Alton Baker Park, and the West Eugene Wetlands.

Learn more about birds at www.audubon.org