Frequently Asked Questions

Q: Why build the Country Homes Boulevard Restoration Project (CHBRP)?

A: First, Spokane County's NPDES Phase II permit, a permit required by the EPA and administered by the Washington State Department of Ecology, states that the County must provide water quality retrofit facilities in an effort to treat polluted stormwater before it reaches a surface water body or drinking water source. Second, the Country Homes Boulevard channel is the main conduit for transporting stormwater runoff within the Five Mile Watershed to the Price and Wall Regional Stormwater facility. While Price and Wall is a water quality treatment facility, it does not have the capacity to treat all of the potential stormwater pollutants that reach the facility via the channel. Third, almost all of the pollution-generating impervious surfaces (i.e., roads, sidewalks, roofs and driveways) that stormwater runoff flows across (starting from the Prairie on down to the channel) are currently lacking any stormwater pre-treatment. Fourth, there is a great deal of stormwater runoff that seeps through the channel's cracks and fissures, in lieu of reaching the Price and Wall facility where it can be treated. Fifth, by restoring the Country Homes Boulevard channel, we approach meeting the treatment requirements of today's water quality standards.

Q: Why can't the Stormwater Utility just seal the cracks in the channel? Isn't that enough to keep the weeds from growing?

A: No. Sealing the cracks is not a solution. It will not stop the weeds from growing, nor does the existing asphalt channel provide any water quality treatment. Sediment will always be transported from Austin Draw into the channel in its existing state. Seeds will embed and grow in the sediment no matter how often the County removes the material. In addition, the asphalt channel is a pollutant generating surface and provides no treatment.

Project Details

Who's financing the project? What are the expected construction costs?

Spokane County applied for and received two Washington State Department of Ecology Stormwater Retrofit grants totaling $1.75 million. These grants are a 75/25 match, meaning that one quarter (25%) of the project's total cost must be covered by Spokane County, with the other three quarters (75%) provided by Ecology. The Spokane County Stormwater Utility will fund its portion of project design and construction costs with fees collected from residents within the North Spokane Stormwater Service Area. The expected construction costs are $2.5 million.

What are the project limits?

The Country Homes Boulevard Restoration Project will begin at the Excell Avenue intersection, and extend just north of Carolina Way to, and include a portion of, the Vern Ziegler ditch. If bid alternative items are approved, the area will extend the project limits to Wedgewood and to Wall. The CHBRP will not involve replacing or increasing the number and width of traffic lanes. The County Traffic Engineer may elect to slightly narrow existing traffic lane widths in order to re-stripe existing parking and add new bicycle lanes along the Boulevard.

What is the projected timeline for construction?

Stormwater Utility plans to put the project out to bid in early 2014. Construction should begin June 2014, and end no later than November 2014.

Will Country Homes Boulevard be closed to through traffic during construction? If so, how will it affect homeowners?

The exact details of the traffic plan will be finalized prior to construction next year. Affected homeowners will be notified of the plan. Access to homes will be provided after construction is completed for the day, but there will be no on-street parking; access to and from homes during the day will be provided but delays should be expected.

What is the County's plan for the bridge crossings?

The bridges will be demolished and replaced with new crossings in the exact same locations.

What about the project construction creating noise pollution?

Yes, there will noise during demolition of the asphalt channel and subsequent grading. However, this noise will be limited to the duration of project construction. Additionally, studies show that, on roads with speeds less than 40 mph, a 20- to 50-foot-wide vegetated centerline buffer can actually help to reduce road noise. So, post-construction, Country Homes Boulevard residents should observe a slight reduction in traffic noise levels.

People drive way too fast on Country Homes Boulevard. Will this project make it worse?

Studies show that vegetated medians have a calming effect on traffic, encouraging slower speeds as the landscaping helps to visually narrow the driving lane. In other words, the plantings and trees interrupt motorists' views further down the street, rather than being able to see an endless length of pavement a long distance ahead.

Research also indicates that the inclusion of trees and other streetscape features along boulevards may actually reduce crashes and injuries on urban roadways. In fact, accident rates on urban, tree-lined streets were reduced by 61% when compared to similar streets without landscaping and trees.

How will it work?

How does the new bio-infiltration/bio-retention swale and subsurface pipe work?

The new system is a combination landscaped bio-infiltration swale for treatment of stormwater runoff and a subsurface pipe to carry flow from Five Mile Prairie, flood flows, and groundwater. Runoff from Country Homes Boulevard, and the neighboring side-streets, driveways, and sidewalks will either sheet flow into the new swale area and slowly infiltrate through the bio-engineered treatment soil or, in places where side-street runoff is currently hard-piped into the existing asphalt channel, will now be hard-piped to the swale onto an energy dissipator and allowed to infiltrate into the soil. Stormwater that is carried in the subsurface pipe will still outfall at the same termination point that it does in its pre-construction condition: the Price and Wall Regional Stormwater Facility.

Will the swale be able to handle heavy rainfall, like the flash floodings these past few springs, in the same capacity that the existing asphalt channel does?

During large storm events, when the soil is saturated and the stormwater cannot infiltrate fast enough to keep up with the rate of precipitation, water will pond up and spill over into structures in the swale that are directly connected to the subsurface pipe. The subsurface pipe is sized to carry the 100-year storm but, in most sections of the pipe, can also carry the 500-year storm.

Will standing water in the bio-infiltration swale attract mosquitoes?

No. Mosquitoes need stagnant water to breed. The engineered topsoil is designed to infiltrate slowly for pollutant removal; stormwater runoff should not pond in the swales for longer than 72 hours.

How will the bio-infiltration swale handle snow?

Vehicle-rated pullouts will be sited alongside each overflow structure for facility cleaning, access for mowing and weeding, and for the placement of snow in winter months. There will also be a 2-foot gravel shoulder before the planting area in the channel begins, also for snowpack storage. Additionally, plant selection will involve materials that are salt, sand, and ice tolerant.

What are your plans for the irrigation system?

Due to the height and density of the plant material, and the desire to be good stewards of our water resources, a subsurface drip system is proposed for a high level of watering efficiency. Weather sensors will automatically make adjustments based upon on-site conditions. Other sensors can detect leaks, send alerts, and shut down the parts of the system that are leaking, all while continuing to irrigate elsewhere.

Who will be responsible for maintaining the project landscaping?

The residents within the North Spokane Stormwater Service Area are levied stormwater fees on their bi-yearly property tax bill. The Stormwater Utility will use current and future fees to maintain the CHBRP landscaping. No additional fees are proposed.

Weeds are currently a huge nuisance. How will this fix the problem?

Stormwater Utility will contract landscape professionals to provide maintenance for the completed project. The first few years, extra weed abatement will be required until the closely-spaced plants grow in and around each other. At that point, the plantings will naturally block out the weeds. The facility will also have bark mulch to help prevent weed growth.

As the native grasses and trees grow, won't that impair visibility at the intersections?

Traffic studies do show that having a barricade of some kind, particularly grasses, shrubs, and trees, may decrease visibility across the median. However, the Stormwater Utility, in cooperation with the project landscape architect, will select appropriate plant material and account for overhang in order to facilitate safe vehicular sight distances at all Country Homes Boulevard intersections / crossings.

Will there be permanent signage placed at or near the project site?

Yes. There will be an entry monuments at either end of the project.

How will you bring public awareness of the project to City and County residents who don't get the newsletter or live in the Country Homes area?

The Stormwater Utility is proposing to hang banners along the existing light standards at each end of the project. These banners will meet the criteria for outreach and education, as required by the Washington State Department of Ecology.

Country Homes Boulevard is a dangerous place for animals and could be a vehicular hazard if animals are drawn to the project area. Will the project entice wildlife to nest or live in the swale?

Deer, small animals, birds, coyote, moose, etc., are already frequently spotted in the area, including at the Price and Wall Regional Stormwater Facility and in the surrounding neighborhoods, due to the proximity to the vegetated hillside of the Five Mile bluff. The bluff provides important habitat for area wildlife. It is highly unlikely that more animals will come to the project area, let alone live or nest in it permanently, as it is simply not conducive to nesting species.

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DEPARTMENT OF ECOLOGY State of Washington

AHBL

SPOKANE COUNTY

Country Homes Boulevard

F A Q

Questions & Answers

Q: Why were new hydrology and hydraulic studies required to design the proposed system?

A: Published FEMA flow-rates and elevations were from analyses performed over 30 years ago (1983). FEMA was unable to produce the original analyses for review. County staff had to start from the very beginning, establishing the project area drainage basin, determining land use and soils, and locating existing stormwater facilities through research, observation, and fieldwork.

Q: What factors do engineers consider when performing stormwater modeling?

A: The predictive information generated by the models provide a basis for how to size stormwater pipes, channels and ponds. Modeling factors include:

topography: the lay of the land
soil type: poorly- or well-drained
geology: near groundwater, bedrock formation
land use type: commercial, agricultural
pipe material: corrugated metal, polyethylene plastic
structure characteristics: concrete, plastic, metal, round, square, elevated

What about the permit process?

The Country Homes Boulevard Restoration Project is located within a FEMA designated floodplain; is designated as a stream per Washington State Fish and Wildlife; and is located over a moderately susceptible zone of the aquifer. These multiple designations require additional permitting associated with its design. The permitting process is outlined below.

The **National Pollution Discharge Elimination System** (NPDES) Permit was written and enacted in order to address polluted, nonpoint stormwater runoff. The Permit dictates that Spokane County programs and practices must be created for all new development, ensuring that stormwater runoff is being captured and treated in order to protect groundwater and surface waterbodies from further degradation.

Conditional Letter of Map Revisions (CLOMR). This conditional permit/certificate, issued by FEMA, is required due to the project being located within a designated floodplain. New hydrology for the area and hydraulic calculations for design of the system, along with resultant changes to the Flood Insurance Rate Maps (FIRM) and floodplain elevations were submitted to FEMA in May 2012. The CLOMR was approved in April 2013. Once the project is fully constructed, the process will be repeated, and a final **Letter of Map Revision** (LOMR) will be issued.

Joint Aquatic Permit Application (JARPA). Multiple regulatory agencies (U.S. Army Corp of Engineers, Washington State Department of Ecology, Washington State Fish and Wildlife, etc.) joined together to develop this permit application in order to streamline the environmental permitting process. A JARPA is planned to be submitted by mid-September 2013.

Prior to submittal, the JARPA required the distribution of a **State Environmental Policy Act** (SEPA) checklist to affected property owners around the project area, and contact with both Native Tribes and the Washington State Department of Archaeology and Historic Preservation. Another critical element of the JARPA is the **Habitat Management Plan** (HMP). The HMP is referred to throughout the JARPA in order to demonstrate that all aspects of potential impact to the environment have been investigated and analyzed, and will be accounted for prior to and during project construction.

History of the Clean Water Act

The Clean Water Act (CWA) is the primary federal law in the United States regulating water pollution. The original goal of the Clean Water Act was to eliminate point-source discharge of untreated wastewater from municipal and industrial sources to make American waterways safe for swimming and fishing. Since the passage of the Clean Water Act in 1972, the quality of our Nation's water has improved dramatically.

However, by the late 1990s, the EPA had changed its focus under the CWA to emphasize eliminating nonpoint-source pollution. Nonpoint-source pollution comes from diffused sources. This type of pollution is caused by rainfall or snowmelt flowing over and through the ground. As the runoff moves over impervious surfaces (i.e. streets, parking lots, driveways, etc.), it picks up and carries away the natural and human-made pollutants, finally depositing them into lakes, rivers wetlands, coastal waters and groundwater. These human-made pollutants include oils, metals, pesticides, salts, sediment, litter and other debris.

As such, the EPA's National Pollution Discharge Elimination System (NPDES) Permit was written and enacted in order to address polluted, nonpoint stormwater runoff. In 2007, Washington State Department of Ecology issued the first Eastern Washington Phase II NPDES permit, which included Spokane County. The Permit dictates that County programs and practices must be created for all new development, ensuring that stormwater runoff is being captured and treated in order to protect groundwater and surface waterbodies from further degradation.

As a part of this directive of protecting our environment, federal and state grant programs have been established that provide funding for the retrofitting of existing situations where polluted stormwater runoff has the potential to reach waterbodies or groundwater. The Spokane County Stormwater Utility received two such water quality grants to retrofit the Country Homes Boulevard channel.