

## Message from Mayor Condon

When I was elected Mayor, I didn't realize that so much of my time would be spent talking about stormwater and wastewater. But the magnitude of the work that needed to be done and the expected price tag that came with it underscored its importance.

For me, good government requires delivering excellent services at an affordable price. I constantly consider and pursue new ways of doing business to benefit our citizens and deliver value. So, I challenged our Utility Division to take another look, to reconsider the assumptions, to find a path forward that would be both environmentally and financially responsible.

This Integrated Clean Water Plan is the result of that effort.

We spent a year reevaluating our work to reduce combined sewer overflows and stormwater runoff going to the Spokane River, along with plans to improve treatment at our wastewater facility. We identified a path forward that would reduce the cost by about \$150 million and vastly improve the health of the river.

Interestingly, this work is pushing us to be "integrated" in more than just our solutions to stormwater and CSO projects. We already have committed to treat stormwater on site whenever we improve street infrastructure to lessen the impact on our wastewater system. And we are looking for opportunities to integrate other above-ground benefits into our projects, like improved parks, completed sidewalks, multi-modal connections, and projects that encourage private investment, enhance our business districts, and improve neighborhoods.

We've also embarked on a major update to our Comprehensive Plan chapter that deals with transportation and we're expanding it to include utility infrastructure. Streets are three-dimensional, and we must evaluate them and plan that way.

Frankly, it can be difficult to get people excited about utility projects that primarily occur underground, but the benefits of this work combined with the potential for above-ground improvements should help bridge that divide.

Certainly our outdoor beauty and recreational opportunities are some of the primary draws that make people and businesses choose Spokane. Through the heart of our downtown, we have a beautiful, wild river with falls that literally roar during spring runoff. We have to commit to protecting the river for current residents and future generations, if we are truly going to be the City of Choice.

In the end, that's why this is so important. We are steering change that will serve us for generations. I feel a great responsibility to get it right.



*David A. Condon*

## ELEMENT #5 – Measuring Success

The City is committed to measuring the success of this plan. The City has documented conditions as they exist today and will assess the effectiveness of the work going forward. The City will continue to monitor CSO frequency and volumes, the quantity and quality of wastewater at the RPWRF, and provide monitoring and modeling of stormwater and green infrastructure projects. This information will help determine regulatory compliance and actions that might be needed in the future.



## ELEMENT #6 Adapting for the Future

This Integrated Clean Water Plan allows the City to adapt to changing conditions and changing information. The City has committed to removing stormwater from combined sewers and separated storm sewers when reconstructing streets and other infrastructure. The goal is to reduce the amount of water in our system and lessen overflows to the river. Green infrastructure is a likely method to accomplish this.

This adaptive management approach allowed the City to size facilities based on current information and still accommodate for growth and varying weather patterns as a result of climate change.

The City will codify this integrated approach to infrastructure planning through an update to its Comprehensive Plan, called Link Spokane. Rather than just considering the surface transportation uses for streets, the City is taking a three-dimensional view of its streets that includes connectivity for pipes and conduit and management of stormwater, along with multi-modal connections.

### Questions or Comments on this Integrated Plan?

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# Integrated Clean Water Plan DRAFT

The City of Spokane (City) is proud to introduce its Integrated Clean Water Plan—a plan that meets the City's strategic objective of delivering a cleaner Spokane River faster in a financially responsible way.

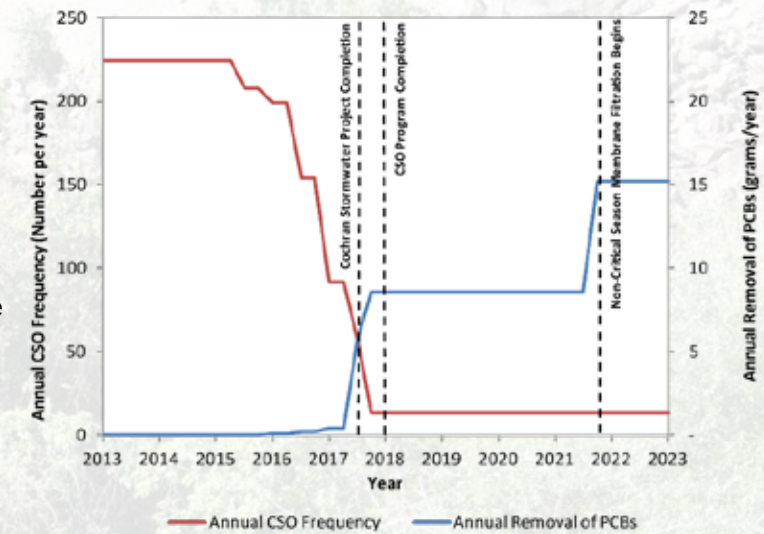
Facing significant costs, an aggressive timeline, and a changing regulatory environment, the City decided to take a new look at its plans to improve water quality in the Spokane River and meet Clean Water Act mandates, adopting an integrated approach to its planning. The City used the U.S. Environmental Protection Agency's Integrated Planning Framework as a guide and collaborated with the Eastern Region of the Washington State Department of Ecology.

An integrated approach requires the City to study all flows that bring pollutants to the river, consider all viable technologies and options to manage those flows, and develop a comprehensive solution that delivers the best value for the investment. Essentially, this approach is designed to get enhanced results more quickly at a more affordable price. The City included flows from its Riverside Park Water Reclamation Facility (RPWRF) along with discharges to the river from combined sanitary and stormwater sewers (CSOs) and separated storm sewers in this integrated approach.

The City established three primary objectives:

- To achieve a cleaner river faster, prioritizing work with the greatest potential to reduce pollution going into the river. The City is working to reduce phosphorus, PCBs, heavy metals, bacteria from sewage, and others.
- To implement cost-effective and innovative approaches. The City will spend dollars wisely and include "green" technologies as they make sense.
- To opportunistically address other critical infrastructure needs with Integrated Clean Water Plan projects.

City staff probed actual rainfall and overflow data, in addition to computer models, and maximized the use of the existing piping system. They considered the result of significant wastewater changes in our community, like the addition of Spokane County's Water Reclamation Facility, which frees up capacity in our main downtown sewer interceptor.



The City has made a commitment to manage stormwater on site when reconstructing streets or making other infrastructure improvements. The more water that is captured before entering City sewer and stormwater pipes, the less there is to flow to the river or to require treatment at the plant.

Overall, the plan will deliver significantly greater pollution reduction benefit to the river on a schedule that meets the City's tight regulatory deadlines. It includes about \$310 million in work to be completed over the next four to five years; this collection of work represents the largest infrastructure investment in the City's history. Those savings will allow the City to complete the work while limiting annual utility rate increases to average cost of inflation over the last 25 years—or 2.9 percent.

Before considering this integrated plan, the City had expected to spend more than \$450 million on improvements at the City's RPWRF and to reduce CSOs. Other sources of pollution, including stormwater, wouldn't have been addressed. With this integrated plan, the City saves money and prevents more pollution from entering the Spokane River – a win-win.

Ultimately, this Integrated Clean Water Plan will transform how the City manages stormwater and wastewater, while building critical new infrastructure and other above-ground improvements to build stronger neighborhoods and a healthier Spokane.



## Focus on Water Quality

A number of entities and mechanisms regulate water quality in the Spokane River and Long Lake. The overall goal of the regulations is attainment of designated uses, including aquatic life, recreational, and cultural uses. Also, there are less tangible (for example, spiritual) uses of the River and its resources that also depend on the quality of its waters.

The Spokane River and Lake Spokane are on the state's 303(d) list of impaired water bodies for polychlorinated biphenyls (PCBs) and bacteria (Category 5), and total phosphorus, zinc, lead, and dissolved oxygen (Category 4A). A TMDL is in place for dissolved oxygen (related to phosphorus), and additional TMDLs are being developed for dissolved cadmium, dissolved lead, and dissolved zinc. For PCBs, the City is working with Ecology and others on a toxics control task force to establish performance-based PCB limits. The City considered a number of pollutants to evaluate the projects, including fecal coliform bacteria, total suspended solids, total phosphorus, total zinc, dissolved zinc, and PCBs.

## The Plan Elements

Following the EPA's integrated planning framework, the City of Spokane's Integrated Clean Water Plan includes six major elements: a discussion of regulatory requirements, a description of the existing system, a public involvement process, a selection of projects with implementation plans, a way to measure success, and a way to adapt the plan for the future. Below is a summary of each of these elements.



## Why Integrated Planning?

This Integrated Clean Water Plan seeks to improve water quality of the Spokane River and achieve regulatory compliance. The City is focused both on implementing cost-effective and innovative technologies, and on addressing other critical infrastructure needs while developing Integrated Plan projects. Applying an Integrated Planning Framework to address CSOs, stormwater, and municipal wastewater treatment comprehensively maximizes the benefits provided by the City's clean water investments.

### ELEMENT #1 Regulatory Requirements

This Integrated Clean Water Plan allows the City to meet its regulatory requirements related to water quality in the Spokane River and Lake Spokane. The City is subject to regulatory requirements across its range of stormwater, CSO, and municipal wastewater treatment services. All these requirements come from the Clean Water Act and are regulated through a National Pollutant Discharge Elimination System (NPDES) permit for both CSOs and municipal wastewater treatment, existing and potential future total maximum daily load (TMDL) limits, and the Eastern Washington Phase II NPDES Municipal Stormwater Permit. Other regulations also apply.

The regulations specify:

- A performance standard for controlled CSOs as not more than one discharge event per year on a 20-year moving average. The City is required to achieve this standard by the end of 2017.
- The implementation of an additional level of treatment, focused on reducing phosphorus and other pollutants going to the Spokane River and Lake Spokane at the RPWRF, with regulatory compliance by March 2021.

The projects in this Integrated Clean Water Plan also go beyond the City's current regulatory requirements. For example, the City has identified the Cochran stormwater basin as the largest point source contributor of stormwater to the Spokane River and has included a project to treat and infiltrate flows from the Cochran Basin in this plan. Although not specifically required, this project is expected to reduce the total amount of suspended solids by about 500,000 pounds a year.

### ELEMENT #2 The Existing System

The City operates an extensive wastewater collection and treatment system that serves about 251,000 people in the Spokane metropolitan area. The system includes the RPWRF, which processes about 34 million gallons of wastewater daily, along with nearly 900 miles of sewer pipe, a variety of pumps and pump stations, and 22 combined sewer discharge points to the River.

This Integrated Clean Water Plan includes a comprehensive look at all the City's discharges to the Spokane River, including those from CSOs, separated storm sewers, and the City's RPWRF.

With this plan, the City is building on a long history of stewardship of the River and other surface waters. The City built the community's first sewage collection system and wastewater treatment plant, making significant and ongoing upgrades and improvements over the years. From 2000 through 2012, the City spent \$220 million on clean water improvements. Projects to reduce overflows from combined sewers began in the early 1980s, with the City reducing those overflows by 86 percent to date.



### ELEMENT #3 Public Involvement Process

Throughout the development of this Integrated Clean Water Plan, the City has worked diligently to open and maintain communication channels with the public, interested stakeholders, and regulatory agencies.

The City developed and implemented a communications action plan that relied on multiple communication approaches—from in-person presentations and meetings, to outreach to local media, to use of internet resources and social media—to reach more people in ways that are convenient for them. The City reached out to specialized interested stakeholders, including environmental advocates, users of the Spokane River, owners of property along the river's shores, and neighborhoods that would experience construction projects.

In all, the City made more than 40 presentations to stakeholder and citizen groups, reaching nearly 1,400 people. The City also partnered with The Lands Council to provide door-to-door outreach and completed dozens of other communications.

In parallel efforts, the City also kept staff from regulatory agencies and the Spokane Tribe engaged and informed. The City held about 30 meetings with regulators, elected officials, and Tribal leaders.

### ELEMENT #4 Selecting Projects & Plans for Implementation

This Integrated Clean Water Plan details a significant amount of work to be completed over four to five years, including:

- A series of projects to **control overflows from combined sewers** and meet current regulations.
- Management of **stormwater coming from what's called the Cochran Basin** on Spokane's North Side, where the City separated storm sewers in the 1980s. About half the volume of stormwater runoff that reaches the river comes from this single stormwater outfall.
- Construction of **tertiary treatment at the RPWRF** and plans to operate it year-round to get additional pollution reduction benefits. The City only is required to run tertiary treatment during the "critical" 8-month season.

The projects use different technologies—including storage and/or conveyance of CSOs, treatment and infiltration of stormwater with green infrastructure, and treatment of municipal wastewater at the RPWRF—to reduce pollutant loading to the Spokane River. This combination of projects achieves greater pollution reduction than would have been possible if these clean water investments were implemented just to meet regulatory requirements.

The projects were selected using a set of criteria designed to ensure value for the dollars that will be spent and maximize benefits. The criteria included environmental outcomes, community benefits like improved streets and economic development, operations and maintenance considerations, ability to meet regulatory requirements, and life-cycle costs. The City has:

- **Re-sized tanks** to manage overflows from combined sewers based on actual rainfall and overflow data to meet current regulations.
- **Optimized the use of the overall piping system** for storage during storms and accounted for the addition of a new wastewater treatment plant built by Spokane County that reduces the amount of wastewater in our system.
- **Incorporated stormwater removal** from City piping systems during street construction.

Overall, the projects total about \$310 million. Although they represent a significant cost savings from previous plans, these investments still require a significant financial investment by the citizens of the City of Spokane. The EPA's integrated planning framework addresses communities' financial capabilities, and the City of Spokane's median household income is 70 percent of the statewide media household income and about 78 percent of the U.S. median household income.

With that financial consideration, and because improving the health of the Spokane River provides a statewide benefit, a sharing of costs with the state is appropriate. The City is seeking a partnership that would include an investment by the state equal to 20 percent of the overall project cost, or approximately \$62 million.