

How do pollutants get into water?

These **pathways** transport pollutants into Puget Sound, rivers, and lakes in our region and negatively impact water quality.

Stormwater

Stormwater is rain that runs off streets, parking lots, driveways, lawns, and sidewalks and picks up pollutants. Stormwater can also run off fields and other lands in rural areas.

1

Suspended Solids

Bacteria

Nutrients

Metals

Organic Chemicals

CECs

Wastewater treatment plant discharge

Wastewater treatment plants treat sewage from homes and businesses then "discharge" it or return it to the environment.

2

Nutrients

CECs

Overflows of untreated wastewater and stormwater

Some pipes carry both sewage and stormwater to a treatment plant. When heavy rains fill these pipes they can overflow into local water bodies to prevent backups into homes and businesses.

3

Bacteria

Suspended Solids

Nutrients

Metals

Organic Chemicals

CECs

Contaminated sediments

Sediment is the soil or sand on the bottom of a water body. In some parts of the region, sediments are contaminated from past industrial and commercial activities.

4

Organic Chemicals

Metals

Air pollution that settles on waterbodies

Air pollution from cars, industry, and even forest fires is made of tiny particles that can float down from the air onto the water.

5

Metals

Climate change

In the Northwest, climate change is bringing drier summers, warmer winters, bigger winter storms, and sea-level rise.

6

High Water Temperature



Pollutants can have harmful impacts on our waters, aquatic life, and health.

Pollutant	Description	Impact
Bacteria	Bacteria from animals or humans can make people sick.	 
Nutrients	Nutrients, like nitrogen and phosphorus, are fertilizers for plants, but can cause algae blooms that decrease dissolved oxygen and harm fish, shellfish, and aquatic life as well as make waters unswimmable.	
Suspended Solids	Suspended solids, like sediment, silt, and sand, can carry pollution, settle to the bottom, and smother habitat for fish, shellfish, aquatic life, and small animals.	
Metals	Heavy metals, like arsenic, copper, lead, and mercury, can harm fish, shellfish, and aquatic life and cause human health problems.	 
Organic Chemicals	Organic chemicals, like phthalates from plastics, PBDEs from flame retardants, chlorinated pesticides, and banned industrial chemicals called PCBs, can sicken people, fish, shellfish, and aquatic life.	 
Contaminants of Emerging Concern (CECs)	Little information is available on the potential impact to people, fish, shellfish, aquatic life, or wildlife from contaminants of emerging concern, including medicines, personal care products, and plastic microfibers.	
High Water Temperature	Warm water has lower levels of dissolved oxygen for fish, shellfish, and aquatic life to breathe and can result in an increase in algal blooms along with a number of other ecological effects.	

Community priorities and the Clean Water Plan

Goals of regional engagement

- Robust dialog
- Constructive working relationships
- Confidence in the public process
- Understanding of key project decisions
- A plan that reflects regional priorities



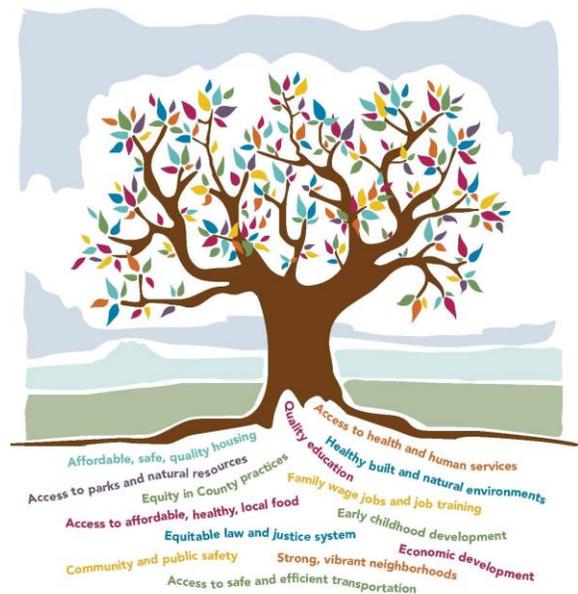
Community priorities and the Clean Water Plan

Understanding priorities will help us answer:

- What is important for our water quality future?
- How can our investments in water quality support the priorities that are revealed through this effort?

Equity and social justice

- Committed to a fair and inclusive process
- Breaking down barriers to involvement:
- Long-time participants
- New, interested parties
- When we hear from everyone, we all benefit
- Preliminary interviews* affirmed the importance of:
 - Accessible and equitable outreach
 - Education
 - Engagement with tribal communities



*So far, we've interviewed organizations representing: community development, economic development, environmental, equity and social justice, immigrant and refugee support, native peoples, public advocacy, public agency, and youth/student advocacy.

What we've heard so far about community priorities

- Many residents are proud of local water quality and have a connection to local waterways.
- Residents are most concerned about industrial pollution in the Duwamish River, but think more positively about Lake Washington and Puget Sound water quality.
- Housing affordability, cost of living, and transportation rank higher than water quality as concerns for residents.
- The public believes the government should invest in water infrastructure and is willing to pay for water quality investments within reason.
- Climate change and extreme weather add uncertainty to water management and perception of water infrastructure needs.
- Preliminary interviews identified the following eight priorities as important:



Affordability & cost of living



Climate change & justice



Distributional equity



Improving environmental regulations



Protecting public health



Improving water quality



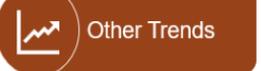
Species protection



Sustainable solutions

These findings are based on a review of local, regional, and national public opinion research from 2011-2018 and preliminary interviews with 23 local organizations.

Keep the conversation going! Other opportunities for input will occur through summer 2020, including an online open house this summer and another engagement in late summer/early fall. Visit www.kingcounty.gov/cleanwaterplan or contact cleanwaterplan@kingcounty.gov to learn more.

	<p style="text-align: center;">Trend</p> <p>A trend is an ongoing or anticipated local, regional, and/or national general direction that is developing or changing.</p> <p>The trends presented here are important drivers for the Clean Water Plan. We will use trends to explore how King County can best protect and enhance regional water quality in the coming decades.</p>	<p style="text-align: center;">Take Notes As You Go</p> <p>We'll be asking you to discuss these trends during the upcoming small table discussion.</p> <p>Feel free to use this space to take notes as the trends are presented.</p>
	<ul style="list-style-type: none"> The region has made significant water quality accomplishments. Fifty years ago, millions of gallons of untreated sewage flowed daily into Lake Washington. Today, it's one of the cleanest urban lakes in the world. There is more work to do: <ul style="list-style-type: none"> Water temperature is getting warmer, which is worse for fish. Water does not always meet state standards for certain criteria, including bacteria and dissolved oxygen. Historic contaminated sediments persist in the region's waters. Emerging contaminants are being detected but not fully understood. Due to historic and systemic inequities, historically underrepresented communities do not experience the same quality of life as white residents, this includes exposure to pollution. 	
	<ul style="list-style-type: none"> Declining numbers of Puget Sound southern resident orca which indicate that this population is at risk of extinction. Declining salmon populations, particularly from urban rivers. Declining aquatic habitat in urban and urbanizing areas. 	
	<ul style="list-style-type: none"> Cost of living and of doing business continues to increase in the region. Financing water quality improvements is becoming increasingly expensive. There are not many federal grants or much loan funding available for wastewater facilities, and limited availability is expected into the future. Affordable housing is one of the region's most pressing issues and disproportionately affects historically underrepresented communities including people of color and Native communities. 	
	<ul style="list-style-type: none"> The central Puget Sound Region is projected to add 1.7 million residents and 1.2 million jobs by 2050. Much of this growth will occur in King County. 	
	<ul style="list-style-type: none"> The region's wastewater facilities (pipes, pumps, and treatment plants) are aging. Some of these facilities are approaching the end of their useful life. 	
	<ul style="list-style-type: none"> State and Federal water pollution control regulations are expected to become more stringent in the decades ahead. There may be new requirements to: <ul style="list-style-type: none"> Remove nutrients that are harmful to fish, like nitrogen from wastewater. Remove contaminants of emerging concern, like medicines and cleaning products, from wastewater. Increase stormwater treatment. 	
	<ul style="list-style-type: none"> Scientists predict that climate change will bring sea level rise, more rain in the winter, and higher temperatures to the region. 	
	<ul style="list-style-type: none"> There are ongoing improvements in wastewater treatment and water pollution control technologies. Installing and operating technology is expensive. Future costs to install and operate new technologies are uncertain. 	
	<p><i>What is missing? What else should we consider?</i></p>	