

RESEARCH



# 2021 Water Infrastructure Survey: *Summary Report*

MAY 2021

It has been well-documented and long understood that Oregon’s water infrastructure is in significant need of repair, upgrade and investment. Our water infrastructure plays a critical role in supporting community public health, livability, economic development, environmental protection, housing, and a growing population. Not only is Oregon’s existing infrastructure in serious need of repair, but local water and wastewater providers are also facing new and emerging challenges that will require additional investment and add additional costs. These challenges include:

- Seismic upgrades to better ensure that some of the critical components of water systems will be able to withstand a Cascadia earthquake (e.g. system backbone; lines to hospitals; reservoirs/storage);
- Additional system capacity to support needed housing, including affordable housing;
- Additional water supply storage to combat persistent drought and declining snowpack; and
- New and more stringent water quality challenges/permit requirements, including for stormwater.

**Previous LOC Infrastructure Surveys:** In 2016, the League of Oregon Cities (LOC) surveyed its member cities to better understand water infrastructure needs across the state. [That survey](#) identified \$7.6 billion in water infrastructure needs from the 121 of Oregon’s 241 cities that responded to the survey. Of the \$7.6 billion in identified needs, \$4.3 billion was attributed to water quality-related projects, including wastewater treatment plants, while \$3.3 billion was related to drinking water and water supply/storage projects. An LOC transportation infrastructure survey was also conducted in 2016, and identified \$3.7 billion in transportation-related infrastructure needs (highway and non-highway). Fortunately, during the 2017 legislative session, the state Legislature approved a \$5.3 billion transportation infrastructure investment package.

**2021 Water Infrastructure Survey:** In late 2020, the LOC sent out an updated survey to its membership to, once again, identify water-related infrastructure needs across the state. The LOC contracted with Portland State University’s (PSU) Center for Public Service to conduct the survey. The survey was sent out in November of 2020, with questions that sought to differentiate between medium-term (within the next 10 years) and long-term (within the next 20 years) needs. The updated survey also included questions designed to gain a better understanding seismic resilience needs for water systems and issues related to water/sewer rate affordability. Page 4 outlines key findings from the 2021 survey, including a breakdown of drinking water/water supply needs versus water-quality related needs. Ultimately, the survey identified the significant combined water infrastructure needs for the coming 20 years as follows:

*The 100 cities that responded to the survey (out of 241 total cities in Oregon), identified \$9.7 billion in water infrastructure needs, including both water quality-related needs and drinking water/water supply needs. With this data, PSU was able to estimate approximately \$23 billion in statewide water infrastructure costs in the coming 20 years.*

**Water Infrastructure: Impacts to Affordability:** The importance of water infrastructure can’t be overstated. Oregon’s water infrastructure is too often out of sight, and therefore, out of mind. It often takes a significant disruption of drinking water or wastewater service to remind citizens and policymakers of the critical role that water infrastructure plays in the protection of public health and the environment. However, the costs of providing this critical and necessary infrastructure is, unfortunately,

outpacing the budgetary capacity of local communities. As a result, many communities are experiencing increasing drinking water and sewer rates that are resulting in affordability challenges throughout the state. According to the American Water Works Association, projects to address aging drinking water infrastructure in the United States are projected to surpass \$1 trillion in the next 25 years and could triple the cost of household water bills.

State and federal investments in water-related infrastructure have simply not kept pace with overall needs; and communities across the state, of all sizes, are struggling to balance ratepayer affordability challenges, with the need to finance significant and necessary infrastructure investments at the local level. According to a white paper from the National Association of Clean Water Agencies, “the Congressional Budget Office has found that the federal cost-share of total water capital, operations, and maintenance spending in the country has declined in real dollars over the past four decades and has fallen below 5%. This federal share is much smaller than other core infrastructure sectors, such as highways (close to 50%), mass transit and rail (17%), and aviation (17%). Local and state investments...now account for 95% of the investment. As a result, the vast majority of the growing cost for clean and safe water...is coming directly from ratepayers.”

It is important for policymakers to understand the shift that has taken place, and the immense costs that local communities are facing. Across Oregon today, communities are can't afford to address failing or deficient infrastructure. Unfortunately, this can, and has, resulted in some communities being unable to support additional housing. Oregon Revised Statute 197.505 to 197.540 outlines local requirements that must be met in order to declare a growth moratorium due to insufficient “public facilities,” including water supply. In 2018, the city of Banks was faced with this difficult decision and remains in a growth moratorium today (2021). Without critical investments in water infrastructure, this community is unable to support additional housing. Just recently, the city of Wilsonville faced a similar situation, with a building moratorium that was implemented in the late 1990s – again due to a lack of water supply infrastructure that was necessary to support additional growth. The reality is that these immense costs are largely being addressed at the local level, using local ratepayer dollars (water/sewer/stormwater bills), system development charges, or through temporary increases to property taxes (temporary tax levies or general obligation bonds). For those communities that can access state funding resources, it is important to recognize that much of this funding assistance comes in the form of low-interest loans. While there are some existing opportunities for loan forgiveness, those opportunities are limited, and many communities are finding that they must still finance infrastructure costs locally, plus interest. We have reached the point in Oregon where the backlog of needs continues to grow, while costs continue to increase. This has resulted in communities that are simply unable to afford necessary projects and has resulted in impacts to low-income and other vulnerable populations.

### ***Infrastructure Impacts, Rates, and the Need for Low Income Assistance***

As a result of the cost impacts and affordability challenges that Oregonians are already grappling with, it is not surprising that many municipal water providers, including cities, have seen an increase in the amount of delinquent water/sewer accounts. While these affordability challenges are not new, the pandemic and resulting economic shut down highlighted a very clear need for additional low-income assistance to help Oregonians struggling to pay water and sewer bills, and to ensure that water utilities remain financially solvent when ratepayer revenues are impacted as a result of increased arrearages. As of 2020, there were no federal or state-funded low-income assistance programs to help Oregonians pay

water and sewer bills. The problem isn't that low-income assistance programs have not, and do not, exist. Those programs, however, exist at the local level, funded through local ratepayer dollars. This dynamic creates some unique equity challenges for low-income Oregonians, those on fixed incomes, and for small communities, as an increase in water rates to help offset affordability challenges is likely to simply intensify those affordability challenges. The LOC identified the need for additional state/federal ratepayer dollars as a legislative priority for the 2021 legislative session. And in December of 2020, Congress approved more than \$600 million in federal water/sewer ratepayer assistance, with another \$500 million approved in March of 2021. The LOC is focusing on implementation of the federal program (Low-Income Household Water Assistance Program) and will continue to advocate for additional funding from state and federal resources.

## LOC 2020 Water Infrastructure Survey: General Findings

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The 100 cities that responded to the survey (out of 241 cities in Oregon), identified \$9.7 billion in water infrastructure needs, including water quality-related needs and drinking water/water supply needs. With this data, PSU estimates approximately \$23 billion in statewide water infrastructure costs in the next 20 years.

Oregonians simply can't afford to bear this cost alone.

### **Drinking Water/Water Supply Costs and Emerging Challenges:**

*Drinking Water/Water Supply Infrastructure Needs:* 91% of survey respondents indicated that they provide drinking water services. The medium-term (next 10 years) drinking water and water supply needs identified by survey respondents totaled \$2.12 billion. PSU was able to extrapolate the data to generate a statewide estimate of \$4.365 billion in the next 10 years. Long-term needs (next 20 years) identified by survey respondents included an additional \$2 billion; representing approximately \$7.6 billion as a statewide estimate of total drinking water/water supply needs.

The LOC anticipates that drinking water infrastructure needs will only increase as a result of seismic risk assessments and mitigation plans that are now being required by the Oregon Health Authority's Drinking Water Services program (as of 2018) and will be incorporated into regular water master plan updates for communities that are located within more seismically vulnerable parts of the state. One city, with a population of slightly more than 27,000, highlighted the extent of this emerging need as follows:

*"We identified \$176 million in pipe replacement costs to upgrade our distribution system to withstand a large seismic event. That doesn't count costs to make our large diameter transmission pipe resilient. That would be on the order of \$300 million."*

In addition, it is anticipated that municipal and other community drinking water providers will continue to see necessary additional investments to address other ongoing and emerging challenges. Some of these include water supply curtailments due to fish persistence and other permit conditions, and a need to build additional water supply storage including secondary supply sources to ensure continued drinking water supply during times or shortage, contamination events (e.g. harmful algal blooms) or other disruptions of service. In addition, many communities have identified other water-related infrastructure needs for levees and dams that are in need of repair, replacement, and seismic upgrades.

Finally, it is important to note the importance of source water protection investments for drinking water supplies. This work is critical to ensure safe drinking water. Investments, including funding to address failing septic systems and coordinated efforts to address and help mitigate impacts from harmful algal blooms, are just two examples that highlight the importance of critical source water protection investments. Unfortunately, as a result of recent wildfires, there may be additional risks to downstream drinking water providers from increased water runoff, phosphorous and nutrient loading that can lead to increased likelihood of harmful algal blooms.

### **Water Quality Costs and Emerging Challenges:**

*Water Quality/Wastewater Infrastructure Needs:* 71% of survey respondents indicated that they provide water quality/wastewater services. The medium-term (next 10 years) water quality/wastewater needs identified by survey respondents totaled \$3 billion. Again, PSU was able to extrapolate the data to generate a statewide estimate of \$5.879 billion in the next 10 years. Long-term needs (next 20 years) identified by survey respondents included an additional \$7.64 billion; representing approximately \$15.786 billion as a statewide estimate of total water quality/wastewater needs.

One of the most significant challenges facing public sewer/wastewater providers has been the backlog of water quality permits from the state. These water quality permits, known as National Pollutant and Discharge Elimination System permits and Water Pollution Control Facility permits, outline the water quality standards that must be met for public/municipal wastewater providers. If a municipality does not know the water quality standards they must meet, it is very difficult to invest in the appropriate treatment technologies and system upgrades that may be necessary. Unfortunately, due to the backlog, many of these permits have expired, though some have been administratively extended, for more than 10 years. As a result of litigation, the Oregon Department of Environmental Quality (DEQ) has issued a 5-year permit issuance plan to update permits. As municipal wastewater providers receive updated permits, they will very likely receive updated, and more stringent, water quality standards that must be met in order to discharge treated wastewater. Some of the more challenging emerging pollutants in recent years have included temperature, mercury, and copper. The LOC has worked with the DEQ and the Legislature to provide additional staffing capacity and targeted investments to address the water quality permitting backlog. Much of this work (60%) will be funded through increased fees for permit holders, but is also partially funded through state general fund dollars (40%).

In addition, the costs of managing stormwater runoff represents both an existing and emerging infrastructure challenge that many Oregon communities will need to continue to address and fund through local fees/rates. Stormwater regulations continue to increase, and are regulated through a specific NPDES permit called a Municipal Separate Storm Sewer System (MS4) permit. These permits require municipalities to implement local regulations and plans to manage stormwater runoff including from streets, construction site runoff and other impervious surfaces.

### **Conclusions:**

Oregon communities are struggling to pay for necessary water infrastructure costs, and expectations that communities will be able to continue to finance these costs at the local level are simply unrealistic. While local governments must grapple with how to best finance this infrastructure, it is ultimately the ratepayers and citizens of Oregon that are paying the bill. Costs already far exceed the ability of

Oregonians to pay for necessary infrastructure, and communities with smaller populations and those serving lower-income populations are disproportionately impacted when costs and regulations increase. At this point, many communities simply can't afford necessary infrastructure. Addressing this backlog will require significant additional investments from the state and federal government. In addition, the LOC encourages the state to work with local governments to ensure that small and rural communities have access to the resources necessary to plan for infrastructure investments. Many communities are far from "shovel-ready," and will need assistance to ensure that they are prepared to accept federal infrastructure dollars that may become available.

[View the full PSU report here.](#)