



## CITY MANAGER'S OFFICE

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June 20, 2025

U.S. Army Corps of Engineers  
 Attn: CENWP-PME-E / Willamette EIS  
 P.O. Box 2946  
 Portland, OR 97208-2946

**Re: City of Salem Public Comments on USACE Proposed Detroit Reservoir Drawdown**

This letter and the attached memorandum provide comments from the City of Salem (City) to the US Army Corps of Engineers (USACE) regarding the Supplemental Environmental Impact Statement (SEIS) the USACE is preparing. The SEIS addresses two issues: (1) a permanent end to hydropower production at Willamette Valley Dams, as directed by the Water Resources Development Act of 2024, and (2) a deep drawdown of Detroit Reservoir, as published in the Biological Opinion (BiOp) issued in December 2024 by the National Marine Fisheries Services (NMFS). The City's comments are specific to a deep drawdown in which the level of Detroit Reservoir is dropped to a historically low elevation of 1,395 feet in the fall/winter in a single, continuous operation to facilitate the out-migration of threatened fish species.

To begin, the City firmly supports the efforts of USACE, NMFS, and others that improve passage through Detroit Dam for spring Chinook and winter steelhead, both of which are listed as threatened under the Endangered Species Act (ESA). The City also recognizes and respects the historic, cultural, and spiritual interests these species represent to the tribal nations. However, the City cannot support a deep drawdown conducted as proposed in the BiOp because it will cause excessively high levels of turbidity in the North Santiam River which will put at risk the City's drinking water system. The attachment provides additional details and considerations to the City's comments below.

**1. As proposed, the deep drawdown puts in danger public health, public safety, and the regional economy because of the risks it places on the City's drinking water system.**

The City is the only regional water provider in the Mid-Willamette Valley and is responsible for supplying safe and reliable drinking water to approximately 200,000 individuals and thousands of customers that include hospitals, schools, businesses, industries, irrigators, multifamily housing units, and single-family homes. The City's water service area includes the City of Salem, the City of Turner, four water districts, and portions of unincorporated Marion and Polk counties. In addition, the City must provide water in sufficient quantities for firefighting and other emergency needs.

Moreover, the City is the only emergency source of drinking water to the City of Stayton and the City of Keizer should either, or both, municipalities suffer impairment to their drinking water system.

There is little question that the deep drawdown will elevate turbidity levels in the North Santiam River. The City's operational procedure in the event of high turbidity involves filling the slow sand

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filters to their maximum capacity and then closing the intake gates. With the gates shut, the filters can operate for no more than three days before being shut down because of low water levels. Historically, high turbidity events that triggered this procedure lasted less than three days. However, if high turbidity levels persist and the gates remain shut, the City must rely on remaining volumes in our reservoirs, several groundwater wells, the aquifer storage and recovery system, and an intertie with the City of Keizer. We estimate that these alternative water sources can marginally meet the projected water demand during the timeframe of the proposed drawdown. However – and this is a significant consideration – under this mode of operation there is *no redundancy* in the system. Should a critical component of one or more of these alternative sources fail, our ability to supply water will fall below the demand and our customers would be faced with untenable and unsustainable risks to life, property, and livelihood.

The City is conducting research to determine the limitations and feasibility of keeping the intake gates open to allow high-turbidity surface water into the slow sand filtration system. Bench-scale testing is being carried out to evaluate the relationship between intake turbidity and filter performance. The results will help inform decision-making on how best to manage high-turbidity events triggered by the drawdown. Our research is continuing but based on the preliminary results, at a turbidity level of 50 Nephelometric Turbidity Units (“NTU”) we expect complete loss of filter performance within one week to ten days. If turbidity exceeds 50 NTU, in which is likely based on other drawdown operations conducted by the USACE, we expect our filter performance will degrade within days. Restoring a filter to full operational status may require months to drain the water, remove the clogged layer of sand, replace the bed with new sand if necessary, and restore the biological layer in the rebuilt filter bed. In addition, rehabilitating filters lost to sustained turbidity as a result of the drawdown operation is a laborious effort and has the real possibility of reducing the City’s ability to meet peak summer demands as the filters remain offline for the duration of the work.

**2. As proposed, the deep drawdown will result in violations of federal law.**

The National Environmental Policy Act (NEPA) requires the lead agency, in this instance NMFS, to rigorously evaluate reasonable alternatives. However, the BiOp does not thoroughly analyze alternatives other than the drawdown. Further, the BiOp does not thoroughly consider the degree to which the degradation of water quality would impact users, including our water customers, or how the drawdown might impact other aquatic species in the basin. The failure to more fully consider these impacts is notable given that the USACE and NMFS are aware that the elevated turbidity will have dramatic and adverse impacts on the City’s drinking water infrastructure.

The Clean Water Act (CWA) addresses, among many other things, contaminants in water resources. Causing high levels of turbidity is a clear violation of the CWA. Typical turbidity levels at the City’s intake from the North Santiam River are well below 10 NTU. The anticipated turbidity during the drawdown is expected to be well in excess of 100 NTU. In the EPA-approved Oregon Water Quality Standards “turbidity” is defined as “pollution” and the standard in ORS 340-041-0036 states, in part:

*Turbidity (Nephelometric Turbidity Units, NTU): No more than a ten percent cumulative increase in natural stream turbidities may be allowed, as measured relative to a control point immediately upstream of the turbidity causing activity.*

The Safe Drinking Water Act (SDWA) requires persons to protect public water systems. The proposed drawdown would likely contaminate the City’s source of drinking water, potentially contaminate the

City's water treatment system, and generally impair the City's ability to provide safe drinking water, any one of which could constitute a violation of the SWDA.

Given the many considerations, the City recommends the SEIS incorporate, at minimum, the following:

1. Developing a stepwise approach to the annual drawdown. It is imperative to avoid a scenario in which the elevation of Detroit Reservoir is continuously and without pause dropped to the target level of 1,395 feet *regardless* of downstream water quality, *regardless* of impacts to aquatic species, and *regardless* of the attendant harm to the City's drinking water system. A stepwise drawdown conducted in successive years, coupled with turbidity triggers (see below) would help fill many critical information gaps. These include: (1) How fast and how high will turbidity levels rise during the drawdown? (2) How quickly will turbidity levels drop once drawdown operations cease? (3) How long will it take before turbidity levels sufficiently decrease for the City to resume drawing water from the river?
2. Establishing turbidity levels that trigger a clear and decisive response. The purpose of this recommendation is to balance the USACE's need to perform a deep drawdown with the impacts and duration of those impacts on the City's water system. Turbidity triggers could provide a degree of certainty and significantly enhance the City's ability to develop contingency and recovery plans. One approach to developing turbidity triggers would be to establish a specific turbidity at which the USACE would cease drawdown operations, commence refilling the reservoir, and conduct no further deep drawdowns until the following year or complete recovery of the City's water treatment system, whichever is later. This recommendation comes with a commitment by the City to work with the USACE and to share information, data, and research results (see above) to help develop turbidity triggers that reflect current scientific research and sound engineering practices.
3. Evaluating the merits of delaying implementation. The SEIS should evaluate potential environmental impacts if the deep drawdown is delayed for one, two, or three years hence. Doing so would provide the City additional time to identify locations, obtain funding, and construct enough wells with sufficient yield to provide resiliency and mitigate risks to life, property, and livelihood.
4. Creating a long-term strategy. The BiOp requires development of an Adaptive Management Plan that includes "decision criteria" that guide strategies (see Section 2.5.10 of the BiOp). At issue is the City's need for the USACE to incorporate decision criteria that can be modified over time based on new information, changes in conditions, and lessons learned. More specifically, decision criteria should consider changes in risks and consequences from year to year. To illustrate, consider two scenarios. (1) The City's risk assessment is based, in part, on historic water demand. If the City adds a new industrial customer with a high, *year-round* water demand, the risks/consequences assessment will be altered. (2) The City's water system relies on a wide range of factors and components to deliver safe drinking water to our customers. If, prior to commencing a deep drawdown, one or more of our critical components has failed, decision criteria should be in place that delays or cancels the deep drawdown.

Further, the BiOp instructs the USACE and NMFS to coordinate a review of the 2017 engineering design report for Detroit Dam downstream fish passage via a floating screen structure, to be initiated in early 2026 (see RPA 4.13.5). The Action Agencies will complete construction of structural fish passage facilities by December 2033. By March 2034, the Action Agencies will begin operating downstream fish passage facilities at Detroit that enable collection of steelhead and Chinook salmon from above Detroit, with volitional passage of transport to

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habitat downstream of Big Cliff Dam. The City is adamant that the USACE adhere to these timelines to ensure a long-term plan is enacted for downstream passage that does not present an annual threat to the City's drinking water supply.

In summary, and for the reasons stated, the City has no choice but to stand in opposition to the deep drawdown of Detroit Reservoir as proposed in the BiOp unless the heightened risks and substantial consequences of failure can be mitigated. Our position on this matter is regrettable given our long-standing support for the endeavors of the USACE and others, including our own work, to protect endangered species. However, we *must* give equally significant consideration to the health, life, safety, and livelihood of our customers and our region. Simply put, the risks to the City's water supply created by the deep drawdown are too high and consequences of failure are too staggering to accept. Regardless of our current opposition, the City commits to working with the USACE and others to evaluate and, ultimately, to implement measures that contribute to downstream passage of juvenile species, protect habitat and water quality, and support the many users of the North Santiam River.

Sincerely,



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Krishna Namburi  
Interim City Manager

Attachment: "City of Salem Public Comments on USACE's Proposed Detroit Reservoir Drawdown."  
*Memorandum*. Davis Wright Tremaine, LLP. June 17, 2025

cc:

Brian D. Martin, PE, Public Works Director  
Dan Atchison, City Attorney

**MEMORANDUM**

To: U.S. Army Corps of Engineers, Portland District  
From: Davis Wright Tremaine, LLP on behalf of City of Salem  
Date: June 19, 2025  
Subject: City of Salem Public Comments on USACE's Proposed Detroit Reservoir Drawdown

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On May 16, 2025 the U.S. Army Corps of Engineers ("USACE"), Portland District, published a press release seeking public comments as part of a Supplemental Environmental Impact Statement ("SEIS") focused on two new requirements related to the operations and maintenance of the Willamette Valley System ("WVS") of dams and reservoirs, including implementing a deep fall drawdown of Detroit Reservoir. This memorandum provides the City of Salem's (the "City") comments on the proposed drawdown that the City understands to refer to a proposal to draw Detroit Reservoir down to 1,395 feet in the December 26, 2024, Biological Opinion for the Continued Operation and Maintenance of the Willamette Valley System (the "BiOp") prepared by the National Marine Fisheries Service ("NMFS").

The City has a strong interest in this matter and intervened in prior litigation regarding potential changes to the WVS that would impact its drinking water supply. As a result of that litigation, the court specified interim measures (including drawdowns) that the City found acceptable. The BiOp's proposed elevation target for the drawdown at Detroit Reservoir goes much further than those previous measures and USACE is seeking input from the public on what impacts should be investigated prior to the drawdown.

At the outset, the City is emphasizing its overall support of efforts by NMFS, USACE, and others to protect and benefit listed fish species and the environment, including iconic fish species of the Pacific Northwest. The City also recognizes and supports tribal interests in those resources, including the Confederated Tribes of Grand Ronde and other tribal nations in the salmonid species, their habitat, and the environment. However, the City opposes the proposed drawdown as described in the BiOp and as scheduled because it would violate the National Environmental Policy Act ("NEPA"), the Clean Water Act ("CWA"), and the Safe Drinking Water Act ("SDWA"), and would result in unacceptable risks to the City's drinking water infrastructure. USACE's proposal is particularly troubling because other alternatives exist to benefit listed fish species that would allow USACE to comply with the Endangered Species Act ("ESA"). USACE's drastic proposal is the result of the agency's own repeated failure to comply with the ESA for more than a decade and may jeopardize the water supply for over 200,000

Oregon residents, as well as threaten access to safe water for schools, hospitals, firefighters, and other essential services. USACE’s decision to favor the drawdown as an interim measure seems to be guided by economic considerations and may pose a risk to public health for one of the most populated areas of the state. NMFS and USACE should consider alternatives to the proposed drawdown that would allow the agencies to comply with the ESA without putting the City’s water supply at risk. The City strongly believes that USACE can and should find alternatives to the proposed drawdown allowing maximum benefit for listed fish species while protecting drinking water supplies for the City’s residents. As part of those efforts, the City encourages the Corps to consider and study a stepped approach to the drawdown that would protect water quality in the North Santiam River. The City’s comments first summarize the potential impacts of the drawdown on its water supplies, then address the lack of considerations for those impacts in the BiOp, and finally discuss the legal implications of the drawdown in the context of NEPA, the CWA, and the SDWA.

**I. The Proposed Drawdown Creates an Unacceptable Risk of Public Health Emergency**

a. Background on the City’s Water Supply

For more than 80 years, the North Santiam River—where the Detroit Dam and Reservoir are located—has served as the primary drinking water source for the City of Salem. The City relies on the North Santiam River for water to serve over 200,000 customers and three wholesale customers: the City of Turner, Suburban East Salem Water District, and Orchard Heights Water Association. The City also provides emergency water supply connections to the Cities of Stayton and Keizer or an additional 47,000 residents.

The City’s drinking water treatment plant (the “Treatment Plant”) is located on Geren Island in the North Santiam River, approximately 30 miles downstream from Detroit Dam. The high-water quality of the North Santiam River allows the City to use slow sand filtration as the core treatment process. Slow sand filtration is a natural filtration process, allowing naturally existing biota in the river to form a biological layer which then degrades and/or removes particulates and microbial contaminants in the water. This process uses locally sourced native materials that are reusable and recyclable, providing environmental and ecological benefits. Under normal operating conditions, the slow sand filters are operated without pretreatment. Historical operation of the Treatment Plant indicates that a raw water turbidity (the measure of water clarity or how much matter is suspended in water) of less than 10 Nephelometric Turbidity Units (“NTU”) is necessary. An engineering evaluation and literature review concluded that sustained turbidity greater than 10 NTU in the feedwater to a slow sand filter will lead to rapid head loss accumulation of filters, leading to excessive cleaning of filters which could become impractical for continued operation depending on filter run times. Slow sand filter subject experts have indicated the recommended sustainable feed turbidity to effectively treat water in slow sand filters is typically less than 10 NTU. These theoretical evaluations align with plant historical operating data.

During normal plant operations, filter run times are typically in excess of 3 months. These long run times allow the City operational flexibility to schedule filter cleaning and maintenance activities to avoid peak demand and/or challenging water quality conditions. During normal operation, cleaning and maintenance activities generally consist of both scraping and ripening. Filter scraping is completed by draining the respective filters, scraping 1/4-inch to 1/2-

inch of media off the top of the bed using machinery, then re-filling the filter. The overall scraping process normally lasts 3 to 5 days. Following scraping a filter is normally allowed to ripen before being placed into production. During the ripening period, which lasts anywhere from 1 week to 2 months, the filter develops a biologically active layer on top of the media, which is required to effectively produce potable water.

To quantify the impacts of the proposed deep drawdown to the Treatment Plant, the City has developed a series of bench and pilot scale tests based on anticipated water quality conditions as observed during similar regional drawdown activities in other comparable basins. Below is a summary of the preliminary results:

- Pilot testing confirmed what is suggested by the literature and plant historical data - turbidities above the recommended feedwater turbidity range (<10 NTU) significantly increase filter clogging and reduce filter run durations.
- Pilot testing of 50 NTU feedwater with native sediments collected from Detroit Reservoir at filter loading rates required to produce 20-25 mgd from the Treatment Plant, resulted in filter run times of 11-13 days, or ~88% reduction compared to normal conditions.
- Pilot testing of 100 NTU feedwater with surrogate sediments at filter loading rates required to produce 20-25 mgd from the Treatment Plant resulted in filter run times of 9 days, or 93% reduction compared to normal conditions.
- Preliminary results at higher turbidity loading verify this trend.
- Results from the pilot testing were obtained under controlled laboratory conditions. It is expected that actual run times will be shorter than what has been observed.

Sustainably producing adequate potable water at these reduced run times for an extended duration is unlikely. Significantly reduced filter run durations will lead to a significant increase in annual operating expenses while increasing the load on already heavily burdened City staff and resources. In addition to immediate increased operational costs from filter cleaning, there are longer term cost impacts associated with increased turbidity loading. Pilot results indicate the nature of solids removal during the drawdown period will require deeper sand removal from filters compared to normal cleaning activities and will therefore increase the need for and the frequency of filter re-sanding. Re-sanding is required when sand depths in a filter reach a critical minimum value to ensure effluent water quality meets all drinking water standards and treatment goals. Supplies of additional filter sand, to replace the excessively scraped sand, are also limited and costly to procure, and adding sand to a filter is a costly (estimated at between \$2 and \$3.5 million for each filter) and time-consuming process, typically only occurring every 10 or more years during normal operation.

The Treatment Plant is capable of handling short-term turbidity events of a few days, which are frequently caused by unregulated flows in the fork of the river where the Treatment Plant's intake is located. In such instances, the intake to the City's Treatment Plant is shut and the City relies on limited back-up water supplies and in-town finished water storage. The City may

also rely on temporary alterations of operations to mix groundwater (which itself may be impacted by surface water quality) with the river water. However, the City's back-up supplies of water are limited and still rely on treatment from the Treatment Plant. As a result, if high turbidity levels persist beyond a few days, the City's inability to normally operate its Treatment Plant for an extended period would create a significant risk to the City.

b. The Proposed Drawdown and Impacts on the Treatment Plant

Turbidity in the river water is a problem for the City's water supply because 1) it may force a shutdown of the Treatment Plant, and 2) the turbidity and other pollutants may be too high for the treatment process to effectively remove it to drinking water standards and regulations. The result could produce water for the City's customers that violates standards set by the SDWA. Currently, the water level in Detroit Reservoir is maintained at no lower than 1,450 feet as established by USACE. In the summer, the water level elevation is approximately 1,560 feet. Lowering the water level to 1,395 feet in the fall and/or winter, as proposed in the BiOp, is likely to result in high levels of turbidity due to both scouring of settled solids in the Reservoir and precipitation events causing significant erosion to the newly exposed shoreline. Further, lower water volume means the suspended sediment remains more concentrated in the lake. A reduced water level in the Reservoir will allow for less settling time of suspended solids entering the Reservoir. As a result, much of the sediment may flow through the dam and downstream, creating high turbidity, as shown in the case studies summarized in subsection e) below.

The proposed drawdown would seriously exacerbate the problems described above—such as exposed shoreline erosion and low volume of reservoir water—creating a higher risk of excessively turbid water. Moreover, the drawdown conducted over multiple weeks creates a higher risk of sustained high-turbidity events and an unreasonable risk for the City and its ability to supply adequate potable water for its residents and customers. The impacts of drawing down the reservoir would not be limited to the fall or winter. If the reservoir is nearly empty into the spring, for example, it is unlikely to refill to the regular level of 1,560 feet during the summer, which would result in additional stress on the City's water supplies during peak demand times. As the weather gets warmer, the City's water needs more than double from approximately 25 million gallons per day to approximately 50 million gallons per day. If the Detroit Reservoir is near empty in late spring, the City would be largely reliant on natural flow levels of the river during dry months and simply may not have enough water to meet its customers' needs.

The City's Treatment Plant relies on flows that pass by the facility's intake structure in the river channel on the north side of Geren Island. In order for the Treatment Plant to function properly, the water level at this point of the river must be 2.3 feet or higher, which requires flows of 700 cubic feet per second (cfs) or greater. A sustained drawdown into the spring poses the threat that flow levels in the following months will not be sufficient for the facility to operate. Also, lower water elevations in the reservoir as the weather warms are likely to lead to higher water temperatures in the North Santiam River. Any deviations from normal water quality parameters may impact the operations of the Treatment Plant, including but not limited to changing the filter performance and chemical dosages. Higher water temperatures may also increase the occurrence and magnitude of algal blooms in Detroit Reservoir and the North Santiam River. Algal blooms negatively impact the water treatment process (and wildlife and the environment) by (1) clogging filters and inhibiting the City's ability to meet water demand, (2) producing algal toxins, and (3) creating taste and odor issues caused by Geosmin and 2-

Methylisoborneol (MIB). In summary, the proposed drawdown would be detrimental to water quality and the environment in the North Santiam River.

c. City's Alternative Water Supplies and Risk Scenarios

The City holds municipal water rights in the North Santiam River, and decreasing flows in the river as a result of drawdowns at Detroit Lake would interfere with those rights. If the City were to obtain alternative water supplies sufficient to mitigate the potential impacts described above, the process would take years, not months. Upon the release of the BiOp, the City immediately started studying the impact of the proposed drawdown on its water supply and assessed its ability to rely on alternative sources of water. While not final, the City's studies indicate that the Treatment Plant cannot sustainably accommodate the increase in turbidity that will result from the proposed drawdown. A preliminary operational impacts analysis resulted in the following findings:

- Sustained and peak turbidity of the North Santiam River will significantly increase because of the proposed drawdown, potentially up to a sustained value of 200 NTU based on regional case studies of similar events.
- As a result of the proposed drawdown, increased suspended solids concentrations will be deposited along the banks of the river, which may be re-suspended during future storm events, resulting in elevated turbidity into the Treatment Plant even when a deep drawdown is not actively occurring.
- Recent case studies show that water treatment facilities in similar basins have incurred increases in operational costs and encountered challenges meeting finished water quality goals because of increased raw water turbidity from similar drawdowns.
- The City's Treatment Plant is not designed to sustainably treat raw water sources with sustained turbidities above 10 NTU.
- Excessive filter scraping will reduce the stocks of available filter sands, leading to limitations on the Treatment Plant's production capacity.
- Elevated raw water turbidity events may lead to permanent capacity reduction until the entire filter sand bed is replaced, extending impacts beyond the time of initial turbidity loading.

During the anticipated drawdown events of the Detroit Reservoir, large amounts of organic and inorganic sediment will be exposed to changes in hydraulic patterns that have not been previously experienced. This will result in water quality impacts by changing suspended solids concentrations. Based on those findings, the City has been researching alternative water supplies in preparation of a potential shutdown of the Treatment Plant caused by the Reservoir drawdown. The City's water demand in the fall and winter months averages about 25 million gallons per day, with peak day demand reaching 27 to 28 million gallons per day. At full capacity, the City's existing groundwater supply system can provide up to 17 million gallons per day. The City may be able to secure up to 4.3 million gallons per day from the City of Keizer's water supply, if Keizer has excess supply available. This leaves the City short of at least 3 million gallons per day

to barely accommodate its demand, assuming that the groundwater system of wells can run at full capacity for long periods of time, which is unrealistic. During pilot tests, the City of Keizer connection that would be used by the City to provide up to 4.3 million gallons per day operated at full capacity for only two days before breaking down. Even with the additional supply from the City of Keizer and potential additional wells commissioned as part of the City's existing groundwater supply, the City would be operating without any redundancy, which would constitute an unreasonable and unacceptable risk to human health. Finally, the cost of relying on the City of Keizer's system and on additional wells is estimated at an additional cost of at least \$6,600 per day.

In summary, unless the City takes extraordinary measures to mitigate the impacts, the proposed drawdown would cause irreparable harm to the City's infrastructure in such a way that could either (1) cause a shutdown of the treatment plant or (2) reduce the amount of water and water quality level to such a degree that adequate filtration of the water for health and safety may not be possible. In either scenario, the City would be unable to comply with the provisions of the SDWA and Oregon statutes adopting these standards and thus would be in breach of its duty to provide clean and safe drinking water. Additionally, the harm to the City's residents described above may harm the City's reputation and goodwill that cannot be adequately addressed by money.

d. General Impacts of the Drawdown on Water Quality

High loading of fine suspended solids in water entering the Treatment Plant is a significant risk to maintaining effluent quality below limits for drinking water. States and the EPA establish effluent water quality standards. In Oregon, drinking water quality standards are established under the Oregon Drinking Water Quality Act (OAR 333-061), which includes implementation of national drinking water quality standards (40 CFR 141.73 for turbidity requirements). To maintain public health, each contaminant has either an established maximum contaminant level (MCL) or a recommended treatment technique. For turbidity, the Treatment Plant must produce an effluent turbidity of less than 1.0 NTU 95 percent of the time and less than 5.0 NTU 100 percent of the time.

Multiple literature sources indicate that colloidal clays (i.e., fine sediment type of a diameter less than 2  $\mu\text{m}$ , matching the most expected suspended solids type from the Detroit Reservoir drawdown) can cause higher effluent turbidity from slow sand filters compared to larger particle sizes (AWWARF, 1991; Collins, Youngstrom, and Broder, 2012; EPA, 2024). For example, in one set of pilot slow sand filters in a Boulder, Colorado experiment, the process only removed 20 percent of raw water turbidity when feedwater particles were primarily composed of colloidal clay particles. Elevated filter outlet turbidity can be correlated to decreased cyst and bacteria removal across the filters (AWWARF, 1991). The City's Treatment Plant may not be equipped to remove the biological particles due to the elevated turbidities corresponding with lower water levels in the Reservoir. In addition to risk of passage of biological particulates through the Treatment Plant, biologicals in the filtered water would also increase due to the shorter than normal filter run times expected. Shorter run times will lead to more frequent scraping of the sand filter, which limits the biological maturity of the filters and increases the chances of biological and particulate breakthrough. Accordingly, during a deep drawdown of the Detroit Reservoir, elevated turbidity and biological contaminants in the filtered water of the Treatment Plant are at risk of not meeting MCLs.

It is important to note that increased surface water turbidity could also impact groundwater quality of the City's groundwater sources, depending on the level of infiltration occurring in a specific location, which may be impacted by riverbed material, riverbed depth, and surface water quality. Finally, the proposed drawdown may impact the pH of water from the North Santiam River, which would impose a disproportionate burden on many food and beverage businesses served by the City.

e. Case Studies of Deep Drawdown Events

The impact to the City's Treatment Plant as a result of high turbidity is not just a hypothetical. Several water treatment plants designed for low turbidity raw water have been exposed to elevated raw water turbidity as a result of a deep drawdown of an upstream reservoir. These have consistently resulted in significant operational challenges, operational costs, and risks to finished water quality at the treatment plants:

- Deep drawdowns of the Green Peter Dam have occurred for the past two years on the South Santiam River, resulting in abnormally high turbidity levels in the water and leading to severe disruptions at treatment plants in Lebanon and Sweet Home. The City of Lebanon filed a claim for damages against USACE under the Federal Tort Claims Act on October 11, 2024, claiming \$26 million in damages.
- The initial drawdown of the Cougar Reservoir, which feeds the McKenzie River, created severe operational challenges and treatment costs for the City of Eugene's Hayden Bridge Water Treatment Plant, with turbidity ranging from 50 to 200 NTU for a three-month period. Water quality was monitored during fall drawdowns of the Fall Creek Reservoir, showing recorded values of turbidity ranging from 501 to 814 Formazin Nephelometric Units (FNU). Turbidity remained elevated during the drawdown period for all years in which drawdowns were observed, with erosion and re-suspension of sediment as primary causes for the increased turbidity.
- With regard to the City's Treatment Plant, one noteworthy event provides valuable insight to the Treatment Plant's operations when raw water turbidity spikes in the North Santiam River. In February 1996, due to a 50+ year flood event in Northwest Oregon, the North Santiam River turbidity rose to values in excess of 100 NTU, leading to the shutdown of the Treatment Plant for eight days due to concerns of finished water quality not meeting safe drinking water standards. In response, the City issued a stage three water alert prohibiting the use of water outdoors and asking households and businesses to cut water use.

Those cases suggest that the proposed drawdown is likely to result in the type of impacts to the City's Treatment Plant that could shut down the Treatment Plant and jeopardize City's customers' access to safe drinking water.

f. Summary

In summary, the proposed drawdown will result in elevated raw water turbidity for extended periods of time, resulting in significantly shorter filter run times at the Treatment Plant. This, in turn, is likely to produce finished water quality that does not meet all MCLs and/or result

in a shutdown of the Treatment Plant. Despite its best efforts, the City may not be able to provide sufficient alternative water supplies to meet peak demand during the proposed drawdown periods and months following the proposed drawdown if the Reservoir does not fill back up as needed. As a result, the proposed drawdown may result in a public health emergency by jeopardizing access to safe drinking water for hundreds of thousands of residents, and for hospitals, schools and other public services.

## **II. USACE Did Not Properly Consider the Impacts of the Drawdown to the City's Water Supply**

Under the ESA, lead agencies must identify reasonable and prudent alternatives to a proposed action. Those reasonable and prudent alternatives (“RPAs”) are those that can be implemented consistent with the scope of the agency’s legal authority and jurisdiction. 50 C.F.R. § 402.02. In Section 8 of the BiOp, NMFS concluded that the continued operation of the WVS would jeopardize the continued existence of Upper Willamette River (“UWR”) Chinook salmon and UWR steelhead and destroy or adversely modify their designated habitat. As a result, NMFS developed an RPA that it believes would avoid jeopardizing the continued existence for those species and avoid impacts to their habitat. The RPA is in fact comprised of a number of measures related to adaptive management, flow management, water quality management, fish passage, hatchery management, and habitat improvement. In the BiOp, the proposed drawdown is part of RPA 4 addressing fish passage and more particularly RPA 4.12 addressing juvenile downstream passage in the North Santiam Basin. As part of RPA 4.12.2, the BiOp provides the following:

“[t]he Action Agencies will test and improve effectiveness of interim juvenile fall drawdown operations through Detroit and Big Cliff Reservoirs and Dams with the following operations in years 2025-2028, and will conduct studies to measure effectiveness, as part of the Adaptive Management process with input from the WATER Technical Teams:

- In the fall, draw Detroit Reservoir elevation down to no more than 50 feet above upper RO for passage (1395 ft), when possible given hydrology and hydropower activity in the North Santiam and other subbasins.
- Design and conduct a study, or use existing data, to optimize RO gate openings at Detroit for survival and reduced harm. While also considering temperature implications downstream, as well as turbidity effects.”

The BiOp does not provide any information regarding alternatives that were considered in place of the Detroit Reservoir drawdown that could have met ESA objectives related to UWR Chinook salmon and UWR steelhead. The BiOp also does not discuss at all how the proposed drawdown would impact users in the basin, including the City. The failure to consider or discuss those impacts is even more glaring due to the fact that the USACE and NMFS know that the resulting elevated turbidity will have dramatic impacts on the City’s drinking water infrastructure. In fact, after USACE implemented a similar drawdown at Green Peter Reservoir in 2023, the cities of Lebanon and Sweet Home experienced extreme operational costs, equipment damage, and were forced to implement costly pretreatment system upgrades due to elevated turbidity levels in the South Santiam River. The cities filed a tort claim against USACE to seek compensation for over \$26 million in damages for Lebanon and over \$11 million for Sweet Home.

While NMFS and USACE have a duty to comply with the ESA, this does not necessarily translate into a duty to move forward with the Detroit Reservoir drawdown. Agencies retain considerable discretion in choosing what specific actions to take in order to implement the mandatory goal of the ESA. NMFS's failure to consider alternatives to the drawdown that would not result in a public health emergency for over 200,000 residents is arbitrary, capricious, and inconsistent with its various mandates under federal law. The City has repeatedly expressed concern about the impacts that a drawdown at Detroit Reservoir would have on its drinking water supplies and NMFS seems to have ignored those impacts altogether.

### **III. USACE Has a Duty to Comply with All Federal Laws**

Moving forward with the drawdown would likely violate NEPA, the CWA, and SDWA. Compliance with one statute (ESA) shall not come at the expense of another.

#### **a. NEPA violation**

The consideration of alternatives to a proposed action is the heart of the environmental impact statement. 40 C.F.R. § 1502.14. The alternatives section of an EIS should identify the reasonably foreseeable environmental effects of the proposed action. In doing so, the analysis should “sharply define the issues for the decision maker and the public and provide a clear basis for choice among options.” *Id.* As part of its ESA duties, NMFS (the lead agency) must “[r]igorously explore and objectively evaluate reasonable alternatives to the proposed action, and, for alternatives that the agency eliminated from detailed study, briefly discuss the reasons for their elimination.” 40 C.F.R. § 1502.14(a). NMFS has not addressed how the drawdown would impact water quality in the North Santiam River below Detroit dam and how the proposed action could have lasting effects on the health of the basin beyond the period of the drawdown itself. USACE and NMFS are required to consider and respond to the City's comments as part of its decision-making process and to consider alternatives to the proposed drawdown. Failure to do so would be a violation of NEPA.

#### **b. CWA violation**

The goal of the CWA is to “restore and maintain the chemical, physical, and biological integrity of the Nation's waters.” 33 U.S.C. § 1251(a). The CWA prohibits the discharge of any pollutant from a point source into navigable waters, unless the discharger possesses a valid permit authorizing the release of the particular pollutant discharged in the specific amount, or concentration, contained in the discharge. 33 U.S.C.A. § 1311. While courts have generally recognized that dams are not point sources and operators may not always be required to obtain a National Pollutant Discharge Elimination System (NPDES), it does not mean that USACE and NMFS have no obligation under the CWA. First, some courts have found that dam operators do not need an NPDES permit when dam operation does not involve an addition of a pollutant to navigable waters. *National Wildlife Federation v. Gorsuch*, 693 F.2d 156 (D.C. Cir. 1982); *National Wildlife Federation v. Consumers Power Co.*, 862 F.2d 580 (6th Cir. 1988); *accord Los Angeles Flood Control District v. Natural Resources Defense Council*, 568 U.S. 78 (2013). Second, USACE has been required to obtain an NPDES permit to account for the discharge of oil, grease, and heated water for certain dams on the Columbia River. In fact, USACE seems prepared to apply for an obtain NPDES permits for certain WVS dams in 2025. Third, USACE's obligations under the CWA may be implicated in this case where USACE's actions will directly result in polluted water being discharged from Detroit Dam, including high turbidity and increased temperature.

USACE and NMFS cannot ignore the CWA goals and mandates just to comply with the ESA. Courts previously rejected an argument by USACE that it was not able to comply with Washington water quality standards because of the Endangered Species Act and stated “the Endangered Species Act and the Clean Water Act ‘should be read together, so that compliance with one statute does not come at the expense of the other.’” *Nat'l Wildlife Fed'n v. U.S. Army Corps of Eng'rs*, 132 F.Supp. 2d 876, 891 (D. Or. 2000). USACE’s own policy is to meet downstream water quality standards whenever possible: “[w]hen releases are found to be incompatible with state standards they should be studied to establish an appropriate course of action for upgrading release quality, for the opportunity to improve water quality in support of ecosystem restoration, or for otherwise meeting their potential to best serve downstream water quality needs. Any physical or operational modification to a project (for purposes other than water quality) shall not degrade water quality in the reservoir or project discharges.” *Nat'l Wildlife Fed'n v. U.S. Army Corps of Eng'rs*, 92 F. Supp. 2d 1072, 1076 (D. Or. 2000) (quoting USACE’s *Digest of Water Resources Policies and Authorities*, Engineering Pamphlet 1165-2-1, dated February 15, 1996).

c. SDWA Violation

The SDWA, 42 U.S.C.A. §§ 300f et seq., establishes a federally mandated, state-administered regulatory scheme for the protection of drinking water. Its general purpose is to assure that the water supply systems serving the public meet minimum national standards for protection of public health. *Manufactured House. Inst. v. U.S. Env't Prot. Agency*, 467 F.3d 391, 394 (4th Cir. 2006). The Act regulates contaminants in drinking water supplied by public water systems and empowers the EPA to promulgate regulations protecting the quality of drinking water sources in the United States, which regulations specify dangerous contaminants and prescribe either maximum contaminant levels or satisfactory treatment techniques. It delegated to EPA the responsibility for setting the standards for drinking water contaminants, 42 U.S.C.A. § 300g-1. Under the statute, the EPA must regulate the majority of contaminants in drinking water by formulating maximum contaminant level goals (MCLGs), representing its expert determination of “the level at which no known or anticipated adverse effects on the health of persons occur and which allows an adequate margin of safety.” 42 U.S.C.A. § 300g-1(b)(4)(A). It then must set a maximum contaminant level (MCL) “as close to the [MCLG] as is feasible.” 42 U.S.C.A. § 300g-1(b)(4)(B). Generally, federal agencies are subject to and comply with all federal, state, interstate, and local requirements respecting wellhead protection area, public water systems and any underground injection in the same manner and to the same extent as any person is subject to such requirements. 42 U.S.C.A. § 300j-6(a). The proposed drawdown may impact the City’s surface water and groundwater sources by dramatically increasing turbidity and other pollutants in the North Santiam River. Clean drinking water is a necessity and a failure to provide it can create irreparable harm. *See, e.g., Concerned Pastors for Social Action v. Khouri*, 217 F. Supp. 3d 960, 972 (E.D. Mich. 2016) (“It is abundantly clear that the public relies every day on the ready availability of safe drinking water at the tap. . . . In modern society, when we turn on a faucet, we expect safe drinking water to flow out.”). The action proposed by NMFS and the Corps would jeopardize access to clean drinking water for communities relying on the North Santiam River. USACE needs to take this into account when looking at different RPAs.

**IV. Conclusion**

As proposed in the BiOp for the WVS, the drawdown of Detroit Reservoir would dramatically increase turbidity in the North Santiam River at the time of the drawdown but also

potentially for months afterwards. This in turn could cause permanent harm to the City's drinking water infrastructure and impact hundreds of thousands of residents and businesses who rely on that water. The drawdown as proposed would violate the CWA and the SDWA, and NMFS and USACE's lack of consideration of those impacts would also violate NEPA. The City understands USACE's obligations under the ESA and is committed to the protection of listed fish species in the WVS and would like to work with USACE to find a solution that is protective of fish and wildlife *and* of the City's water supplies. The City also acknowledges and recognizes the Confederated Tribes of Grand Ronde's and other tribal nations' interest in the WVS and welcomes opportunities to speak with the tribes to find a solution. More specifically, the City's preliminary engineering studies suggest that its Treatment Plant could handle a turbidity of up to 50 NTU for up to 13 days before running into operational issues. As such, the City encourages the Corps to better study a stepped approach to the drawdown that would remain below such turbidity triggers to allow the City and the Corps to respond and adapt to changing water quality conditions and ensure continued access to safe drinking water for the City's residents and businesses.