



Gregory L. Geist  
Director

February 6, 2020

Board of County Commissioners  
Clackamas County

Members of the Board:

Approval of an Intergovernmental Agreement with the University of Washington to model Projected Changes in Precipitation Extremes due to Climate Change

<b>Purpose/Outcomes</b>	This Board action will authorize the University of Washington to take multiple global climate models and develop regional climate models in order to forecast changes to precipitation patterns in Clackamas County resulting from climate change. This data will be used to help WES understand climate change impacts to stormwater and wastewater infrastructure.
<b>Dollar Amount and Fiscal Impact</b>	\$24,848 of budgeted funds from the FY 2019-20 budget \$18,452 of requested funds from the FY 2020-21 budget For a total of \$43,300.
<b>Funding Source</b>	WES Surface Water Operating Funds
<b>Duration</b>	Through December 31, 2020
<b>Previous Board Action/Review</b>	N/A
<b>Counsel Review</b>	This agreement has been reviewed and approved by County Counsel on December 30, 2019.
<b>Strategic Plan Alignment</b>	This action: <ol style="list-style-type: none"> <li>1. Aligns with WES's strategic plan to build a strong infrastructure.</li> <li>2. Aligns with the Board's goal of building trust through good government.</li> </ol>
<b>Contact Person</b>	Ron Wierenga, WES Environmental Services Manager x4581
<b>Contract No.</b>	N/A

**BACKGROUND:**

Water Environment Services has been exploring opportunities within the professional clean-water community to help ensure that the utility is more climate change resilient. In 2017, WES staff learned of efforts being undertaken in King County, Washington in collaboration with the University of Washington's Climate Impacts Group ("UW") to conduct innovative new climate modeling to determine how new stormwater and wastewater infrastructure can be designed for climate resilience. WES collaborates with other clean-water utilities through trade organizations, such as the Oregon Association of Clean Water Agencies. In 2018, WES, through Oregon ACWA, engaged in conversations with other partner agencies to explore bringing the successful modeling work to Oregon. Similar efforts were either completed or underway in Snohomish and Thurston Counties in Washington, and the results of the King County work was encouraging, demonstrating excellent applicability to Oregon. Also, the foundational funding provided by King County has made the cost to duplicate this research for other jurisdictions more affordable, as

those costs are not necessary for subsequent efforts. During 2019, WES determined that a collaborative approach with other utilities would allow each to benefit whenever another would use the results of a similar modeling effort for Oregon, and would bring the overall cost down.

The results of this work will enable WES to better understand future precipitation pattern changes, specifically design storms, which will enable better design of stormwater and sanitary sewer infrastructure. This work will be in alignment with goals within the forthcoming Clackamas County Climate Action Plan. WES will co-fund this work in partnership with the City of Portland's Bureau of Environmental Services, Clean Water Services, and the City of Gresham. As noted by the multiple jurisdictions supporting this work, there is strong support across the region for better understanding climate change impacts of precipitation patterns.

UW approved the intergovernmental agreement on January 10, 2020, attached hereto as Exhibit A.

This agreement has been reviewed and approved by County Counsel.

**RECOMMENDATION:**

District staff respectfully recommends that the Board of County Commissioners of Clackamas County, acting as the governing body of Water Environment Services, approve the Intergovernmental Agreement with the University of Washington to model Projected Changes in Precipitation Extremes due to Climate Change.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Greg Geist", with a long horizontal flourish extending to the right.

Greg Geist, Director  
Water Environment Services

**INTERGOVERNMENTAL AGREEMENT  
BETWEEN WATER ENVIRONMENT SERVICES  
AND THE UNIVERSITY OF WASHINGTON**

THIS AGREEMENT (this "Agreement") is entered into and between Water Environment Services ("District"), a political subdivision of the State of Oregon, and the University of Washington, by and through the Climate Impacts Group ("Agency"), collectively referred to as the "Parties" and each a "Party."

**RECITALS**

Oregon Revised Statutes Chapter 190.010 confers authority upon local governments to enter into agreements for the performance of any and all functions and activities that a party to the agreement, its officers or agencies have authority to perform.

District and Agency desire to work together to use new regional climate model simulations of 21st century changes in precipitation to develop projects that are specific to Clackamas County, Oregon, that can be used to inform District's stormwater planning, design, and regulations. Changes in the intensity, duration and frequency of precipitation is expected to negatively impact stormwater, wastewater, and surface water restoration efforts, and lead to water quality concerns.

By this Agreement, Agency agrees to provide the necessary personnel, equipment and expertise to model and analyze rain gage data throughout Clackamas County to produce station-based projections of various interval, durations and time periods which is further described in the Statement of Work and Budget attached hereto as Exhibit A, and District agrees to reimburse Agency for costs associated with the provision of these services as described in this document.

In consideration of the mutual promises set forth below and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

**TERMS**

1. **Term.** This Agreement shall be effective upon execution, and shall expire upon the completion of each and every obligation of the Parties set forth herein, or December 31, 2020, whichever is sooner.
2. **Scope of Work.** The Agency agrees to provide the services further identified in the Scope of Work attached hereto as Exhibit A and incorporated herein ("Work").
3. **Consideration.** The District agrees to pay Agency, from available and authorized funds, a sum not to exceed **Forty Three Thousand and Three Hundred Dollars** (\$43,300.00) for accomplishing the Work required by this Agreement.
4. **Payment.** Unless otherwise specified, the Agency shall submit quarterly invoices for Work performed and shall include the total amount billed to date by the Agency prior to the current invoice. Invoices shall describe all Work performed with particularity, by whom it was performed, and shall itemize and explain all expenses for which reimbursement is claimed. Payments shall be made to Agency following the District's review and approval of invoices submitted by Agency. Agency shall not submit invoices for, and the District will not pay, any amount in excess of the maximum compensation amount set forth above.

**5. Representations and Warranties.**

- A. *Agency Representations and Warranties:* Agency represents and warrants to District that Agency has the power and authority to enter into and perform this Agreement, and this Agreement, when executed and delivered, shall be a valid and binding obligation of Agency enforceable in accordance with its terms.
- B. *District Representations and Warranties:* District represents and warrants to Agency that District has the power and authority to enter into and perform this Agreement, and this Agreement, when executed and delivered, shall be a valid and binding obligation of District enforceable in accordance with its terms.
- C. The warranties set forth in this section are in addition to, and not in lieu of, any other warranties provided.

**6. Termination.**

- A. Either the District or the Agency may terminate this Agreement at any time upon thirty (30) days written notice to the other party.
- B. Either the District or the Agency may terminate this Agreement in the event of a breach of the Agreement by the other. Prior to such termination however, the Party seeking the termination shall give the other Party written notice of the breach and of the Party's intent to terminate. If the breaching Party has not entirely cured the breach within fifteen (15) days of deemed or actual receipt of the notice, then the Party giving notice may terminate the Agreement at any time thereafter by giving written notice of termination stating the effective date of the termination. If the default is of such a nature that it cannot be completely remedied within such fifteen (15) day period, this provision shall be complied with if the breaching Party begins correction of the default within the fifteen (15) day period and thereafter proceeds with reasonable diligence and in good faith to effect the remedy as soon as practicable. The Party giving notice shall not be required to give more than one (1) notice for a similar default in any twelve (12) month period.
- C. The District or the Agency shall not be deemed to have waived any breach of this Agreement by the other Party except by an express waiver in writing. An express written waiver as to one breach shall not be deemed a waiver of any other breach not expressly identified, even though the other breach is of the same nature as that waived.
- D. The District may terminate this Agreement upon thirty (30) days' notice in the event the District fails to receive expenditure authority sufficient to allow the District, in the exercise of its reasonable administrative discretion, to continue to make payments for performance of this Agreement, or if federal or state laws, regulations or guidelines are modified or interpreted in such a way that either the Work under this Agreement is prohibited or District is prohibited from paying for such Work from the planned funding source.
- E. Any termination of this Agreement shall not prejudice any rights or obligations accrued to the Parties prior to termination.

**7. Indemnification.**

- A. Subject to the limits of the Oregon Constitution and the Oregon Tort Claims Act or successor statute, the District agrees to indemnify, save harmless and defend the

Agency, its officers, elected officials, agents and employees from and against all costs, losses, damages, claims or actions and all expenses incidental to the investigation and defense thereof arising out of or based upon damages or injuries to persons or property caused by the negligent or willful acts of the District or its officers, elected officials, owners, employees, agents, or its subcontractors or anyone over which the District has a right to control.

B. Subject to the limits of the Oregon Constitution and the Oregon Tort Claims Act or successor statute, the Agency agrees to indemnify, save harmless and defend the District, its officers, elected officials, agents and employees from and against all costs, losses, damages, claims or actions and all expenses incidental to the investigation and defense thereof arising out of or based upon damages or injuries to persons or property caused by the negligent or willful acts of the Agency or its officers, elected officials, owners, employees, agents, or its subcontractors or anyone over which the Agency has a right to control.

8. **Insurance.** The Parties agree to maintain levels of insurance, or self-insurance, sufficient to satisfy their obligations under this Agreement and all requirements under applicable law, including, but not limited to, ORS Chapter 30.282.

9. **Notices; Contacts.** Legal notice provided under this Agreement shall be delivered personally, by email or by certified mail to the individuals identified below. Any communication or notice so addressed and mailed shall be deemed to be given upon receipt. Any communication or notice sent by electronic mail to an address indicated herein is deemed to be received 2 hours after the time sent (as recorded on the device from which the sender sent the email), unless the sender receives an automated message or other indication that the email has not been delivered. Any communication or notice by personal delivery shall be deemed to be given when actually delivered. Either Party may change the Party contact information, or the invoice or payment addresses by giving prior written notice thereof to the other Party at its then current notice address.

A. Ron Wierenga or their designee will act as liaison for the District.

**Contact Information:**

Ron Wierenga, Environmental Services Manager  
Water Environment Services  
150 Beaver Creek Rd., Suite 430  
Oregon City, OR 97145

Phone: 503-742-4581  
Email: [rwierenga@clackamas.us](mailto:rwierenga@clackamas.us)

B. Carol Rhodes or their designee will act as liaison for the Agency.

**Contact Information:**

Carol Rhodes, Director, Office of Sponsored Programs  
Phone: 206-543-4043  
e-mail: [osp@uw.edu](mailto:osp@uw.edu)

## 10. General Provisions.

- A. **Oregon Law and Forum.** This Agreement, and all rights, obligations, and disputes arising out of it will be governed by and construed in accordance with the laws of the State of Oregon and the ordinances of District and Clackamas County without giving effect to the conflict of law provisions thereof. Any claim between County and Agency that arises from or relates to this Agreement shall be brought and conducted solely and exclusively within the Circuit Court of Clackamas County for the State of Oregon; provided, however, if a claim must be brought in a federal forum, then it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon. In no event shall this section be construed as a waiver by the District of any form of defense or immunity, whether sovereign immunity, governmental immunity, immunity based on the Eleventh Amendment to the Constitution of the United States or otherwise, from any claim or from the jurisdiction of any court. Agency, by execution of this Agreement, hereby consents to the in personam jurisdiction of the courts referenced in this section.
- B. **Compliance with Applicable Law.** Both Parties shall comply with all applicable local, state and federal ordinances, statutes, laws and regulations. All provisions of law required to be a part of this Agreement, whether listed or otherwise, are hereby integrated and adopted herein. Failure to comply with such obligations is a material breach of this Agreement.
- C. **Non-Exclusive Rights and Remedies.** Except as otherwise expressly provided herein, the rights and remedies expressly afforded under the provisions of this Agreement shall not be deemed exclusive, and shall be in addition to and cumulative with any and all rights and remedies otherwise available at law or in equity. The exercise by either Party of any one or more of such remedies shall not preclude the exercise by it, at the same or different times, of any other remedies for the same default or breach, or for any other default or breach, by the other Party.
- D. **Access to Records.** Agency shall retain, maintain, and keep accessible all records relevant to this Agreement ("Records") for a minimum of six (6) years, following Agreement termination or full performance or any longer period as may be required by applicable law, or until the conclusion of an audit, controversy or litigation arising out of or related to this Agreement, whichever is later. Agency shall maintain all financial records in accordance with generally accepted accounting principles. All other Records shall be maintained to the extent necessary to clearly reflect actions taken. During this record retention period, Agency shall permit the District's authorized representatives' access to the Records at reasonable times and places for purposes of examining and copying.
- E. **Work Product.** All work products, including reports, research data in hard copy or electronic form that result from this IGA, are the exclusive property of UW, with the exception WRF projects as described in Task 1 of Exhibit A, which shall remain the exclusive intellectual property of UW. However, UW agrees to provide District with

a non-exclusive license to use the work product produced under this IGA. District reserves the right to retain copies of such work product items for its records and UW agrees to share any later analysis with District.

- F. **Hazard Communication.** Reserved.
- G. **Debt Limitation.** This Agreement is expressly subject to the limitations of the Oregon Constitution and Oregon Tort Claims Act, and is contingent upon appropriation of funds. Any provisions herein that conflict with the above referenced laws are deemed inoperative to that extent.
- H. **Severability.** If any provision of this Agreement is found to be unconstitutional, illegal or unenforceable, this Agreement nevertheless shall remain in full force and effect and the offending provision shall be stricken. The Court or other authorized body finding such provision unconstitutional, illegal or unenforceable shall construe this Agreement without such provision to give effect to the maximum extent possible the intentions of the Parties.
- I. **Integration, Amendment and Waiver.** Except as otherwise set forth herein, this Agreement constitutes the entire agreement between the Parties on the matter of the Project. There are no understandings, agreements, or representations, oral or written, not specified herein regarding this Agreement. No waiver, consent, modification or change of terms of this Agreement shall bind either Party unless in writing and signed by both Parties and all necessary approvals have been obtained. Such waiver, consent, modification or change, if made, shall be effective only in the specific instance and for the specific purpose given. The failure of either Party to enforce any provision of this Agreement shall not constitute a waiver by such Party of that or any other provision.
- J. **Interpretation.** The titles of the sections of this Agreement are inserted for convenience of reference only and shall be disregarded in construing or interpreting any of its provisions.
- K. **Independent Contractor.** Each of the Parties hereto shall be deemed an independent contractor for purposes of this Agreement. No representative, agent, employee or contractor of one Party shall be deemed to be a representative, agent, employee or contractor of the other Party for any purpose, except to the extent specifically provided herein. Nothing herein is intended, nor shall it be construed, to create between the Parties any relationship of principal and agent, partnership, joint venture or any similar relationship, and each Party hereby specifically disclaims any such relationship.
- L. **No Third-Party Beneficiary.** Agency and District are the only parties to this Agreement and are the only parties entitled to enforce its terms. Nothing in this Agreement gives, is intended to give, or shall be construed to give or provide any benefit or right, whether directly, indirectly or otherwise, to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of the terms of this Agreement.

- M. **Subcontract and Assignment.** Agency shall not enter into any subcontracts for any of the work required by this Agreement, or assign or transfer any of its interest in this Agreement by operation of law or otherwise, without obtaining prior written approval from the District, which shall be granted or denied in the District's sole discretion. District's consent to any subcontract shall not relieve Agency of any of its duties or obligations under this Agreement.
- N. **Counterparts.** This Agreement may be executed in several counterparts (electronic or otherwise), each of which shall be an original, all of which shall constitute the same instrument.
- O. **Survival.** All provisions in Sections 5, 7, and 10 (A), (C), (D), (G), (H), (I), (J), (L), (Q), (T), and (U) shall survive the termination of this Agreement, together with all other rights and obligations herein which by their context are intended to survive.
- P. **Necessary Acts.** Each Party shall execute and deliver to the others all such further instruments and documents as may be reasonably necessary to carry out this Agreement.
- Q. **Time is of the Essence.** Agency agrees that time is of the essence in the performance this Agreement.
- R. **Successors in Interest.** The provisions of this Agreement shall be binding upon and shall inure to the benefit of the parties hereto, and their respective authorized successors and assigns.
- S. **Force Majeure.** Neither Agency nor District shall be held responsible for delay or default caused by events outside of the Agency or District's reasonable control including, but not limited to, fire, terrorism, riot, acts of God, or war. However, Agency shall make all reasonable efforts to remove or eliminate such a cause of delay or default and shall upon the cessation of the cause, diligently pursue performance of its obligations under this Agreement.
- T. **Confidentiality.** Reserved.
- U. **No Attorney Fees.** In the event any arbitration, action or proceeding, including any bankruptcy proceeding, is instituted to enforce any term of this Agreement, each party shall be responsible for its own attorneys' fees and expenses.

**IN WITNESS HEREOF**, the Parties have executed this Agreement by the date set forth opposite their names below.

**Water Environment Services**

**University of Washington**

\_\_\_\_\_  
Chair, Board of County Commissioners

Donna Parks, Compliance Analyst  
[name/title]

\_\_\_\_\_  
Date

January 10, 2020  
Date



Exhibit A  
SCOPE OF WORK

## University of Washington Scope of Work

# Climate Change and Stormwater for Clackamas County Water Environment Services: *Projected Changes in Precipitation Extremes*

## Objective

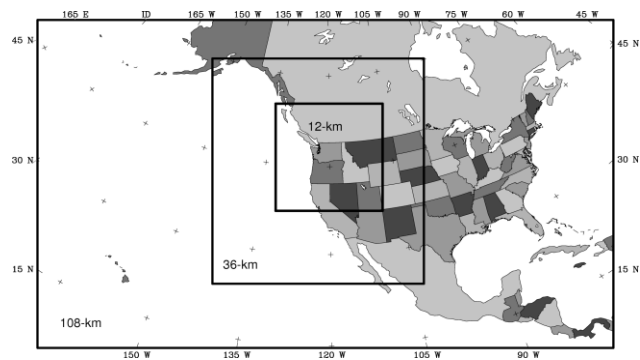
Use new regional climate model simulations of 21<sup>st</sup> century changes in precipitation to develop projections that are specific to Clackamas County Water Environment Services (WES) in Oregon. Develop tailored results that are designed to address stormwater planning needs.

## Background

Changes in the intensity, duration, and frequency of precipitation may negatively affect stormwater and wastewater treatment facilities, exacerbate landslide and urban flood risk, and lead to other public safety and water quality concerns.

King County has recently awarded funding to the UW Climate Impacts Group (CIG) to develop two new regional climate model (RCM) simulations of changing precipitation. These simulations are an improvement over statistically-based methods for “downscaling” global climate model output because they explicitly simulate the physics of changing local processes. For precipitation, the key distinction is that they simulate the interactions of weather systems with the complex terrain of the Pacific Northwest (Salathé et al. 2014). This is of critical importance, since for many jurisdictions climate change impacts on stormwater will primarily be felt via changes in precipitation intensity, which statistical downscaling is not able to capture reliably.

With support and collaboration from the Climate Impacts Group (CIG), Cliff Mass (Professor, Atmospheric Sciences, University of Washington) has recently produced a total of 12 new regional climate model (RCM) projections. The new RCM simulations were performed using the Weather Research and Forecasting (WRF, <http://www.wrf-model.org>; Skamarock et al., 2005) community mesoscale



**Figure 1.** Domains for the WRF model: Western US at 36-km and Pacific Northwest at 12-km grid.

model, following the configuration developed in previous work. Specifically, nested grids are used to downscale from the global atmospheric fields with grid spacings of approximately 100-200 km. The inner 12-km domain spans the region from northern California to southern British Columbia and from the coastal ocean to the Rocky Mountains (Figure 1).

Simulations were performed using WRF version 3.2 implemented following Salathé et al. (2010, 2014). Initial and boundary conditions were provided by the following GCMs, all driven by the high-end RCP 8.5 greenhouse gas scenario (Van Vuuren et al., 2011):<sup>1</sup>

ACCESS1-0, ACCESS1-3, bcc-csm1-1, CanESM2, CCSM4, CSIRO-Mk3-6-0, FGOALS-g2, GFDL-CM3, GISS-E2-H, MIROC5, MRI-CGCM3, and NorESM1-M

Lateral boundary conditions and sea surface temperature (SST) were updated once every six hours. Thirty vertical levels were used in the model spanning from the surface to 10 hPa, with the finest vertical resolution in the boundary layer. WRF runs were initialized three months prior to the start date of each simulation as spin-up. The physics parameterizations for microphysics, cumulus parameterization, planetary boundary layer, land surface models, and longwave and shortwave radiation are summarized in Lorente et al. (2018). Although we did not perform an extensive validation of the model's performance, previous research has established that it captures the essential characteristics of local-scale weather variations in the Pacific Northwest (e.g., Dulière et al. 2011). Simulations were performed for the years 1970 through 2099. Results were archived at hourly intervals following Greenwich Mean Time (GMT, which is 8 hours ahead of local standard time in the Pacific Northwest).

The proposed work will analyze the results of these new simulations, producing updated heavy precipitation projections that are specific to interested jurisdictions in western Oregon. These will be evaluated for changes in user-specified metrics, selected for direct application to planning and decision-making.

An example of the products that can be anticipated from this work can be seen on the project page for our work with King County and other Washington State jurisdictions:

<https://cig.uw.edu/our-work/applied-research/heavy-precip-and-stormwater/>

The tasks below describe the specific work that will be undertaken as part of the proposed project.

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<sup>1</sup> For more information on regional climate projections and greenhouse gas scenarios, see Chapters 1 and 2 of the CIG *State of Knowledge* report on Puget Sound: <https://cig.uw.edu/resources/special-reports/ps-sok/>

## ***Task 1. Post-Processing and Gridded Statistics***

Research on global model projections typically suggest that 5-10 simulations are needed to adequately estimate the mean and range of future conditions. Under separate funding from the Amazon Catalyst program, Cliff Mass (Professor, Atmospheric Sciences) has recently created an additional 11 WRF projections, all based on the high-end RCP 8.5 greenhouse gas scenario. Although the runs have been completed, additional funding is needed for post-processing and the analysis needed to assess impacts on stormwater.

CIG will post-process the new ensemble of WRF projections for use in the analyses described under Task 2. In addition, CIG researchers will produce gridded estimates, on the native WRF 12 km grid, of the percent change in select precipitation statistics. These will be evaluated for the same return intervals, durations, and time periods assessed for Washington State jurisdictions:

- Return Intervals: 2-, 5-, 10-, 25-, 50-, and 100-year events;
- Precipitation Durations: 1-, 2-, 3-, 6-, 12-, 24-, 48-, 72-, 120-, 240-, and 360-hours
- Time Periods: Historical (1970-2005), 2030s (2020-2049), 2050s (2040-2069), and 2080s (2070-2099).

## ***Task 2. Station-Based Projections***

CIG will use the new WRF projections to produce hourly precipitation time series and precipitation statistics for the locations listed in Table 1. For each rain gauge, CIG researchers will produce an hourly record of simulated precipitation for the years 1970-2099, along with percent changes in the same statistics described above under Task 1. CIG researchers will work with Clackamas County staff to determine the best approach to quality control and interpretation of the observations.

Bias corrected model time series files will be produced for each rain gauge location with sufficient observations, using the approach described by Mauger et al. (2017). Testing will determine the length and quality of record needed to ensure a reliable bias correction. This may mean that bias corrected estimates are not provided for some weather stations.

**Table 1.** Rain gauges that will be included in the proposed analysis.

Network	Name	ID	Lat. / Lon.	Dates
NOAA HPD	Detroit Dam	352292	44.7241N / 122.2547W	1954/11/18 – 2013/12/23
	Marion Forks Fish Hatchery	355221	44.6125N / 121.9486W	1948/07/05 – 2013/12/23
	Portland International Airport	356751	45.5958N / 122.6093W	1948/11/03 – 2013/12/31
	Salem Airport McNary Field	357500	44.9050N / 123.0011W	1948/07/05 – 2013/12/31
HYDRA (BES)	Albina Pump Station	117	45.5408N / 122.6776W	02/25/2000 – 09/30/2019
	Ankeny Fire Station	001	45.5221N / 122.6706W	05/18/1995 – 09/30/2019
	Ankeny Pump Station	108	45.5227N / 122.6693W	06/14/1984 – 08/20/1991
	Arleta School	174	45.4862N / 122.5959W	04/26/2002 – 09/30/2019
	Beaumont School	152	45.5487N / 122.6213W	06/19/1995 – 09/30/2019
	Bonny Slope BSD	230	45.5395N / 122.7978W	04/18/2019 – 09/30/2019
	Bonny Slope School	058	45.5455N / 122.7837W	05/21/1976 – 03/08/2017
	Bridlemile School	311	45.4916N / 122.7245W	04/02/1976 – 03/29/1984
	Chapman School	312	45.5333N / 122.7057W	04/02/1976 – 08/23/1984
	Children's Museum	192	45.5086N / 122.7179W	03/11/2005 – 09/30/2019
	Cleveland High School	229	45.4985N / 122.6388W	06/22/1918 – 09/30/2019
	Collins View School	010	45.4541N / 122.6843W	04/02/1976 – 09/30/2019
	Facilities Planning	313	45.5149N / 122.6735W	04/05/1976 – 06/13/1984
	Fernwood School	012	45.5368N / 122.6315W	04/02/1976 – 09/30/2019
	Fire Station Number 1	314	45.5218N / 122.6707W	04/30/1976 – 05/30/1991
	Fire Station Number 9	315	45.5163N / 122.6278W	02/16/1977 – 06/06/1985
	Fire Training Center	316	45.5016N / 122.6534W	03/28/1980 – 08/15/1994
	Fremont Drive (Old)	317	45.5422N / 122.5713W	07/21/1981 – 01/15/1986
	Fremont Pump Station	072	45.5422N / 122.5713W	01/16/1986 – 08/12/2010
	Glencoe School	175	45.5168N / 122.6112W	11/04/2002 – 09/30/2019
	Grant Park Unsumped	162	45.5367N / 122.6172W	02/03/2000 – 10/21/2004
	Gresham Fire Station	020	45.5076N / 122.4373W	12/07/1990 – 09/30/2019
	Harney Pump Station	064	45.4623N / 122.6432W	07/01/1991 – 09/30/2019
	Holgate Pump Station	021	45.4895N / 122.5244W	05/31/1991 – 02/16/2012
	Holy Family School	319	45.4693N / 122.6232W	04/02/1976 – 08/02/1988
	Irvington School	228	45.5402N / 122.6520W	06/20/2018 – 09/30/2019
	Kelly School	014	45.4729N / 122.5701W	04/02/1976 – 09/30/2019
	Madison School	213	45.5433N / 122.5808W	12/03/2009 – 06/03/2019
	Maplewood Elementary School	172	45.4707N / 122.7302W	05/31/2002 – 09/30/2019
	Metro Learning Center	173	45.5268N / 122.6932W	04/26/2002 – 09/30/2019
	Mt. Tabor Yard	006	45.5057N / 122.5966W	04/02/1976 – 09/30/2019
	Multnomah Raingage	181	45.5127N / 122.6601W	10/21/2004 – 09/30/2019
OPB	214	45.4741N / 122.6712W	05/07/2010 – 09/30/2019	
Park SE Yard	217	45.4817N / 122.5241W	12/15/2011 – 09/30/2019	
Pleasant Valley School	145	45.4648N / 122.4796W	04/30/1976 – 09/30/2019	
Powell Shops (Fire Bureau)	323	45.5016N / 122.6534W	04/02/1976 – 07/24/1979	

Network	Name	ID	Lat. / Lon.	Dates
	Sunnyside School	171	45.5146N / 122.6293W	02/12/2002 – 09/30/2019
	SW 12th & Clay	164	45.5152N / 122.6875W	06/29/2000 – 09/30/2019
	Sylvan School	161	45.5099N / 122.7370W	03/21/2000 – 09/30/2019
	Sylvania PCC	004	45.4369N / 122.7318W	04/01/1976 – 09/30/2019
	Thomas Pump Station	120	45.4939N / 122.6727W	08/16/1994 – 07/31/2009
	Vermont Hills Pump Station	089	45.4770N / 122.7362W	03/31/1984 – 07/23/2002
	West T.V. School	300	45.5153N / 122.7671W	05/24/1976 – 05/14/1995
	Wilson High School	227	45.4776N / 122.6898W	06/14/2018 – 09/30/2019
	Yeon Pump Station	121	45.5462N / 122.7103W	08/25/1984 – 09/30/2019

## ***Deliverables and Timeline***

Proposed project dates: 12/1/2019-06/30/2020.

<b>Deliverable</b>	<b>Due Date</b>
Kick-off meeting	12/31/2019
Quarterly project status reports.	12/31/2019, 03/31/2020, 06/30/2020, 09/30/2020, 12/31/2020.
Gridded percent change statistics for all durations and return intervals	03/31/2020
Results from evaluation of bias-correction approach	06/30/2020
Hourly time series of precipitation for historical and future projections, developed for the rain gauges listed in Table 1. Separate files will be created for both raw and bias-corrected model output.	09/30/2020
Brief technical report describing the methodology and summarizing the results.	12/31/2020
Presentation on the results, limitations, and interpretation.	12/31/2020

## Budget

	FY 2020	FY 2021	<i>Total</i>
Salary	\$12,163	\$9,049	\$21,212
Benefits	\$3,817	\$2,817	\$6,634
Indirect	\$8,868	\$6,586	\$15,454
Total	\$24,848	\$18,452	<b>\$43,300</b>

*\* Fiscal Year ("FY") is defined as going from July 1<sup>st</sup> through June 30<sup>th</sup>.*





Gregory L. Geist  
Director

February 6, 2020

Water Environment Services Board  
Board of County Commissioners  
Clackamas County

Members of the Board:

Approval of an Assignment of Easement Agreement with  
Fischer's Forest Park Property Owners' Association for Lot 27 Fischer's Forest Park

<b>Purpose/Outcomes</b>	Approval of an assignment agreement transferring a sewer easement from the County to Water Environment Services.
<b>Dollar Amount and Fiscal Impact</b>	No fiscal impact.
<b>Funding Source</b>	N/A
<b>Duration</b>	Perpetual until terminated by the Board.
<b>Previous Board Action/Review</b>	N/A
<b>Counsel Review</b>	January 29, 2020
<b>Strategic Plan Alignment</b>	<ol style="list-style-type: none"> <li>1. This initiative supports the County Strategic Plan of building a strong infrastructure that delivers services to customers.</li> <li>2. This initiative supports the WES Strategic Plan to provide partner communities with reliable wastewater infrastructure to serve existing customers and support future growth.</li> </ol>
<b>Contact Person</b>	<i>Jessica Rinner, Civil Engineering Supervisor, x4551</i>
<b>Contract No.</b>	<i>Easement No. 73 25894</i>

**BACKGROUND:**

In 1973, prior to the formation of Clackamas County Service District No.1 (“CCSD1”), sewer easements were granted to Clackamas County, for use by its Department of Utilities. However, since then, the County formed two service districts to provide wastewater services within the County, the Tri-City Service District (“TCSD”) and CCSD1.

On November 3<sup>rd</sup>, 2016, TCSD and CCSD1 entered into an intergovernmental agreement (“IGA”) to form a municipal partnership entity named Water Environment Services (“WES”) that provides regional wastewater services within Clackamas County. As a part of that IGA, TCSD and CCSD1 agreed to transfer all real property assets, including easements, over to WES.

In order to allow for efficient administration of WES’ business and resources in managing these easements, WES staff recommends the County transfer the sewer easements it holds to WES.

**RECOMMENDATION:**

WES staff recommends the Board, acting as the governing body of Water Environment Services, approve the assignment agreement transferring the sewer easement from Fischer's Forest Park Property Owners' Association for Lot 27 from the County to Water Environment Services.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Greg Geist", with a long horizontal flourish extending to the right.

Greg Geist  
Director, Water Environment Services

Attachments:  
Assignment Agreement

## ASSIGNMENT OF EASEMENT

THIS ASSIGNMENT OF EASEMENT ("**Assignment**") is dated \_\_\_\_\_, 2020, by and between **Clackamas County**, a political subdivision of the State of Oregon ("**Assignor**"), and **Water Environment Services**, an intergovernmental entity formed pursuant to ORS Chapter 190 ("**Assignee**"), with reference to the following:

### RECITALS:

- A. Assignor was the original recipient of a sewer easement identified as Document No. 1973-025894 recorded in the Clackamas County Deed Records on August 15, 1973 (the "Easement"), a copy of which is attached hereto and incorporated herein as **Exhibit A**.
- B. The Assignee is the sewer utility within the applicable region of Clackamas County where the easement is located, whom both parties agree should be the holder of a sewer easement.
- C. The Assignor desires to transfer the interest in the Easement to Assignee.

### AGREEMENT:

NOW, THEREFORE, for value, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

#### 1. Assignment

Assignor hereby assigns, transfers and sets over unto Assignee all of Assignor's right, title, and interest in and to the Easement. The Assignment shall be effective upon the last date of signature of the parties ("Effective Date").

#### 2. Assumption

Assignee hereby accepts such assignment and agrees to be bound by and comply with all of the duties and obligations identified in the terms of the Easement from and after the Effective Date.

#### 3. Indemnification

- 3.1 Assignor hereby agrees to indemnify Assignee for, defend Assignee against, and hold Assignee harmless from and against any and all liabilities, losses, costs, damages, expenses, claims, suits or demands resulting from Assignor's failure to perform any of its duties or fulfill any of its obligations under the Easement prior to the Effective Date.
- 3.2 Assignee hereby agrees to indemnify Assignor for, defend Assignor against, and hold Assignor harmless from and against any and all liabilities, losses, costs, damages, expenses, claims, suits or demands resulting from Assignee's failure

to perform any of its duties or fulfill any of its obligations under the Easement on and after the Effective Date.

**4. Further Assurances**

The parties agree to execute, acknowledge where appropriate and deliver such other or further reasonable instruments of assignment as the other party may reasonably require to confirm the foregoing assignment, or as may be otherwise reasonably requested by Assignor or Assignee to carry out the intent and purposes hereof.

**5. Binding Effect**

This Assignment shall inure to the benefit of, and be binding upon, each of the parties hereto and their respective successors and assigns.

**6. Counterparts**

This Assignment may be signed in one or more counterparts, each of which shall be deemed an original and all of which counterparts shall be deemed one and the same instrument.

IN WITNESS WHEREOF, Assignor and Assignee have executed this Assignment the day and year first above written.

**FOR ENTITY SIGNATURES:**

**ASSIGNOR: CLACKAMAS COUNTY**

**ASSIGNEE: WATER ENVIRONMENT SERVICES**

By: \_\_\_\_\_  
Chair Date

By: \_\_\_\_\_  
Chair Date

Witness: \_\_\_\_\_  
Date

Witness: \_\_\_\_\_  
Date

Approved As to Form:

  
\_\_\_\_\_  
County Counsel Date 1/29/20

73-1001

- Record -  
- make copy

Exhibit A

EASEMENT

KNOW ALL MEN BY THESE PRESENTS, that FISCHER'S FOREST PARK PROPERTY OWNERS' ASSOCIATION, an Oregon corporation, hereinafter referred to as the grantor, for the consideration hereinafter stated paid by CLACKAMAS COUNTY, OREGON, and the mutual benefits hereby gained, which consideration and benefits are hereby acknowledged and receipted by the grantor, does hereby grant, bargain, sell and convey unto Clackamas County, Oregon, a permanent easement and right to lay down, construct, reconstruct, replace, maintain, operate, inspect and perpetually care for a sewer and all related facilities through, under and along the following described real property in the County of Clackamas and State of Oregon:

Lot 27 Fischer's Forest Park on a duly recorded plat located in Section 32, Township 2 South, Range 3 East, Willamette Meridian, County of Clackamas, State of Oregon.

It is understood and agreed that no buildings shall be erected upon said easement premises without the written consent of Clackamas County, Oregon, and that the said County shall replace and restore as nearly as practicable the surface of said easement premises and any water lines, storm sewers or other improvements after construction and maintenance work on said sewer.

It is further understood that the construction by Clackamas County shall be done in such a way as to not interfere with any existing improvements on or under the aforesaid described real property.

The above conveyance of a permanent easement and perpetual maintenance of improvements by grantee is for so

long as said property is used for the stated purpose. When said easement is no longer so used, the interest of the grantee shall automatically terminate.

This instrument does not grant or convey unto Clackamas County, Oregon any right or title to the surface of the soil along the line of said sewer except for the purpose of laying down, constructing, reconstructing, replacing, maintaining, operating, inspecting and perpetually caring for said sewer and related facilities. This instrument gives immediate possession of the foregoing premises.

The true and actual consideration for this transfer is \$ - none - paid herewith, \$ - none - to be paid prior to construction, but is a gift to grantee from grantor.

The only other persons, firms or corporations known by grantor to have any interest in the foregoing premises are: none.

IN WITNESS WHEREOF, the grantor above named has heretofore set its hand and seal this 20<sup>th</sup> day of May, 1970.

FISCHER'S FOREST PARK  
PROPERTY OWNERS' ASSOCIATION

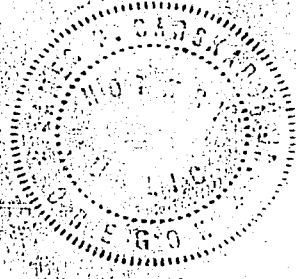
By Roger E. Amick  
President

G. Clayton Teach  
Secretary

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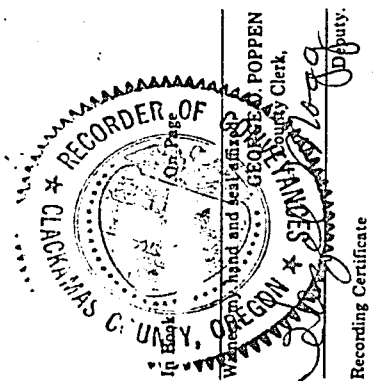
STATE OF OREGON )  
 ) ss.  
County of Clackamas )

On this \_\_\_\_\_ day of May, 1970, before me personally appeared Roger E. Smelser and C. Clayton Teach, who being duly sworn did say that he, Roger E. Smelser, is the President, and he, C. Clayton Teach, is the Secretary, of Fischer's Forest Park Property Owners' Association, an Oregon corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors; and Roger E. Smelser and C. Clayton Teach acknowledged said instrument to be its voluntary act and deed.



*James L. ...*  
Notary Public for Oregon  
My Commission Expires 3 April 1972

STATE OF OREGON, }  
County of Clackamas, } ss.  
I, George D. Poppen, County Clerk, Ex-Officio  
Recorder of Conveyances and Ex-Officio Clerk  
of the Circuit Court of the State of Oregon, for  
the County of Clackamas, do hereby certify that  
the within instrument of writing was received by  
me and recorded in the records of  
**DEED**  
1973 AUG 15 PM 2 45  
73 25894  
of said County at



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