PROFESSIONAL SERVICES AGREEMENT

PREAMBLE

This Contract, made and entered into upon the later day stated on the signature page (the "Effective Date") by and between **KENNEDY JENKS,** hereinafter called "Contractor", and the **CITY OF SANDY**, a municipal corporation of the State of Oregon, hereinafter called "City".

WHEREAS, City is in the process of executing a large-scale program titled the Sandy Clean Water Program ("SCWP") to upgrade its wastewater collection and treatment facilities, and protect the environment while planning for a growing community; and

WHEREAS, the City anticipates needing various minor upgrades to its wastewater treatment facility in order to provide a more reliable and resilient resource; and

WHEREAS, the City solicited proposals from engineering firms via the RFP attached hereto as Exhibit A, in order to provide on-call, routine engineering services and related consulting services for upgrades in connection with the SCWP and City water treatment facility (the "Purpose"); and

WHEREAS, upon evaluating all responses, the City awarded one such proposal to the Contractor.

W I T N E S S E T H:

The parties hereto mutually covenant and agree to and with each other as follows:

1. ENUMERATION OF CONTRACT DOCUMENTS

The "Contract Documents" include the following and together complete the entirety of the Contract. In the event of a conflict between the terms of these Contract Documents, the terms shall take precedence in the order enumerated below:

A. This Contract;
B. Exhibit A Request for Proposal; and
C. Exhibit B Form of Task Order

2. TASK ORDERS

City may identify the need for the provision of services under this Contract in connection with the Purpose, from time to time and for the duration of the Term. When City identifies a need for the provision of services under this Contract in connection with the Purpose, City may issue a Task Order for such services to Contractor. Contractor shall review the Task Order and promptly respond with any suggested edits, or execute the Task Order, in order to provide such services. The provision of services under this Contract shall be accomplished only through the negotiation and full execution of a Task Order substantially in the form set forth in Exhibit B. Such fully executed Task Order shall include, at minimum, the services and deliverables to be completed by Contractor, the schedule for such services, and the fee for such services and any associated fee schedule.

Each Task Order fully executed pursuant to this Contract shall not individually exceed five hundred thousand dollars ($500,000). In total, all fees contemplated under any and all Task Orders fully executed pursuant to this Contract shall not cumulatively exceed one million dollars ($1,000,000).

The parties recognize and agree that the City may have entered into multiple agreements with other qualified consultants in connection with the Purpose. The City intends to rotate services that it identifies in connection with the Purpose amongst the selected and contracted consultants; however, selection of a particular consultant for a particular service will be based on the City's sole discretion and judgment. In selecting a consultant to fully execute a Task Order for a particular service, City shall consider the consultants' expertise, availability, and pricing information. By executing this Contract, Contractor understands and agrees that there is no guarantee of any particular dollar value associated with services, that City retains the sole right to make a selection for any individual service, and that execution of this Contract is not a guarantee of any availability of service or Task Order execution.

All provisions and covenants contained in said exhibit are hereby incorporated by reference and shall become a part of this Contract as fully set forth. Contractor will, in the rendering of its services to City, use its best efforts and due diligence and provide such personnel as are necessary to successfully provide the services covered under this Contract (including Exhibit "B").

This C ontract shall supersede any prior representation or contract, written or oral. This Contract shall not be subject to modification or amendment except in writing, executed by both parties.

3. DURATION OF CONTRACT

Unless earlier terminated or extended, this Contract shall remain in force and effect from **the Effective Date** through December 31, 2024 (the "Term"). The City may choose to extend the Term, in its sole discretion, for up to an additional two (2) calendar years from the expiration date, by providing Contractor with advance written notice of its intent to renew.

4. CONTRACTOR IDENTIFICATION

Contractor shall furnish to City Contractor's employer identification number as designated by the Internal Revenue Service or, if the Internal Revenue Service has designated no employer identification number, Contractor's Social Security number.

5. CHANGES

This Contract and any substantive changes to the scope of work or changes to the Contract costs will not be effective until approved in writing by the City. Failure of Contractor to secure authorization for extra work shall constitute a waiver of all right to adjustment in the Contract price or Contract time due to such unauthorized extra work, and Contractor thereafter shall be entitled to no compensation whatsoever for the performance of such unauthorized extra work.

6. INDEPENDENT CONTRACTOR STATUS

Contractor agrees and certifies that:

A. Contractor is engaged as an independent contractor and will be responsible for any federal or state taxes applicable to payment under this Contract;

B. Contractor will not, on account of any payments made under this Contract, be eligible for any benefit from federal social security, workers' compensation, unemployment insurance, or the Public Employee's Retirement System, except as a self-employed individual;

C. Contractor is not currently an employee of the federal government or the state of Oregon;

D. Contractor is not a contributing member of the Public Employees' Retirement System;

E. Contractor certifies it meets the specific Independent Contractor Standards of ORS 670.600;

F. Contractor is not an "officer, employee or agent" of City as those terms are used in ORS 30.265.

7. SUBCONTRACTS AND ASSIGNMENT; SUCCESSORS IN INTEREST

Both City and Contractor bind themselves and any partner, successor, executor, administrator, or assign to this Contract. Contractor shall not enter into any subcontracts for any of the work required by this Contract, excepting those portions of the work specifically described in Exhibit B or assign or transfer any of its interest in this Contract without the prior written consent of City. The provisions of this Contract shall be binding upon and shall inure to the benefit of the parties hereto, and their respective successors and assigns, if any.

8. PROJECT INFORMATION

Contractor agrees to share all project information, to fully cooperate with all corporations, firms, contractors, governmental entities, and persons involved in or associated with the project. No information, news, or press releases related to the project shall be made to representatives of newspapers, magazines, television and radio stations, or any other news medium without the prior written authorization of City.

9. DUTY TO INFORM

Contractor shall give prompt written notice to City if, at any time during the performance of this Contract, Contractor becomes aware of actual or potential problems, faults or defects in the project, any nonconformity with the Contract, or with any federal, state, or local law, rule or regulation, or has any objection to any decision or order made by City. Any delay or failure on the part of City to provide a written response to Contractor shall constitute neither agreement with nor acquiescence in Contractor's statement or claim and shall not constitute a waiver of any of City's rights.

10. PAYMENT OF LABORERS

A. Contractor shall, pursuant to ORS 279B.220:

(1) Make payment promptly, as due, to all persons supplying to Contractor labor or material for the prosecution of the work provided for in this Contract;

(2) As applicable, pay all contributions or amounts due the Industrial Accident Fund incurred in the performance of this Contract;

(3) Not permit any lien or claim to be filed or prosecuted against City on account of any labor or material furnished; and

(4) Pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.

B. If Contractor fails, neglects or refuses to make prompt payment of any claim for labor or services furnished to it by any person in connection with this Contract as such claim becomes due, City may pay such claim to the person furnishing the labor or services and charge the amount of the payment against funds due or to become due to Contractor by reason of such Contract.

C. The payment of a claim in this manner shall not relieve Contractor or Contractor's surety from obligation with respect to any unpaid claims.

11. PAYMENT FOR MEDICAL CARE AND PROVIDING WORKERS' COMPENSATION

Pursuant to ORS 279B.230, Contractor shall promptly, as due, make payment to any person, co-partnership, association or corporation furnishing medical, surgical and hospital care or other needed care and attention, incident to sickness or injury, to the employees of Contractor, of all sums which Contractor agrees to pay for such services and all moneys and sums which Contractor collected or deducted from the wages of employees pursuant to any law, contract or agreement for the purpose of providing or paying for such service.

Contractor, its subcontractors, if any, and all employers working under this Contract are subject employers under the Oregon Workers' Compensation Law and shall comply with ORS 656.017, which requires them to provide workers' compensation coverage for all their subject workers. Contractor warrants that all persons engaged in contract work and subject to the Oregon Workers' Compensation law are covered by a workers' compensation plan or insurance policy that fully complies with Oregon law. Contractor shall indemnify City for any liability incurred by City as a result of Contractor's breach of the warranty under this paragraph.

12. OVERTIME AND HOLIDAYS

Persons employed by Contractor under this Contract shall receive at least time and a half pay for work performed on the following legal holidays:

A. New Year's Day on January 1

B. Memorial Day on the last Monday in May

C. Independence Day on July 4

D. Labor Day on the first Monday in September

E. Thanksgiving Day on the fourth Thursday in November

F. Christmas Day on December 25

and for all overtime worked in excess of forty [40] hours in any one week, except for individuals who are excluded under ORS 653.101 to 653.261 or under 29 U.S.C., Sections 201 to 209, from receiving overtime.

13. ERRORS

Contractor shall perform such additional work as may be necessary to correct errors or failures to meet the standard of work required under this Contract without undue delays and without additional cost to City.

14. DEFAULT

City, by written notice of default (including breach of contract) to Contractor, may terminate the whole or any part of the Contract:

A. If Contractor fails to provide services called for by this Contract within the time or in the manner specified herein, or any extension thereof; or

B. If Contractor fails to perform any of the other provisions of this Contract, or so fails to pursue the work as to endanger performance of this Contract in accordance with its terms, and after receipt of written notice from City, fails to correct such failures within ten [10] days or such longer period as City may authorize.

Pending a decision to terminate all or part of this Contract, City unilaterally may order Contractor to suspend all or part of the services under this Contract. If City terminates all or part of the Contract pursuant to this paragraph, Contractor shall be entitled to compensation only for services rendered prior to the date of termination, but not for any services rendered after City ordered suspension of those services. If City suspends certain services under this Contract and later orders Contractor to resume those services, Contractor shall be entitled to reasonable damages actually incurred, if any, as a result of the suspension.

Upon termination, City will pay Contractor for only the value to City of work actually performed, may obtain substitute services in a reasonable manner, and may recover from Contractor the amount by which the price for those substitute services exceeds the price for the same services under this Contract. To recover amounts due under this paragraph, City may withhold from any amounts owed by City to Contractor, including but not limited to, amounts owed under this or any other Contract between Contractor and City. The rights and remedies of City provided in the above clause related to defaults (including breach of contracts) by Contractor shall not be exclusive, and are in addition to any other rights and remedies provided by law or under this Contract.

15. TERMINATION FOR CONVENIENCE

City may terminate all or part of this Contract at any time for its own convenience by written notice to Contractor. Upon termination under this paragraph, Contractor shall be entitled to compensation for all services rendered prior to actual notice of the termination or the receipt of City's written notice of termination, whichever is earlier, plus Contractor’s reasonable costs actually incurred in closing out the Contract.

16. OWNERSHIP OF WORK

The interest in any intellectual property, including but not limited to copyrights and patents of any type, arising from the performance of this Contract, and all work products of Contractor, including background data, documentation and staff work that is preliminary to final reports, which result from this Contract, shall become the exclusive property of City upon payment of the compensation due to Contractor under this Contract, including as set forth in Section 15. Contractor shall execute any assignment or other documents necessary to affect this paragraph. Contractor may retain a nonexclusive right to use any intellectual property that is subject to this paragraph. Contractor shall transfer to City any data or other tangible property generated by Contractor under this Agreement and necessary for the beneficial use of intellectual property covered by this paragraph. If this Contract is terminated by either party or by default, City, in addition to any other rights provided by this Contract, may require Contractor to transfer and deliver such partially completed reports or other documentation that Contractor has specifically developed or specifically acquired for the performance of this Contract. For any use by the City of the materials for any purpose other than the one for which Consultant prepared the materials without the Consultant's professional involvement, the City shall release Consultant from any and all claims and, to the fullest extent permitted by law, shall indemnify, defend, and hold harmless the Consultant, its officers, employees and subconsultants from and against any damages, liabilities or costs.

17. INDEMNITY AND HOLD HARMLESS

Contractor shall indemnify, defend and hold City, its officers, agents, volunteers, elected officials, and employees, harmless against all liability, loss or expenses, including reasonable attorney's fees, and against all actions or judgments based upon or arising out of damage or injury (including death) to persons or property to the extent caused by Contractor's negligent, grossly negligent, or willfully wrongful act, errors or omissions of an act sustained in connection with the performance of this Contract or based upon violation of any statute, ordinance or regulation.

18. INSURANCE

A. Contractor shall obtain, prior to the commencement of the Contract, and shall maintain in full force and effect for the term of this Contract, at Contractor's expense, occurrence form commercial general liability and automobile liability insurance for the protection of Contractor and City, its officers, boards, commissions and employees. This policy shall be issued by a company authorized to do business in the state of Oregon, protecting Contractor or anyone directly or indirectly employed by either of them against liability for the loss or damage of personal and bodily injury, death and property damage, and any other losses or damages above mentioned in the combined single limit of $1,000,000 or the limit of public liability contained in ORS 30.260 to 30.300, whichever is greater. The insurance company shall provide City with an endorsement thereto naming City as an additional insured, providing that no acts on the part of the insured shall affect the coverage afforded to the above policy, and providing City will receive thirty [30] days' written notice of cancellation or material modification of the insurance contract.

B. Errors and Omissions: Contractor shall maintain during the term of this Contract, Professional Liability Insurance covering damages caused by any errors, omissions or any negligent acts. Single limit per claim shall not be less than $1,000,000. Annual aggregate limit shall not be less than $2,000,000. If such insurance is written on a claims-made basis, the Contractor agrees that such policy shall have an extended reporting or discovery "tail" period, or be renewed for a period of not less than (i) two years from substantial completion of the project or abandonment of for claims that are known or in the exercise of reasonable care should have been known, and (ii) ten years after substantial completion for latent defects. Such policy shall have a retroactive date effective before the commencement of any work by the Contractor.

C. Workers' Compensation Coverage: Contractor certifies that Contractor has qualified for State of Oregon Workers' Compensation coverage for all Contractor's employees who are subject to Oregon's Workers' Compensation statute, either as a carrier-insured employer as provided by ORS 656.407, or as a self-insured employer. Contractor shall provide to City, within ten (10) days after execution of this Contract by the parties, a certificate of insurance evidencing coverage of all subject workers under Oregon's Workers' Compensation statutes insured by an insurance company satisfactory to City, if any. The certificate and policy shall indicate that the policy shall not be terminated by the insurance carrier without thirty (30) days' advance written notice to City. A copy of the certificate of self-insurance issued by the State shall be provided to City if the Contractor is self-insured.

D. Contractor will not perform any work under this Contract until City has received copies of applicable insurance policies or acceptable evidence that appropriate insurance heretofore mentioned is in force.

E. The coverage provided by the commercial general liability insurance required under this Contract shall be primary, and any other insurance carried by City shall be excess.

19. STANDARD OF WORK

Contractor will accomplish the work using a standard of performance and care that is currently accepted by other professionals engaged in similar work in the Portland metropolitan area.

20. TERMINATION

This Contract may be terminated by mutual consent of the parties, or by City at any time in accordance with section 14. Contractor shall be entitled to compensation for services performed up to the date of termination.

21. CONFIDENTIALITY

No reports, information and/or data given to or prepared or assembled by Contractor under this Contract shall be made available to any individual or organization by Contractor without the prior written approval of City. This section shall not apply to information in whatever form that comes into the public domain, nor shall it restrict the Contractor from giving notices required by law or complying with an order to provide information or data when such order is issued by a court, administrative agency or other authority with proper jurisdiction, or if it is reasonably necessary for the Contractor to defend itself from any suit or claim.

22. PUBLICATION RIGHTS / RIGHTS IN DATA

A. All publication rights in the product produced by Contractor in connection with the work provided for under this Contract, whether in preliminary draft or final form, shall be vested in City.

B. Contractor shall not publish any of the results of the work without the prior written permission of City.

C. All original written material and other documentation, including background data, documentation and staff work that is preliminary to final reports, originated and prepared for City pursuant to this Contract, shall become exclusively the property of City. The ideas, concepts, know-how or techniques relating to data processing development during the course of this Contract by Contractor or City personnel, or jointly by Contractor and City personnel, can be used by either party in any way it may deem appropriate.

D. Material already in Contractor's possession, independently developed by Contractor outside the scope of this Contract or rightfully obtained by Contractor from third parties, shall belong to Contractor. However, Contractor grants to City a non-exclusive, irrevocable and royalty- free license to use such material as it sees fit.

E. This Contract shall not preclude Contractor from developing materials which are competitive, irrespective of their similarity to materials which might be delivered to City pursuant to this Contract in developing materials for others, except as provided in this section.

23. ACCESS TO RECORDS

Contractor shall retain all books, documents, papers, and records that are directly pertinent to this Contract for at least three (3) years after City makes final payment on this Contract and all other pending matters are closed. Contractor agrees that City and its authorized representatives shall have access to the books, documents, papers and records of Contractor which are directly pertinent to the specific Contract for the purpose of making audit, examination, excerpts and transcripts for three (3) years following expiration or termination of this Contract.

24. ATTORNEY'S FEES

If a suit or action is filed to enforce any of the terms of this Contract, the substantially prevailing party shall be entitled to recover from the other party, in addition to costs and disbursements provided by statute, any sum which a court, including any appellate court, may adjudge reasonable as attorney's fees.

25. COMPLIANCE WITH APPLICABLE LAW

Contractor shall comply with all federal, state and local laws and ordinances applicable to the work under this Contract, including, without limitation, the applicable provisions of ORS 279A, 279B, 279C, 279.312, 279.314, 279.316, 279.320 and 279.555. Without limiting the generality of the foregoing, Contractor expressly agrees to comply with:

A. Title VI of the Civil Rights Act of 1964;
B. Section V of the Rehabilitation Act of 1973;
C. The Americans with Disabilities Act of 1990 (Pub L No. 101-336), ORS 659.425, and all regulations and administrative rules established pursuant to those laws; and
D. All other applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations.

26. FOREIGN CONTRACTOR

If Contractor is not domiciled in or registered to do business in the state of Oregon, Contractor shall promptly provide to the Oregon Department of Revenue and the Secretary of State Corporation Division all information required by those agencies relative to this Contract. Contractor shall demonstrate its legal capacity to perform these services in the state of Oregon prior to entering into this Contract.

27. GOVERNING LAW; JURISDICTION; VENUE

This Contract shall be governed and construed in accordance with the laws of the state of Oregon without resort to any jurisdiction's conflict of laws, rules or doctrines. Any claim, action, suit or proceeding (collectively, "the claim") between City (and/or any other agency or department of the state of Oregon) and Contractor that arises from or relates to this Contract shall be brought and conducted solely and exclusive within the Circuit Court of Clackamas County for the state of Oregon. Provided, however, if the 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. Contractor, by the signature below of its authorized representative, hereby consents to the *in personam* jurisdiction of said courts. Any litigation arising under or as a result of this Contract shall be tried in court without a jury.

28. FORCE MAJEURE

Neither City nor Contractor shall be held responsible for delay or default caused by fire, riot, epidemics, pandemics, declared states of emergency, closing or reduction of force by the contractors or governmental permit reviewing entities, the enactment of governmental actions which cause delays or limit travel, acts of God, or war where such cause was beyond, respectively, the reasonable control of City or Contractor. Contractor shall, however, 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 contract.

29. MERGER CLAUSE

This Contract and attached Exhibit constitute the entire agreement between the Parties. No waiver, consent, modification or change of terms of this Contract shall bind either party unless in writing and signed by both parties. Such waiver, consent, modification or change, if made, shall be effective only in the specific instance and for the specific purpose given. There are no understandings, agreements, or representations, oral or written, not specified herein regarding this Contract. Contractor, by signature of its authorized representative, hereby acknowledges that he/she has read this Contract, understands it, and agrees to be bound by its terms and conditions.

30. CONSENT DECREE

The City is to provide a copy of this Consent Decree, Attachment A, to any contractor retained to perform work required under this Consent Decree. The performance of the work shall be in conformity

with the terms of this Consent Decree, but only as applicable to the work of the Contractor as stated in the individual Task Order.

31. ARPA/SLFRF REQUIRED CONTRACT CLAUSES

The Consultant understands that services performed under this agreement may be funded with monies made available by the State and Local Fiscal Recovery Funds (SLFRF) program as part of the American Rescue Plan Act (ARPA). Consultant agrees to comply with required contract clauses for the Project per Attachment B.

32. WIFIA

The Consultant understands that services performed under this agreement may be funded with monies made available by the federal Water Infrastructure Finance and Innovation Act ("WIFIA"). Consultant agrees to comply with all applicable statutes, regulations, executive orders, and any additional terms and conditions imposed by the Environmental Protection Agency ("EPA") in connection with WIFIA funding for the Project per Attachment C.

33. SRF

The Consultant understands that services performed under this agreement may be funded with monies made available by the Clean Water State Revolving Fund (CWSRF). Consultant agrees to comply with all applicable statutes, regulations, executive orders, and any additional terms and conditions imposed by the State of Oregon Department of environmental Quality's (DEQ) funding for the Project per Attachment D.

34. EXECUTION AND COUNTERPARTS

This Contract may be executed in several counterparts, each of which shall be an original, all of which shall constitute but one and the same instrument.

CONTRACTOR

By:	
Printed Name:	Michael Humm
Title:	Oregon Operations Manager
Date:	12/6/2023
Firm Name:	Kennedy/Jenks Consultants
Address:	1500 NE Irving Street, Suite 200
City, State, Zip	Portland, Oregon 97232
Individual S.S.N or Employer ID#	94-2147007

CITY OF SANDY

By: _____

Printed Name: _____

Title: _____

Date: _____

City of Sandy
39250 Pioneer Blvd.
Sandy, OR 97055

EXHIBIT A: REQUEST FOR PROPOSAL

CITY OF SANDY, OREGON
REQUEST FOR PROPOSALS (RFP) #SCWP – 08 – 23:

ON CALL ENGINEERING SERVICES FOR WASTEWATER FACILITY MINOR UPGRADES

Request for Proposals Information:

RFP NUMBER: SCWP 8-23

RFP TITLE: On-Call Engineering Services for Wastewater Facility Equipment Upgrades

DATE ISSUED: 08/04/2023

CONTACT PERSON:
City of Sandy
Jenny Coker, PE
Public Works Director
39250 Pioneer Boulevard
Sandy, OR 97055

EMAIL ADDRESS: jcoker@ci.sandy.or.us

CONTACT PHONE: 503-816-3972

QUESTIONS DUE: 08/16/2023
2:00 p.m. Pacific

ADDENDUM ISSUANCE: 08/23/2023
2:00 p.m. Pacific

RESPONSES DUE: 09/13/2023
2:00 p.m. Pacific

Submit Qualification Statements and all Proposal information to:

FOR DELIVERY BY HAND, UPS, FEDEX, USPS OR OTHER COURIER SERVICE:

City of Sandy
Jenny Coker, PE
Public Works Director
39250 Pioneer Boulevard
Sandy, OR 97055

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REQUEST FOR PROPOSALS

CITY OF SANDY, OREGON

ON CALL ENGINEERING SERVICES FOR WASTEWATER FACILITY MINOR UPGRADES

1. Instructions to Proposers

The City of Sandy (City) is soliciting statements of interest and qualifications information from consulting engineering firms to enter into a Master Services Agreement to provide professional engineering design services for planned minor equipment replacement, upgrades, and related improvements to the City's existing wastewater facility.

Request for Proposal documents may be examined at: Bids and RFPs | Sandy, OR.
Questions or Requests for Clarification must be sent to Jenny Coker via email to jcoker@ci.sandy.or.us and be received by **2:00 p.m. on August 16th, 2023**. Incomplete or late inquiries may not be considered. If required, an addendum addressing these matters will be issued by no later than **2:00 p.m. on August 23rd, 2023.**

No Pre-Proposal Meeting will be held.

The City reserves the right to cancel this RFP or reject any and all statement of qualifications and other proposal documents submitted or to waive any minor formalities of this solicitation if the best interest of the City would be served. The City reserves the right to seek clarifications of each proposal submission, in its sole discretion. The City reserves the right to negotiate a final PSA that is in the best interest of the City. Proposers responding to this RFP do so solely at their expense, and City is not responsible for any proposer expenses associated with this RFP.

Proposers may not withdraw statements of qualifications after the stated due date and time, unless award of contract is delayed for more than ninety (90) days.

To be considered, four hard copies and one digital copy (USB flash drive preferred) of the Statement of Qualifications in a sealed envelope must be physically received by the City at **City Hall, 39250 Pioneer Boulevard, Sandy, OR 97055** no later than **2:00 p.m. (Pacific Time) September 13th, 2023**. Submissions received after the specified time will not be accepted. The City is not responsible for delays in delivery. Official delivery time shall be documented by City-affixed time stamp.

Statements of qualifications and other proposal documents submitted via the United States Postal Service (USPS), United Parcel Service (UPS) or Federal Express (FedEx) or any other courier service must be addressed:
City of Sandy, Jenny Coker, PE, Public Works Director
39250 Pioneer Boulevard
Sandy, OR 97055

Statements of qualifications and other proposal documents must be in a sealed envelope, and clearly marked "**RFP 1-23 ON-CALL ENGINEERING SERVICES FOR WASTEWATER FACILITY MINOR UPGRADES.**" Proposals submitted by **FAX** or **EMAIL** will **NOT** be accepted. The City is committed to providing equal opportunities to State of Oregon certified Minority, Disadvantaged and Women's Business Enterprises.

The City of in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, subtitle A, Office of the Secretary, Part 21, nondiscrimination in federally assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises, as defined in 49 CFR part 26, will be afforded full opportunity to submit qualification statements in response to this invitation and will not be discriminated against on the grounds of race, color, national origin or sex in consideration for an award.

Moreover, the City reserves the ability to utilize Water Infrastructure Finance and Innovation Act (WIFIA) funding and therefore requires proposers to accept the following conditions to be included in the Master Services Agreement:

Debarment and Suspension. Contractor certifies that it will not knowingly enter into a contract with anyone who is ineligible under the 2 CFR part 180 and part 1532 (per Executive Order 12549, 51 FR 6370, February 21, 1986) or who is prohibited under Section 306 of the Clean Air Act or Section 508 of the Clean Water Act to participate in the [Project]. Suspension and debarment information can be accessed at http://www.sam.gov. Contractor represents and warrants that it has or will include a term or conditions requiring compliance with this provision in all of its subcontracts under this Agreement.

Federal Lobbying Restrictions (31 U.S.C 1352). Recipients of federal financial assistance may not pay any person for influencing or attempting to influence any officer or employee of a federal agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress with respect to the award, continuation, renewal, amendment, or modification of a federal grant, loan, or contract. These requirements are implemented for USEPA in 40 CFR Part 34, which also describes types of activities, such as legislative liaison activities and professional and technical services, which are not subject to this prohibition. Upon award of this contract, Contractor shall complete and submit to the City the certification and disclosure forms in Appendix A and Appendix B to 40 CFR Part 34. Contractor shall also require all subcontractors and suppliers of any tier awarded a subcontract over $100,000 to similarly complete and submit the certification and disclosure forms pursuant to the process set forth in 40 CFR 34.110.

Furthermore, construction projects resulting from completion of bid documents by selected proposers maybe further encumbered with construction contract requirements required by WIFIA funding.

Jennifer Coker, PE
Public Works Director

2. Introduction and Background

The City of Sandy, Oregon (City), is executing a large Program to upgrade its wastewater collection and treatment facilities. The Sandy Clean Waters Program (SCWP) will protect the environment while planning for a growing community. The Wastewater Facility Plan, adopted in 2019, is currently being amended by the City. The plant recently completed hydraulic and process stress testing and it is anticipated that various minor near-term plant equipment upgrades will be necessary to provide a reliable and resilient facility.

As a result, the City of Sandy is soliciting proposals from prospective consulting engineering firms to provide engineering design services to develop reports, plans, specifications and bid documents necessary to implement individual capital equipment replacements and improvements as directed by the City of Sandy through a task order process on an as-needed basis.

The City intends to conduct a competitive selection process based on qualifications consistent with OAR 137-048-0130 and execute an On-Call Master Professional Services Agreement (PSA) with each of the selected consultants. These Master PSAs will be considered Price Agreements, as defined in OAR 137-048-0110(3) and further provided for in OAR 137-048-270. The City is anticipating awarding Master PSAs no fewer than three (3) firms, when feasible.

Each Master PSA will be valid through December 31, 2024, with a renewal option at the City's discretion for an additional two calendar years. Once established, the City intends to use the On-Call consultants for its routine consulting service needs and will issue project specific Task Orders against individual Master PSAs. The maximum value of any Task Order or group of Task Orders associated with the same project is $500,000, irrespective of the time frame or year in which the work is performed.

The City intends to rotate work amongst the selected consultants; however, selection of a particular consultant for a particular task or project will be based on the City's sole discretion and judgment, taking into account the consultants' expertise, availability, and pricing information. By agreeing to execute an On-Call PSA with the City, Consultant is agreeing that there is no guarantee of any particular dollar value of work, and that the City retains the sole right to make a selection for any individual project or task.

Work under the On-call PSAs will generally be associated with equipment and asset replacement to maintain required reliability and redundancy at the facility. This could include:

- **Ultraviolet (UV) Equipment Replacement**. The existing UV system is a Trojan UV4000 with medium pressure bulbs. A new UV system was installed as part of the Phase 1 improvements to meet peak disinfection needs and provide redundant capacity, however the older gravity-fed system is used for base disinfection needs as it feeds the plant utility water system. The UV4000 does not provide reliable service and needs to be replaced.
- **Headworks Screening Equipment Installation**. Screening of raw influent is provided with a single rotary fine screen with ¼-inch screen openings. When influent flow exceeds the current capacity of the screen or the fine screen is out of service, raw wastewater is bypassed to a manual bar screen with ¾-inch openings. Providing reliable, redundant influent screening would mitigate existing issues caused by materials bypassing the screening process.

- **High priority reliability improvements**. The City completed a Spare Parts and Repair, Replace, Refurbishment Prioritization Report in August 2022 identifying current needs and future considerations to improve overall reliability of the treatment processes. This report identifies improvements such as installation of new instruments and analyzers, improving access to below grade equipment, and replacing hard-to-access valves.
- **Ongoing Phase 1 needs**. During the Phase 1 Treatment Upgrades project, the City identified several improvements that were not included in the original scope of the project. Some of these improvements may be completed during Phase 1, but some may require greater design effort or procurement time than can be accommodated within the existing Phase 1 project.

3. Desired Qualifications

1. A consultant registered as a licensed professional engineering firm including individual engineers in responsible charge who are licensed in the State of Oregon.
2. A consultant team with the local capability, including staff and equipment, to perform the services and will have demonstrated experience performing this level of work as a regular part of their business. Key team members will be asked to regularly commute to the City of Sandy.
3. A consultant team and Project Manager with a demonstrated track record preparing and completing wastewater facility equipment replacement and upgrade projects while maintaining facility operations to not interrupt flow or treatment objectives.
4. A consultant team that can work closely with the City, the City's Program Manager, and treatment plant staff to develop scope and level of effort for individual task orders, and with proven expertise in delivering on-call or as-needed services associated with wastewater treatment facilities.
5. A consultant team with a local Northwest presence with key team members able to regularly commute to the City of Sandy.

4. Tasks and Deliverables

The City has contracted with Stantec Consulting Services to serve in the role of the Program Manager for SCWP. The City and its Program Manager will develop requests for services as needed from selected consultant(s). Such requests will outline tasks and deliverables determined based on the specific needs of each Task Order. Typical task order activities are described below.

1. **Project Management**
   a) Coordination with the City's project team, regulatory agencies, and Program Manager.
   b) Manage and supervise subconsultants if required.
   c) Prepare agendas and minutes and lead regular progress meetings.
   d) Maintain a project schedule and update monthly.
   e) Prepare and submit monthly invoicing and progress reports to include earned value metrics in .pdf format by email to *portia.inman@stantec.com*.
2. **Engineering and Design Phase Services**
   a) Consultant may prepare test plans, inspection reports, alternatives analysis, basis of design reports, and other documents as necessary for each task order to clearly define the scope, schedule, and budget for required improvements.
   b) Consultant may prepare design documents for each of the proposed design milestones (Conceptual, 30%, 60%, 90%, Final and Issued For Construction (IFC)) to include reports, plans, details, specifications, and cost estimates as necessary for each task order assignment and its corresponding complexity or level of detail required.
   c) Consultant may prepare equipment procurement technical requirements as necessary for each task order assignment and its corresponding complexity or level of detail required.
   d) Consultant may participate in value engineering studies on the City's 2019 Wastewater System Facilities Master Plan, the pending 2023 Master Facilities Plan Amendment or any task order assignment.
   e) It is anticipated that construction activities required as part of any task order assignment will be completed using a Design-Bid-Build delivery model. As such the consultant may be asked to prepare bidding documents and IFC packages to be utilized by the City for competitive procurement of construction services.
   f) It is not anticipated that land use planning or permitting, public education or outreach or environmental permitting beyond that necessary to secure Oregon Department of Environmental Quality approval to make equipment replacement and modifications will be required.
   g) Deliverables will be in .pdf format. It is preferred that design be completed in Revit and Civil3D platforms.

3. **Bid Phase Services**

It is anticipated that projects will be delivered using a design/bid/build approach. As such, Consultant may be required to provide services during solicitation, bid evaluation and award of construction projects to include:

a) Pre-Bid Meeting

b) Addenda

c) Bid Evaluation

d) Recommendation for Award

4. **Engineering Services During Construction (ESDC)**

Consultant may be required to provide services during construction to include:

a) Material Sample Submittal Reviews
b) Response to Requests for Information
c) Design and Field Change Orders
d) Limited and Periodic Site Inspections
e) Operations and Maintenance Manuals plus training
f) Record Drawings, substantial and final inspection and punch-lists
g) One year warranty inspections and assistance
h) Deliverables will be in .pdf format

5. **Cost Estimation**

a) Consultant may be requested to provide Engineer Opinion of Probable Construction Cost (OPCC) estimates at various design milestones to assist the City in programming and budgeting cost demands.

b) OPCC development shall generally follow and align with the Association for the Advancement of Cost Engineering (AACE) cost estimating guidelines.

6. **Miscellaneous Tasks**

Consultant may be requested to provide additional various work items on an as-needed basis. Tasks may include, but are not limited to:

a) Presentations to City staff, City council, and/or the public

b) Presentations to Program Manager

5. Submission Requirements

Interested and qualified firms are invited to submit the information that demonstrates their experience in performing projects of this scale and complexity. Documentation should include the following information:

1. **Cover Letter.** All submissions shall include the following information:

    - Complete legal name, address, and telephone number of the proposing firm.
    - Name, telephone number and title of the person(s) authorized to represent proposer in any negotiations and legally authorized to sign any contract that may be awarded.
    - A statement that the proposal is valid for a period of 90 days.
    - A statement that the firm is licensed to perform engineering services in the State of Oregon and a certified statement that the firm is not disbarred, suspended, or otherwise prohibited from professional practice by any federal, state, or local agency.

2. **Firm Profile.** Provide the firm's length of time in business, number of employees, and the locations of key offices supporting the project. Describe the firm's overall experience with providing professional services related to preparing design deliverables for process equipment replacements and maintenance of plant operations. Provide a brief profile of the firm and available firm resources. Describe any special skills, software, or services the firm offers that would be relevant to work under the PSA.

3. **Project Team.** Provide a brief profile of the key team members including principal, project manager, project engineer, discipline engineers, task leads, and subject matter experts available to support on-call task orders. Include a brief description of the experience and expertise offered by each team member and the office location of each staff member. List staff with local presence available for regularly meeting in Sandy as required. Include relevant information on sub-consultants your firm would employ for this project, including sub-consultants firm(s) history & profile, specialties, experience, and references.

4. **Related Experience and References.** Describe the firm's experience performing similar projects in the Pacific Northwest including the proposed Project Manager and/or project team. Describe the firm's overall experience with providing professional services on an on-call or as-needed basis related to preparing studies and design deliverables for equipment replacement and upgrades at an existing wastewater treatment plant under continuous operation. Provide a minimum of five (5) project descriptions completed in the past 10 years including the project scope that is similar to the needs of the City's WWTP, the challenges facing the Owner/Agency, and the proposed solution. Include the proposed team members that worked on these past projects. Provide the contact information (name, title, email address, and phone numbers) for Owner/Agency project staff on these projects.

5. **Project Approach.** Describe your approach to providing on-call services associated with alternatives analysis and design of equipment replacement, rehabilitation and reliability upgrades, and related

maintenance projects at wastewater treatment plants. Describe how you will determine the project needs and scope, assign staff to a task order, and coordinate with City staff through execution of the task order.

6. <u>Appendices.</u>

a. Resumes - Include resumes that reflect the education, registrations, and experience of key staff.

6. Limitations

Concise responses with relevant information as outlined in the Submission Requirements section above will be more useful than extensive submittals with elaborate graphics and corporate boilerplate. The following are submissions limitations:

1. Statement of Qualifications is limited to a total of 15 pages excluding cover letter and resumes.
2. Cover letter is limited to two (2) pages, and resumes are limited to two (2) pages each.
3. The limitation does not apply to covers or dividers unless they are used to convey project information.
4. Any 11-inch x 17-inch page will be counted as two pages.
5. A two-sided 8½ x 11-page counts as two (2) pages.
6. Pages beyond these page limitations will not be evaluated.
7. Pages shall be numbered in consecutive order.
8. The body text of the proposal text shall be Arial font, minimum size of 11 points is required.

7. Selection Process

The selection of the engineering firm for this project will be accomplished through the following general timeline for this RFP. No formal pre-proposal meeting is planned. The anticipated schedule may be changed as needed.

Activity	Date(s)
Advertisement of RFP	August 4th, 2023
Respondents to submit qualifications package	September 13, 2023
City to review qualifications and make selections	One week following submittal
Interviews (optional)	TBD
City to issue Notice of Intent to Award	Two days following interviews
Contract Negotiations Completed	Four weeks following NOI
Anticipated Council Approval of Agreements	November 6th, 2023
Task Order Issuance	4 weeks following Council approval

Statement of Qualifications (SOQs) will be evaluated by the City Staff and a committee (consisting of at least three elected officials and City staff). During the evaluation process, evaluators reserve the right, where it may serve the City of Sandy's interests, to request additional information or clarification from potential firms, or to allow corrections of errors or omissions.
The City reserves the right to request an interview from the top three (3) firms.
Any and all costs incurred for the preparation of a proposal in response to this solicitation shall be the sole responsibility of the firm or firms submitting the SOQ. The City of Sandy reserves the right to accept or reject any SOQ. However, the City intends to use this solicitation and the process herein described as the preferred method of evaluating responses and of negotiating with short-listed Respondents. The City of Sandy also reserves the right to select the firm that best meets its needs and serves the interests of the City.

8. Selection Criteria

The City will evaluate responses per ORS 279C.110, the corresponding administrative rules, and the stated evaluation criteria within this RFP. The selection of the engineering firms for this project will be accomplished through a one-step process with an optional interview as follows:

1. An Evaluation Committee (Committee) will be appointed to evaluate the SOQs received. For scoring proposals, each committee member will evaluate each SOQ in accordance with the requested information in **Section 5**.

The committee will require a minimum of ten (10) working days to evaluate and score the proposals. At any point during the evaluation process, the City is permitted, but is not required, to seek clarification of a SOQ. However, a request for clarification does not permit changes to the SOQ.

Evaluation will be based on the criteria given in **Table 1**.

Table 1. Evaluation Criteria and Importance Factors

Category	Maximum Points:
Cover Letter	0
Firm Profile	10
Project Team	35
Related Experience and References	35
Project Approach	20
Total Possible Points:	100

The sum of points awarded to each firm by the reviewing body will be used to rank candidates. If an interview is held, the City will recalculate the total score and add points for interview performance (25 points available, if held).

9. Sample Form of Contract and Protest Procedures

A sample Professional Services Agreement is attached to this document (**Attachment A**). This is intended to demonstrate the basic framework of the Agreement between the City and the selected candidate(s) and not the final form of Agreement between the parties.

A protest, (if any) of the evaluation, ranking, and selection process shall substantially conform to those procedures described in OAR 137-048-0240.

The City will negotiate individual contracts no fewer than three, if feasible, of the highest-ranked firms to arrive at a mutually acceptable (fair and reasonable) agreement terms and conditions for the Master PSA and task order language. If the City and firm are unable to reach such an agreement within a reasonable amount of time, negotiations will cease and negotiations will begin with the firm chosen as the next highest-ranked and so on until an agreement is reached.

After Master PSAs are in place and fully executed, City will then request firms to prepare scope and fee proposals for assigned Task Orders. Task Orders will be negotiated with the firm selected for the task order assignment to arrive at a mutually acceptable (fair and reasonable) agreement to scope, fee, and schedule. Pricing of Task Orders shall be based on the format provided in attached **Exhibit 2** and on a time and materials with a not to exceed value utilizing the reimbursement schedule of values included as attached **Exhibit 1**.

10. Proposal Due Date

To be considered, four hard copies and one digital copy (USB flash drive preferred) of the Statement of Qualifications must be physically received by the City by **2:00 p.m.** on **September 13, 2023.**

Submission Location

Mail, Delivery Service, or Hand-Delivered:

City of Sandy
Jenny Coker, Public Works Director
39250 Pioneer Boulevard
Sandy, OR 97055

Telephone, facsimile, or electronically transmitted proposals will not be accepted. SOQs received after the specified date and time will not be given further consideration.

11. Point of Contact

Any questions, clarifications, or requests for general information on this RFP should be directed by EMAIL ONLY to the point of contact. Please include the following in the subject line: *RFP – On Call Wastewater Facility Minor Upgrades.* All Questions must be submitted by **2:00 p.m. on August 16, 2023**, for a response.

Point of Contact:

City of Sandy
Jenny Coker
Public Works Director
39250 Pioneer Boulevard
Sandy, OR 97055

E-mail: jcoker@ci.sandy.or.us

Attachments

1) **Attachment A** – Sample Master Services Agreement (PSA)
2) **Exhibit 1** – Professional Service Commercial Terms
3) **Exhibit 2** – Professional Services Task Order Template

EXHIBIT B: TASK ORDER FORM

MASTER PROFESSIONAL SERVICES AGREEMENT

EXHIBIT 2 - TASK ORDER

Professional Services Agreement No._____
(as on Master Consulting Services Agreement)

Task Order No. _____

Task Order Effective Date_____

This Task Order is made between **City of Sandy** ("City") and **XXXXXXXXXX** ("CONSULTANT") in accordance with the terms and conditions set out in the Master Consulting Services Agreement dated _____, of which this Task Order forms a part.

1. Invoices for work done should be submitted monthly. The Professional Services Agreement Number and the Task Order Number shall be referred to in each invoice submitted by CONSULTANT to the CITY under this Task Order.

2. The **PROJECT** in connection with which the Services are to be provided by CONSULTANT is as follows:

_____
_____
_____
_____

3. The **SERVICES and DELIVERABLES** to be performed by CONSULTANT under this Task Order are as follows:

_____
_____
_____
_____
_____

4. The **SCHEDULE** for Services provided by CONSULTANT for this Task Order is as follows:

_____
_____
_____
_____
_____

5. The **FEE** for Services provided by CONSULTANT under this Task Order is as follows:

_____
_____
_____
_____
_____

City of Sandy	**CONSULTANT**
_____	_____
Signature	Signature
_____	_____
Name (Printed or Typed)	Name (Printed or Typed)
_____	_____
Date	Date

ATTACHMENT A: CONSENT DECREE

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF OREGON

PORTLAND DIVISION

UNITED STATES OF AMERICA, STATE OF OREGON
BY AND THROUGH DEPARTMENT OF
ENVIRONMENTAL QUALITY,

Plaintiffs, Case No. 23-cv-968

v.

CITY OF SANDY, OREGON

Defendant.

CONSENT DECREE

TABLE OF CONTENTS

I. BACKGROUND

Plaintiff United States of America, on behalf of the United States Environmental Protection Agency ("EPA"), and the State of Oregon by and through the Oregon Department of Environmental Quality (the "State") (collectively "Plaintiffs"), have filed a complaint in this action concurrently with this Consent Decree pursuant to Section 309 of the Clean Water Act ("CWA" or "Act"), 33 U.S.C. § 1319, and Oregon Revised Statute ("ORS") 468.140, alleging that Defendant, City of Sandy, Oregon ("Sandy" or "City"), violated and continues to violate Sections 301 and 402 of the CWA, 33 U.S.C. §§ 1311 and 1342, and ORS 468B.025(2) by failing to comply with the requirements of its National Pollution Discharge Elimination System Permit ("NPDES Permit") for the City's Wastewater Treatment Plant located at 33400 Southeast Jarl Road in Boring, Oregon and its 1200-Z Stormwater Discharge General NPDES Permit ("Industrial Stormwater Permit").

On February 18, 2018, ODEQ and the City entered into a Mutual Agreement and Order ("MAO") resolving civil penalties assessed for violations of the City's NPDES Permit. Pursuant to the MAO, the City was to provide an Updated Facility Plan by January 1, 2019, and plant improvements were to be completed by November 1, 2021, that would bring the City into compliance with the terms and conditions of its NPDES Permit.

In April 2019, the City requested a revised schedule for the MAO, as the improvements were not on schedule to meet the November 1, 2021 deadline.

The City submitted a Facility Plan to ODEQ in October 2019 that was approved on January 17, 2020. A "Preliminary Design Report: Sandy WWTP Immediate Needs Upgrades Project," was submitted in July of 2020 and approved on August 28, 2020. A Preliminary

Design Evaluation Report was submitted to ODEQ in March of 2021 and approved on April 16, 2021 (attached as Appendix A). Preliminary Need Improvements identified in these plans are not scheduled to be completed until August, 2023 due to supply and construction delays and complications with conducting sampling and stress testing in tandem with construction.

The City now estimates that the preferred alternative in the City's 2019 Wastewater System Facilities Plan is cost prohibitive, and seeks to further evaluate alternatives to bring the system into compliance with its NPDES Permit.

Since October 23, 2017, the City has experienced a significant number of violations of its NPDES Permit, including a high volume of waste discharge limitation violations and six bypass events where waste streams were intentionally diverted from a portion of the treatment facility. Due to system improvements in 2021 and 2022, the City has not had any bypass events since June 11, 2022. ODEQ and EPA have determined, based on the extensive history of violations and the lack of information supporting a conclusion that the City has adequate capacity at the Wastewater Treatment Plant for additional peak system flows and that new or modified connections that increase flow may result in increases in the number and extent of violations of the City's NPDES Permit.

Defendant does not admit any liability to the United States or the State arising out of the transactions or occurrences alleged in the Complaint.

The Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and will avoid litigation among the Parties and that this Consent Decree is fair, reasonable, and in the public interest.

NOW, THEREFORE, before the taking of any testimony, without the adjudication or admission of any issue of fact or law except as provided in Section I, and with the consent of the

Parties, IT IS HEREBY ADJUDGED, ORDERED, AND DECREED as follows:

II. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action, pursuant to 28 U.S.C. §§ 1331, 1345, and 1355, and Section 309(b) of the CWA, 33 U.S.C. § 1319(b), and over the Parties. This Court has supplemental jurisdiction over the State law claims asserted by the State of Oregon pursuant to 28 U.S.C. § 1367. Venue lies in this District pursuant to Section 309(b) of the CWA, 33 U.S.C. § 1319(b), and 28 U.S.C. §§ 1391(b) and 1395(a), because the violations alleged in the Complaint are alleged to have occurred in, and Defendant is located in, this judicial district. For purposes of this Decree, or any action to enforce this Decree, Defendant consents to the Court's jurisdiction over this Decree and any such action and over Defendant and consents to venue in this judicial district.

2. For purposes of this Consent Decree, Defendant agrees that the Complaint states claims upon which relief may be granted pursuant to Section 309(b) of the CWA, 33 U.S.C. § 1319(b), ORS 468.035(1)(k) and ORS 468.100.

III. APPLICABILITY

3. The obligations of this Consent Decree apply to and are binding upon the United States and the State, and upon Defendant and any successors, assigns, or other entities or persons otherwise bound by law.

4. No transfer of ownership or operation of the City of Sandy Treatment Works, whether in compliance with the procedures of this Paragraph or otherwise, shall relieve Defendant of its obligation to ensure that the terms of the Decree are implemented. At least 30 Days prior to such transfer, Defendant shall provide a copy of this Consent Decree to the proposed transferee and shall simultaneously provide written notice of the prospective transfer,

together with a copy of the proposed written agreement, to EPA, the State, and DOJ, in accordance with Section XV (Notices). Any attempt to transfer ownership or operation of the City of Sandy Treatment Works without complying with this Paragraph constitutes a violation of this Decree.

5. Defendant shall provide a copy of this Consent Decree to all officers, employees, and agents whose duties might reasonably include compliance with any provision of this Decree, as well as to any contractor retained to perform work required under this Consent Decree. Defendant shall condition any such contract upon performance of the work in conformity with the terms of this Consent Decree.

6. In any action to enforce this Consent Decree, Defendant shall not raise as a defense the failure by any of its officers, directors, employees, agents, or contractors to take any actions necessary to comply with the provisions of this Consent Decree.

IV. OBJECTIVE

7. The Objective of this Consent Decree is for the City to achieve and maintain compliance with the CWA, ORS Chapter 468B, applicable federal and state regulations, its NPDES Permit and its Industrial Stormwater Permit, with the goal of eliminating all untreated discharges and discharges that fail to meet the effluent limitations established in its NPDES Permit.

V. DEFINITIONS

8. Terms used in this Consent Decree that are defined in the CWA, 33 U.S.C. §§ 1251-1387, and ORS Chapter 468B or in regulations promulgated thereunder have the meanings assigned to them in the Act, statutes or such regulations, unless otherwise provided in this

Consent Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions apply:

"2020-2023 Wastewater Improvements" shall mean the 2021-2023 WWTP Immediate Needs Upgrades Project, 2021 Basins 2 and 8 Rehabilitation Project, and 2022 Basins 6 and 7 Rehabilitation Project;

"Basin" shall mean a subdivision of a Wastewater Collection and Transmission System which consists of hydraulically linked sewers that are tributary to a common point in the sewer system. Sewer system evaluation techniques are undertaken on a basin basis. The basins for the City of Sandy are identified in Appendix B;

"City" or "Sandy" shall mean the Defendant City of Sandy, Oregon, including all of its departments, agencies, and instrumentalities and any successors thereto;

"City of Sandy Treatment Works" or "CSTW" shall mean the wastewater collection, treatment, control, and disposal system for the City of Sandy, including the Wastewater Treatment Plant and the Wastewater Collection and Transmission System;

"Complaint" means the complaint filed by the United States and the State in this action;

"Connection" means a physical connection to the WCTS measured at the time the connection is used or is permitted by the City to increase the flow to the CSTW;

"Consent Decree" or "Decree" means this Decree and all appendices attached hereto (listed in Section XXV);

"Day" means a calendar day unless expressly stated to be a business day. In computing any period of time for a deadline under this Consent Decree, where the last day would fall on a Saturday, Sunday, or federal holiday, the period runs until the close of business of the next business day;

"Defendant" means the City of Sandy, Oregon;

"DOJ" means the United States Department of Justice and any of its successor departments or agencies;

"EPA" means the United States Environmental Protection Agency and any of its successor departments or agencies;

"Effective Date" means the definition provided in Section XVI;

"Industrial Stormwater Permit" means the 1200-Z Stormwater Discharge General NPDES Permit 17517, ORR900001 authorizing stormwater discharges associated with an industrial activity;

"ODEQ" means the State of Oregon Department of Environmental Quality;

"ODOJ" means the State of Oregon Department of Justice;

"NPDES Permit" means permit number 102492, OR0026573 issued to the City by ODEQ pursuant to ODEQ's delegated permitting authority under CWA Section 402, 33 U.S.C. § 1342, and any future extended, modified, or reissued permits;

"Paragraph" means a portion of this Decree identified by an Arabic numeral;

"Parties" means the United States, the State, and Defendant;

"Section" means a portion of this Decree identified by a Roman numeral;

"State" means the State of Oregon, acting on behalf of the Oregon Department of Environmental Quality;

"United States" means the United States of America, acting on behalf of EPA;

"Wastewater Collection and Transmission System" or "WCTS" shall mean the municipal wastewater collection, retention and transmission system, including but not limited to, all pipes,

Force Mains, Gravity Sewer Lines, Pump Stations, pumps, manholes, and appurtenances thereto, which are owned or operated by the City and which flow to the City's WWTP;

"Wastewater Treatment Plant" or "WWTP" shall mean all facilities, devices, or systems which are owned, managed, operated, or maintained by the City for the storage, treatment, recycling, or reclamation of municipal wastewater, including the WWTP located at 33400 Southeast Jarl Road in Boring, Oregon, and all components of such wastewater treatment facility;

"Work" shall mean all activities the City is required to perform under this Consent Decree.

VI. CIVIL PENALTY

9. Within 30 Days after the Effective Date, Defendant shall pay the sum of $250,000 as a civil penalty to the United States, together with interest accruing from the date on which the Consent Decree is lodged with the Court, at the rate specified in 28 U.S.C. § 1961 as of the date of lodging.

10. Defendant shall pay the civil penalty due to the United States by FedWire Electronic Funds Transfer ("EFT") to the DOJ account, in accordance with instructions provided to Defendant by the Financial Litigation Program of the United States Department of Justice after the Effective Date. The payment instructions provided will include a Consolidated Debt Collection System ("CDCS") number, which Defendant shall use to identify all payments required to be made in accordance with this Consent Decree. Payment instructions will be provided to:

Jenny Coker, Public Works Director
City of Sandy
39250 Pioneer Boulevard
Sandy, Oregon 97055

(503) 668-6927
jcoker@ci.sandy.or.us

on behalf of Defendant. Defendant may change the individual to receive payment instructions on its behalf by providing written notice of such change to DOJ and EPA in accordance with Section XV (Notices).

11. At the time of payment, Defendant shall send notice that payment has been made: (i) to EPA via email at cinwd_acctsreceivable@epa.gov and steffen.craig@epa.gov or via regular mail at EPA Cincinnati Finance Office, 26 W. Martin Luther King Drive, Cincinnati, Ohio 45268; (ii) to DOJ in accordance with Section XV; and (iii) to EPA in accordance with Section XV. Such notice shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in *United States, et. al v. City of Sandy, Oregon* and shall reference the civil action number, CDCS Number and DOJ case number 90-5-1-1-12501.

12. No later than 30 Days after the Effective Date, Defendant shall pay to the State the $24,300 penalty assessed in Notice of Civil Penalty Assessment and Order No. WQ/M-NWR-2018-141 ("Notice"), issued by ODEQ to Defendant on February 26, 2019, in resolution of that Notice in the same manner as identified in Paragraph 16.

13. In addition to the civil penalty referenced in the preceding paragraph, a total civil penalty of $250,000 is payable to the State. In accordance with ODEQ's Internal Management Directive on Supplemental Environmental Projects ("SEP"), the civil penalty is mitigated to $50,000 on the condition Defendant completes the approved SEP proposal at Appendix C by December 31, 2028. Defendant shall refrain from using the value of the SEP as a tax deduction or as part of a tax credit application; and, if and when Defendant publicizes the SEP or the results of the SEP, Defendant will state in a prominent manner that the project was undertaken as settlement of an ODEQ enforcement action.

Defendant will be deemed to have completed the SEP when ODEQ receives the following documentation: A written report from the Clackamas River Basin Council confirming that it received at least $200,000 from Defendant and expended the money in the manner described in the SEP proposal.

14. Defendant shall pay the $50,000 portion of the civil penalties, not subject to mitigation through the SEP, within 30 Days of the Effective Date.

15. Should Defendant fail to complete the approved SEP by December 31, 2028, Defendant shall pay the balance of the civil penalties, $200,000, plus 9% interest per annum beginning on the Effective Date, within 30 Days of the completion deadline.

16. Defendant shall pay the civil penalties owed to the State in Paragraphs 12-15 by check or money made out to "Oregon State Treasurer" and submitted to Oregon DEQ, Attn: Business Office, 700 NE Multnomah Street, Portland, OR 97232. At the time of payment, Defendant shall send notice that payment has been made to ODEQ via email to Kieran.ODONNELL@deq.oregon.gov.

VII. COMPLIANCE REQUIREMENTS

17. Defendant shall comply with the CWA, ORS Chapter 468B, implementing regulations, and its NPDES Permit with respect to the CSTW and its Industrial Stormwater Permit.

18. Capacity, Management, Operation, and Maintenance. Within 180 Days of the Effective Date, Sandy shall submit to EPA and ODEQ for review and approval a Capacity, Management, Operation, and Maintenance ("CMOM") Program for the City's Wastewater Collection and Transmission System. The CMOM Program shall be developed in accordance with EPA's 2005 Guidance titled "Guide for Evaluating Capacity, Management, Operation, and

Maintenance Programs at Sanitary Sewer Collection Systems." The CMOM Program shall be stamped and signed by a registered professional engineer licensed to practice in the State of Oregon, demonstrating that the Program has been developed in accordance with EPA's 2005 Guidance and sound engineering practices. Upon approval, Sandy shall implement the CMOM Program and shall annually review the Program, by December 31 of each year, and update the Program as necessary to ensure that it is consistent with accepted industry practices to properly manage, operate, and maintain sewer systems, identify and inventory areas within sewer systems with capacity constraints, and implement measures to ensure adequate capacity throughout its sewer systems. Any updates to the CMOM Program shall be completed by March 31 of the year following the annual review of the CMOM Program and the updated CMOM Program shall be provided to EPA and ODEQ no later than 30 Days following completion of the updated CMOM Program.

19. Sewer Assessment and Rehabilitation Program. By December 31, 2025, Sandy shall for all basins within its WCTS: (1) investigate sources of infiltration and inflow by means of smoke testing, CCTV inspection, and other identification methods; and (2) provide EPA and ODEQ for review and approval an annual report and rehabilitation plan, to be submitted by December 31 of each year, containing a schedule for completion of all basins, the results of the smoke testing and other infiltration and inflow identification efforts, and identifying planned corrective measures along with a schedule for implementation. Corrective measures must include removing heavy sediment and making repairs to category 4 and 5 defects from the National Association of Sewer Service Companies ("NASSCO") rating system. All identified corrective measures shall be completed within 10 years of the Effective Date of the Consent Decree.

20. Preliminary Design Improvements. By October 31, 2023, the City shall complete construction and begin operation of improvements detailed in the 2020-2023 Wastewater Improvements, in accordance with ODEQ approved design plans.

21. Stress Test. The City has previously submitted to EPA and ODEQ, and EPA and ODEQ have reviewed and approved, a plan for conducting a stress test at the Wastewater Treatment Plant as outlined in Paragraph 9.b. of Appendix D. By June 30, 2023, Sandy shall perform the Stress Test in accordance with the plan approved by EPA and ODEQ.

22. Amended Wastewater Facilities Plan. The City shall submit to EPA and ODEQ, for review and approval, an Amended Wastewater Facility Plan that complies with the requirements of Appendix E and proposes alternatives to bring the City into compliance with the terms and conditions of the NPDES Permit. The schedule for final completion of all work under the Amended Wastewater Facility Plan shall be as expeditious as possible, but in no event longer than fifteen (15) years from the date the Facilities Plan is approved by EPA and ODEQ.

23. Capacity Assurance Program. The City shall implement the Capacity Assurance Program outlined in Appendix D that limits new sewer connections until capacity for the additional flows associated with those new or modified connections has been demonstrated within City of Sandy Treatment Works during both dry and peak flows.

24. Approval of Deliverables. After review of any plan, report, or other item that is required to be submitted pursuant to this Consent Decree, EPA and the State will in writing: (a) approve the submission; (b) approve the submission upon specified conditions; (c) approve part of the submission and disapprove the remainder; or (d) disapprove the submission. If all or part of a submission is disapproved, the EPA and the State will explain in writing the reasons for the disapproval, including identifying any deficiencies subject to Paragraphs 25 or 26.

25. If the submission is approved pursuant to Paragraph 24(a), Defendant shall take all actions required by the plan, report, or other document, in accordance with the schedules and requirements of the plan, report, or other document, as approved. If the submission is conditionally approved or approved only in part pursuant to Paragraph 24(b) or (c), Defendant shall, upon written direction from EPA and the State, take all actions required by the approved plan, report, or other item that EPA and the State determines are technically severable from any disapproved portions, subject to Defendant's right to dispute only the specified conditions or the disapproved portions, under Section XI (Dispute Resolution).

26. If the submission is disapproved in whole or in part pursuant to Paragraph 24(c) or (d), Defendant shall, within 60 Days or such other time as the Parties agree to in writing, correct all deficiencies and resubmit the plan, report, or other item, or disapproved portion thereof, for approval, in accordance with the preceding Paragraphs. If the resubmission is approved in whole or in part, Defendant shall proceed in accordance with the preceding Paragraph.

27. If a resubmitted plan, report, or other item, or portion thereof, is disapproved in whole or in part, EPA and the State may again require Defendant to correct any deficiencies, in accordance with the preceding Paragraphs, subject to Defendant's right to invoke Dispute Resolution and the right of EPA and the State to seek stipulated penalties as provided in the preceding Paragraphs.

28. If Defendant elects to invoke Dispute Resolution as set forth in Paragraphs 25 or 27, Defendant shall do so by sending a Notice of Dispute in accordance with Paragraph 57 within 30 Days (or such other time as the Parties agree to in writing) after receipt of the applicable decision.

29. Any stipulated penalties applicable to the original submission, as provided in Section IX, accrue during the 60 Day period described in Paragraph 26 or other specified period, but shall not be payable unless the resubmission is untimely or is disapproved in whole or in part; provided that, if the original submission was so deficient as to constitute a material breach of Defendant's obligations under this Decree, the stipulated penalties applicable to the original submission shall be due and payable notwithstanding any subsequent resubmission.

30. Permits. Where any compliance obligation under this Section requires Defendant to obtain a federal, state, or local permit or approval, Defendant shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals. Defendant may seek relief under the provisions of Section X (Force Majeure) for any delay in the performance of any such obligation resulting from a failure to obtain, or a delay in obtaining, any permit or approval required to fulfill such obligation, if Defendant has submitted timely and complete applications and has taken all other actions necessary to obtain all such permits or approvals.

VIII. REPORTING REQUIREMENTS

31. Defendant shall submit the following reports to EPA and the State at the addresses set forth Section XV (Notices):

a. By July 31st and January 31st of each year after the lodging of this Consent Decree, until termination of this Decree pursuant to Section XIX, Defendant shall submit a semi-annual report for the preceding six months that includes: the status of any construction or compliance measures; completion of milestones; problems encountered or anticipated, together with implemented or proposed

solutions; status of permit applications; operation and maintenance; reporting on Capacity Assurance Program in compliance with Paragraph 13 of Appendix D; reports to state agencies; and a summary of costs incurred since the previous report.

b. The report shall also include a description of any noncompliance with the requirements of this Consent Decree and an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation. If Defendant violates, or has reason to believe that it may violate, any requirement of this Consent Decree, Defendant shall notify DOJ, EPA, and the State of such violation and its likely duration, in writing, within ten business days of the Day Defendant first becomes aware of the violation or potential violation, with an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation. If the cause of a violation cannot be fully explained at the time the report is due, Defendant shall so state in the report. Defendant shall investigate the cause of the violation and shall then submit an amendment to the report, including a full explanation of its cause, within 30 Days of the Day Defendant becomes aware of the cause of the violation. Nothing in this Paragraph or the following Paragraph relieves Defendant of its obligation to provide the notice required by Section X (Force Majeure).

32. Whenever any violation of this Consent Decree or of any applicable permits or any other event affecting Defendant's performance under this Decree may pose an immediate threat to the public health or welfare or the environment, Defendant shall notify EPA and the State by telephone at (206) 553-1816 and (503) 229-5019 and by email to levo.brian@epa.gov, R10enforcement@epa.gov, and bailey.randall@deq.state.or.us as soon as possible, but no later than 24 hours after Defendant first knew of the violation or event. This procedure is in addition to the requirements set forth in the preceding Paragraph.

33. Each report submitted by Defendant under this Section shall be signed by an official of the submitting party and include the following certification:

> I certify under penalty of perjury that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

34. This certification requirement does not apply to emergency or similar notifications where compliance would be impractical.

35. The reporting requirements of this Consent Decree do not relieve Defendant of any reporting obligations required by the CWA or implementing regulations, or by any other federal, state, or local law, regulation, permit, or other requirement.

36. Any information provided pursuant to this Consent Decree may be used by the United States and/or the State in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law.

IX. STIPULATED PENALTIES

37. Defendant shall be liable for stipulated penalties to the United States and the State for violations of this Consent Decree as specified below, unless excused under Section X (Force Majeure). A violation includes failing to perform any obligation required by the terms of this Decree, including any work plan or schedule approved under this Decree, according to all applicable requirements of this Decree and within the specified time schedules established by or approved under this Decree.

38. Late Payment of Civil Penalty. If Defendant fails to pay the civil penalty required to be paid under Section VI (Civil Penalty) when due, Defendant shall pay a stipulated penalty of $5,000 per Day for each Day that the payment is late.

39. Permit Violations. The following stipulated penalties shall accrue for each violation of any requirement of Defendant's Permits (NPDES Permit and Industrial Stormwater Permit) specified below:

a. Waste Discharge Limit Violations. For each violation of the requirement to comply with all daily, weekly, or monthly effluent limits on parameters set forth in the Permit or any final effluent limits under any successor permit, Defendant shall pay a stipulated penalty as follows:

Penalty Per Violation

$5,000 for each violation of each daily limit
$10,000 for each violation of each weekly or seven day limit
$20,000 for each violation of each monthly or 30-day limit

b. Bypasses. The following penalties apply to any bypasses made in violation of the requirements of Defendant's NPDES Permit:

Per Violation Per day	
First violation per year	$15,000 per violation per day
Second and Third violation	$30,000 per violation per day
Fourth violation or more	$50,000 per violation per day

c. Any other violations of the Permit shall be subject to the following penalties per violation per day.

Penalty Per Violation Per Day	Period of Noncompliance
$500	1st through 14th Day
$1,000.	15th through 30th Day
$2,500.	31st Day and beyond

40. Compliance Milestones.

a. The following stipulated penalties shall accrue per violation per Day for each violation of the requirements identified in Paragraphs 18-22 of this Consent Decree (CMOM, Sewer Assessment and Rehabilitation Program, Preliminary Design Improvements, Stress Test, Amended Facilities Plan), including failing to meet deadlines set by the Consent Decree or within any deliverables:

Penalty Per Violation Per Day	Period of Noncompliance
$700	1st through 14th Day
$1500	15th through 30th Day
$2500	31st Day and beyond

b. The following stipulated penalties shall accrue per violation per Day for each violation of the requirements of the Capacity Assurance Program:

(a) For any new sewer service connection or change to an existing connection that results in additional flow that is

approved by the City in violation of Capacity Assurance Program:

$10,000 per Equivalent Residential Unit calculated as outlined in Paragraphs 15-16 of Appendix D.

41. Reporting Requirements. The following stipulated penalties shall accrue per violation per Day for each violation of the reporting requirements of Section VIII:

Penalty Per Violation Per Day	Period of Noncompliance
$100	1st through 14th Day
$300	15th through 30th Day
$500	31st Day and beyond

42. Stipulated penalties under this Section shall begin to accrue on the Day after performance is due or on the Day a violation occurs, whichever is applicable, and shall continue to accrue until performance is satisfactorily completed or until the violation ceases. Stipulated penalties shall accrue simultaneously for separate violations of this Consent Decree.

43. Defendant shall pay stipulated penalties to the United States and the State within 30 Days of a written demand by either Plaintiff. Defendant shall pay 50 percent of the total stipulated penalty amount due to the United States and 50 percent to the State. The Plaintiff making a demand for payment of a stipulated penalty shall simultaneously send a copy of the demand to the other Plaintiff.

44. Either Plaintiff may in the unreviewable exercise of its discretion, reduce, or waive stipulated penalties otherwise due to it under this Consent Decree.

45. Stipulated penalties shall continue to accrue as provided in Paragraph 42, during any Dispute Resolution, but need not be paid until the following:

a. If the dispute is resolved by agreement of the Parties or by a decision of EPA or the State that is not appealed to the Court,

Defendant shall pay accrued penalties determined to be owing, together with interest, to the United States or the State within 30 Days of the effective date of the agreement or the receipt of EPA's or the State's decision or order.

b. If the dispute is appealed to the Court and the United States or the State prevails in whole or in part, Defendant shall pay all accrued penalties determined by the Court to be owing, together with interest, within 60 Days of receiving the Court's decision or order, except as provided in subparagraph c, below.

c. If any Party appeals the Court's decision, Defendant shall pay all accrued penalties determined to be owing, together with interest, within 15 Days of receiving the final appellate court decision.

46. Obligations Prior to the Effective Date. Upon the Effective Date, the stipulated penalty provisions of this Decree shall be retroactively enforceable with regard to any and all violations of Section VII (Compliance Requirements) that have occurred after signature but prior to the Effective Date, provided that stipulated penalties that may have accrued prior to the Effective Date may not be collected unless and until this Consent Decree is entered by the Court.

47. Defendant shall pay stipulated penalties owing to the United States in the manner set forth in Paragraph 10 and with the confirmation notices required by Paragraph 11, except that the transmittal letter shall state that the payment is for stipulated penalties and shall state for which violation(s) the penalties are being paid. Defendant shall pay stipulated penalties owing to the State in the manner set forth in Paragraph 16.

48. If Defendant fails to pay stipulated penalties according to the terms of this Consent Decree, Defendant shall be liable for interest on such penalties, as provided for in 28 U.S.C. § 1961, accruing as of the date payment became due. Nothing in this Paragraph shall be construed to limit the United States or the State from seeking any remedy otherwise provided by law for Defendant's failure to pay any stipulated penalties.

49. The payment of penalties and interest, if any, shall not alter in any way Defendant's obligation to complete the performance of the requirements of this Consent Decree.

50. Non-Exclusivity of Remedy. Stipulated penalties are not the United States' or State's exclusive remedy for violations of this Consent Decree. Subject to the provisions of Section XIII (Effect of Settlement/Reservation of Rights), the United States and the State expressly reserve the right to seek any other relief it deems appropriate for Defendant's violation of this Decree or applicable law, including but not limited to an action against Defendant for statutory penalties, additional injunctive relief, mitigation or offset measures, and/or contempt. However, the amount of any statutory penalty assessed for a violation of this Consent Decree shall be reduced by an amount equal to the amount of any stipulated penalty assessed and paid for the same violation pursuant to this Consent Decree.

X. FORCE MAJEURE

51. "Force majeure," for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of Defendant, of any entity controlled by Defendant, or of Defendant's contractors, that delays or prevents the performance of any obligation under this Consent Decree despite Defendant's best efforts to fulfill the obligation. The requirement that Defendant exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure event and best efforts to address the effects of any potential force

majeure event (a) as it is occurring and (b) following the potential force majeure, such that the delay and any adverse effects of the delay are minimized. "Force Majeure" does not include Defendant's financial inability to perform any obligation under this Consent Decree.

52. If any event occurs or has occurred that may delay the performance of any obligation under this Consent Decree, whether or not caused by a force majeure event, Defendant shall provide notice by telephone to (206) 553-1816 and (503) 229-5019 and by email to levo.brian@epa.gov, R10enforcement@epa.gov, and bailey.randall@deq.state.or.us, within 72 hours of when Defendant first knew that the event might cause a delay. Within seven Days thereafter, Defendant shall provide in writing to EPA and the State an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Defendant's rationale for attributing such delay to a force majeure event if it intends to assert such a claim; and a statement as to whether, in the opinion of Defendant, such event may cause or contribute to an endangerment to public health, welfare or the environment. Defendant shall include with any such notice all available documentation supporting the claim that the delay was attributable to a force majeure. Failure to comply with the above requirements shall preclude Defendant from asserting any claim of force majeure for that event for the period of time of such failure to comply, and for any additional delay caused by such failure. Defendant shall be deemed to know of any circumstance of which Defendant, any entity controlled by Defendant, or Defendant's contractors knew or should have known.

53. If EPA, after a reasonable opportunity for review and comment by the State, agrees that the delay or anticipated delay is attributable to a force majeure event, the time for

performance of the obligations under this Consent Decree that are affected by the force majeure event will be extended by EPA, after a reasonable opportunity for review and comment by the State, for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force majeure event shall not, of itself, extend the time for performance of any other obligation. EPA will notify Defendant in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure event.

54. If EPA, after a reasonable opportunity for review and comment by the State, does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, EPA will notify Defendant in writing of its decision.

55. If Defendant elects to invoke the dispute resolution procedures set forth in Section XI (Dispute Resolution), it shall do so no later than 15 Days after receipt of EPA's notice. In any such proceeding, Defendant shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Defendant complied with the requirements of Paragraphs 51 and 52. If Defendant carries this burden, the delay at issue shall be deemed not to be a violation by Defendant of the affected obligation of this Consent Decree identified to EPA and the Court.

XI. DISPUTE RESOLUTION

56. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree. Defendant's failure to seek resolution of a dispute

under this Section shall preclude Defendant from raising any such issue as a defense to an action by the United States to enforce any obligation of Defendant arising under this Decree.

57. Informal Dispute Resolution. Any dispute subject to Dispute Resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when Defendant sends DOJ, EPA, and the State a written Notice of Dispute. Such Notice of Dispute shall state clearly the matter in dispute. The period of informal negotiations shall not exceed 30 Days from the date the dispute arises, unless that period is modified by written agreement. If the Parties cannot resolve a dispute by informal negotiations, then the position advanced by the United States and the State shall be considered binding unless, within 20 Days after the conclusion of the informal negotiation period, Defendant invokes formal dispute resolution procedures as set forth below.

58. Formal Dispute Resolution. Defendant shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph 57, by sending DOJ, EPA, and the State a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting Defendant's position and any supporting documentation relied upon by Defendant.

59. The United States and the State will send Plaintiffs' Statement of Position to Defendant within 45 Days of receipt of Defendant's Statement of Position. The Plaintiffs' Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the United States and the State. The Plaintiffs' Statement of Position is binding on Defendant, unless

Defendant files a motion for judicial review of the dispute in accordance with the following Paragraph.

60. Judicial Dispute Resolution. Defendant may seek judicial review of the dispute by filing with the Court and serving on the United States and the State a motion requesting judicial resolution of the dispute. The motion (a) must be filed within 20 Days of receipt of the Plaintiffs' Statement of Position pursuant to the preceding Paragraph; (b) may not raise any issue not raised in informal dispute resolution pursuant to Paragraph 57, unless the Plaintiffs raise a new issue of law or fact in the Statement of Position; (c) shall contain a written statement of Defendant's position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and (d) shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

61. The Plaintiffs shall respond to Defendant's motion within the time period allowed by the Local Rules of this Court. Defendant may file a reply memorandum, to the extent permitted by the Local Rules.

62. Standard of Review

a. Disputes Concerning Matters Accorded Record Review. Except as otherwise provided in this Consent Decree, in any dispute brought under Paragraph 60 pertaining to: the adequacy or appropriateness of plans, procedures to implement plans, schedules or any other items requiring approval by EPA and ODEQ under this Consent Decree; the adequacy of the performance of work undertaken pursuant to this Consent Decree; and all other disputes that are accorded review on the administrative record under applicable

principles of administrative law, Defendant shall have the burden of demonstrating, based on the administrative record, that the position taken by the United States is not consistent with the Consent Decree or applicable law.

b. Other Disputes. Except as otherwise provided in this Consent Decree, in any other dispute brought under Paragraph 58, Defendant shall bear the burden of demonstrating that its position complies with this Consent Decree and better furthers the Objectives of the Consent Decree.

63. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of Defendant under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first Day of noncompliance, but payment shall be stayed pending resolution of the dispute as provided in Paragraph 45. If Defendant does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section IX (Stipulated Penalties).

XII. INFORMATION COLLECTION AND RETENTION

64. The United States, the State, and their representatives, including attorneys, contractors, and consultants, shall have the right of entry into any facility covered by this Consent Decree, at all reasonable times, upon presentation of credentials, to:

a. monitor the progress of activities required under this Consent Decree;

b. verify any data or information submitted to the United States or the

State in accordance with the terms of this Consent Decree;

c. obtain samples and, upon request, splits of any samples taken by Defendant or its representatives, contractors, or consultants;

d. obtain documentary evidence, including photographs and similar data; and

e. assess Defendant's compliance with this Consent Decree.

65. Upon request, Defendant shall provide EPA and the State or their authorized representatives splits of any samples taken by Defendant. Upon request, EPA and the State shall provide Defendant splits of any samples taken by EPA or the State.

66. Until five years after the termination of this Consent Decree, Defendant shall retain, and shall instruct its contractors and agents to preserve, all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) in its or its contractors' or agents' possession or control, or that come into its or its contractors' or agents' possession or control, and that relate in any manner to Defendant's performance of its obligations under this Consent Decree. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information-retention period, upon request by the United States or the State, Defendant shall provide copies of any documents, records, or other information required to be maintained under this Paragraph.

67. At the conclusion of the information-retention period provided in the preceding Paragraph, Defendant shall notify the United States and the State at least 90 Days prior to the destruction of any documents, records, or other information subject to the requirements of the preceding Paragraph and, upon request by the United States or the State, Defendant shall deliver

any such documents, records, or other information to EPA or the State. Defendant may assert that certain documents, records, or other information is privileged under the attorney-client privilege or any other privilege recognized by federal law. If Defendant asserts such a privilege, it shall provide the following: (a) the title of the document, record, or information; (b) the date of the document, record, or information; (c) the name and title of each author of the document, record, or information; (d) the name and title of each addressee and recipient; (e) a description of the subject of the document, record, or information; and (f) the privilege asserted by Defendant. However, no documents, records, or other information created or generated pursuant to the requirements of this Consent Decree shall be withheld on grounds of privilege.

68. Defendant may also assert that information required to be provided under this Section is protected as Confidential Business Information ("CBI") under 40 C.F.R. Part 2. As to any information that Defendant seeks to protect as CBI, Defendant shall follow the procedures set forth in 40 C.F.R. Part 2.

69. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States or the State pursuant to applicable federal or state laws, regulations, or permits, nor does it limit or affect any duty or obligation of Defendant to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

XIII. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

70. This Consent Decree resolves the civil claims of the United States and the State for the violations alleged in the Complaint filed in this action through the date of lodging.

71. The United States and the State reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree. Defendant retains all rights and defenses to

such claims except as provided in this Consent Decree. This Consent Decree shall not be construed to limit the rights of the United States or the State to obtain penalties or injunctive relief under the Act or implementing regulations, or under other federal or state laws, regulations, or permit conditions, except as expressly specified in Paragraph 70. The United States and the State further reserve all legal and equitable remedies to address any imminent and substantial endangerment to the public health or welfare or the environment arising at, or posed by, Defendant's CSTW, whether related to the violations addressed in this Consent Decree or otherwise.

72. In any subsequent administrative or judicial proceeding initiated by the United States or the State for injunctive relief, civil penalties, other appropriate relief relating to the CSTW or Defendant's violations, Defendant shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States or the State in the subsequent proceeding were or should have been brought in the instant case, except with respect to claims that have been specifically resolved pursuant to Paragraph 70.

73. This Consent Decree is not a permit, or a modification of any permit, under any federal, State, or local laws or regulations. Defendant is responsible for achieving and maintaining complete compliance with all applicable federal, State, and local laws, regulations, and permits; and Defendant's compliance with this Consent Decree shall be no defense to any action commenced pursuant to any such laws, regulations, or permits, except as set forth herein. The United States and the State do not, by their consent to entry of this Consent Decree, warrant or aver in any manner that Defendant's compliance with any aspect of this Consent Decree will

result in compliance with provisions of the CWA, 33 U.S.C. § 1251, et seq., or with any other provisions of federal, State, or local laws, regulations, or permits. Application for construction grants, State Revolving Loan Funds, or any other grants or loans, or other delays caused by inadequate facility planning or plans and specifications on the part of Defendant shall not be cause for extension of any required compliance date in this Consent Decree.

74. This Consent Decree does not limit or affect the rights of Defendant or of the United States or the State against any third parties, not party to this Consent Decree, nor does it limit the rights of third parties, not party to this Consent Decree, against Defendant, except as otherwise provided by law.

75. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not party to this Consent Decree.

76. Nothing in this Consent Decree limits the rights or defenses available under Section 309(e) of the CWA, 33 U.S.C. § 1319(e), in the event that the laws of the State, as currently or hereafter enacted, may prevent Defendant from raising the revenues needed to comply with this Decree.

XIV. COSTS

77. The Parties shall bear their own costs of this action, including attorneys' fees, except that the United States and the State shall be entitled to collect the costs (including attorneys' fees) incurred in any action necessary to collect any portion of the civil penalty or any stipulated penalties due but not paid by Defendant.

XV. NOTICES

78. Unless otherwise specified in this Decree, whenever notifications, submissions, or communications are required by this Consent Decree, they shall be made in writing and sent by mail or email, (with a preference for email), addressed as follows:

As to DOJ by email (preferred):	eescdcopy.enrd@usdoj.gov Re: DJ # 90-5-1-1-12501
As to DOJ by mail:	EES Case Management Unit Environment and Natural Resources Division U.S. Department of Justice P.O. Box 7611 Washington, D.C. 20044-7611 Re: DJ # 90-5-1-1-12501
As to EPA by email (preferred):	levo.brian@epa.gov and johnson.patrick@epa.gov
As to EPA by mail:	Brian Levo, Compliance Officer U.S. Environmental Protection Agency, Region 10 1200 6th Avenue, Suite 155, MS 20-C04 Seattle, Washington 98101
As to the State by email:	Randall.bailey@deq.oregon.gov *and* Jeff.bachman@deq.oregon.gov *and* nina.englander@doj.state.or.us
As to the State by mail:	Randall Bailey Oregon Department of Environmental Quality 700 NE Multnomah Street, Suite 600 Portland, Oregon 97232 Jeff Bachman Oregon Department of Environmental Quality 700 NE Multnomah Street, Suite 600 Portland, Oregon 97232 Nina Englander Oregon Department of Justice 100 SW Market Street Portland, Oregon 97201

As to Defendant by email:	tdeems@ci.sandy.or.us *and* jcoker@ci.sandy.or.us
As to Defendant by mail:	Attn: City Manager City of Sandy 39250 Pioneer Boulevard Sandy, Oregon 97055

79. Any Party may, by written notice to the other Parties, change its designated notice recipient or notice address provided above.

80. Notices submitted pursuant to this Section shall be deemed submitted upon mailing or transmission by email, unless otherwise provided in this Consent Decree or by mutual agreement of the Parties in writing.

XVI. EFFECTIVE DATE

81. The Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted, whichever occurs first, as recorded on the Court's docket; provided, however, that Defendant hereby agrees that it shall be bound to perform duties scheduled to occur prior to the Effective Date. In the event the United States withdraws or withholds consent to this Consent Decree before entry, or the Court declines to enter the Consent Decree, then the preceding requirements to perform duties scheduled to occur before the Effective Date shall terminate.

XVII. RETENTION OF JURISDICTION

82. The Court shall retain jurisdiction over this case until termination of this Consent Decree, for the purpose of resolving disputes arising under this Decree or entering orders modifying this Decree, pursuant to Sections XI and XVIII, or effectuating or enforcing compliance with the terms of this Decree.

XVIII. MODIFICATION

83. Except as otherwise set forth in Appendix D, the terms of this Consent Decree, including any attached appendices, may be modified only by a subsequent written agreement signed by all the Parties. Where the modification constitutes a material change to this Decree, it shall be effective only upon approval by the Court.

84. Any disputes concerning modification of this Decree shall be resolved pursuant to Section XI (Dispute Resolution), provided, however, that, instead of the burden of proof provided by Paragraph 62, the Party seeking the modification bears the burden of demonstrating that it is entitled to the requested modification in accordance with Federal Rule of Civil Procedure 60(b).

XIX. TERMINATION

85. After Defendant has completed the requirements of Section VII (Compliance Requirements), has thereafter maintained continuous satisfactory compliance with this Consent Decree and Defendant's NPDES Permit for a period of 3 years, has complied with all other requirements of this Consent Decree, and has paid the civil penalty and any accrued stipulated penalties as required by this Consent Decree, Defendant may serve upon the United States and the State a Request for Termination, stating that Defendant has satisfied those requirements, together with all necessary supporting documentation.

86. Following receipt by the United States and the State of Defendant's Request for Termination, the Parties shall confer informally concerning the Request and any disagreement that the Parties may have as to whether Defendant has satisfactorily complied with the requirements for termination of this Consent Decree. If the United States, after consultation with

the State, agrees that the Decree may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Decree.

87. If the United States after consultation with the State does not agree that the Decree may be terminated, Defendant may invoke Dispute Resolution under Section XI. However, Defendant shall not seek Dispute Resolution of any dispute regarding termination until 15 Days after service of its Request for Termination.

XX. PUBLIC PARTICIPATION

88. This Consent Decree shall be lodged with the Court for a period of not less than 30 Days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate. Defendant consents to entry of this Consent Decree without further notice and agrees not to withdraw from or oppose entry of this Consent Decree by the Court or to challenge any provision of the Decree, unless the United States has notified Defendant in writing that it no longer supports entry of the Decree.

XXI. SIGNATORIES/SERVICE

89. Each undersigned representative of Defendant and other Parties to the Decree and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice identified on the DOJ signature page below, certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party he or she represents to this document.

90. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis. Defendant agrees to accept service of process by mail with respect to

all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons. Defendant need not file an answer to the Complaint in this action unless or until the Court expressly declines to enter this Consent Decree.

XXII. INTEGRATION

91. This Consent Decree, including deliverables that are subsequently approved pursuant to this Decree, constitutes the entire agreement among the Parties regarding the subject matter of the Decree and supersedes all prior representations, agreements and understandings, whether oral or written, concerning the subject matter of the Decree herein.

XXIII. HEADINGS

92. Headings to the Sections and Subsections of this Consent Decree are provided for convenience and do not affect the meaning or interpretation of the provisions of this Consent Decree.

XXIV. FINAL JUDGMENT

93. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court as to the United States, the State, and Defendant.

XXV. APPENDICES

94. The following Appendices are attached to and part of this Consent Decree:

"Appendix A" is the Preliminary Design Evaluation Report.
"Appendix B" is the Collection System Basin Map
"Appendix C" is the State Supplemental Environmental Project
"Appendix D" is the Capacity Assurance Program Evaluations
"Appendix E" is the Amended Wastewater System Facility Plan Requirements

Dated and entered this 11th day of September, 20

UNITED STATES DISTRICT JUDGE

FOR THE UNITED STATES OF AMERICA:

TODD KIM
ASSISTANT ATTORNEY GENERAL
Environment and Natural Resources Division
U.S. Department of Justice

6/30/23
Date

s/ Rachel A. Hankey
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Environment and Natural Resources Division
U.S. Department of Justice
Washington, D.C. 20044-7611

NATALIE K. WIGHT
United States Attorney

6/30/23
Date

s/ Alexis A. Lien
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FOR THE U.S. ENVIRONMENTAL PROTECTION AGENCY:

6/20/23
Date

s/ Beverly Li

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FOR THE U.S. ENVIRONMENTAL PROTECTION AGENCY CONTINUED:

6/29/23
Date

s/ Rosemarie Kelley
ROSEMARIE KELLEY
Director
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
U.S. Environmental Protection Ageny

–

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Date

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Oregon Department of Justice
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6/8/23
Date

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Portland, Oregon 97232

FOR DEFENDANT:

6/6/2023
Date

s/ Tyler Deems

TYLER DEEMS
Interim City Manager
City of Sandy
39250 Pioneer Boulevard
Sandy, Oregon 97055

Sandy Wastewater Treatment Plant Condition Assessment Improvements Project

PREPARED FOR

City of Sandy, OR

SANDY
WHERE INNOVATION MEETS ELEVATION

LEEWAY
engineering solutions

PREPARED BY

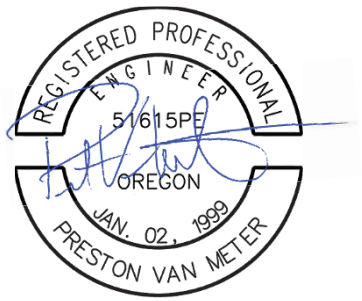
WEST YOST
Water. Engineered.

Sandy Wastewater Treatment Plant Condition Assessment Improvements Project Preliminary Design Evaluation Report

Prepared for

City of Sandy

Project No. 964-50-20-01



Project Manager: Preston Van Meter	March 2021 Date
QA/QC Review: Timothy R. Banyai	March 2021 Date

LIST OF TABLES

LIST OF FIGURES

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LIST OF ACRONYMS

2019 Condition Assessment	Condition Assessment in July 2019
2019 Facilities Plan	Wastewater Facilities Plan in 2019
2019 Facilities Plan	Wastewater Facilities Plan in 2019
2020 PDR	Immediate Needs Improvements Project Preliminary Design Report
AACE	Association for the Advancement of Cost Engineering
AAF	Average Annual Flow
ACH	Air Changes per Hour
ADWF	Average Dry Weather Flow
aSRT	Aerobic Solids Retention Time
ASSB	Aerated Sludge Storage Basin
ASSB	Aerated Sludge Storage Basin
BOD	Biological Oxygen Demand
City	City of Sandy

CMU	Concrete Masonry Unit
DO	Dissolved Oxygen
EDI	Energy Dissipating Inlet
FRP	Fiberglass Reinforced Plastic
GPM	Gallons Per Mile
I&C	Instrumentation and Control
IMLR	Internal Mixed Liquor Recycle
IOT	Internet of Things
LEL	Lower Explosive Limit
MBR	Membrane Bioreactor
MCCs	Motor Control Centers
MGD	Millions of Gallons
MLSS	Mixed Liquor Suspended Solids
MMDWF	Maximum Month Dry Weather Flow
MMWWF	Maximum Month Wet Weather Flow
NFPA	National Fire Protection Association
NPDES	National Pollutant Discharge Elimination System
OPCC	Opinion of Probable Construction Cost
OSHA	Occupational Safety and Health Administration
PDF	Peak Day Flow
PDR	Preliminary Design Report
PIF	Peak Instantaneous Flow
PLC	Programmable Logic Controller
Project	City of Sandy WWTP Condition Assessment Improvements Project
PVC	Polyvinyl Chloride
RAS	Recycled Activated Sludge
RPS	Return Pump Station
SCADA	Supervisory Control and Data Acquisition
SCFM	Standard Cubic Feet Per Minute
SRT	Solids Retention Time
TAG	The Automation Group
TM	Technical Memorandum
UV	Ultraviolet
VFD	Variable Frequency Drives
WAS	Waste Activated Sludge
WWTP	Wastewater Treatment Plant

1.0 INTRODUCTION

The City of Sandy (City) developed a Wastewater Facilities Plan in 2019 (2019 Facilities Plan), which identified wastewater collection, conveyance and treatment system improvements to be implemented in three phases through 2040. The 2019 Facilities Plan also identified several immediate needs projects required to improve the performance of the Wastewater Treatment Plant (WWTP).

After the 2019 Facilities Plan was completed, the City conducted a Condition Assessment in July 2019 (2019 Condition Assessment), which identified additional immediate needs projects beyond those identified in the 2019 Facilities Plan. The City then performed several operational and mechanical improvements to the WWTP after completion of the 2019 Condition Assessment.

In the summer of 2020, the City developed the Immediate Needs Improvements Project Preliminary Design Report (2020 PDR). The 2020 PDR presented a preliminary design for the improvements required at the WWTP based on the recommendations in the 2019 Facilities Plan, the findings of the 2019 Condition Assessment, and the improvements implemented in 2019.

This report evaluates the recommendations in the 2020 PDR and presents a modified set of recommended improvements, which will more efficiently utilize the City's budget while also effectively addressing the operational and maintenance deficiencies at the WWTP. These improvements will be implemented under the City of Sandy WWTP Condition Assessment Improvements Project (Project).

In addition to the recommended improvements identified in this report, a "Wish List" of improvements that can be implemented under this Project, if funding allows, or under future projects is provided in Appendix E. The items included on the Wish List are improvements identified by City and plant operations staff during site visits conducted for this Project. The Wish List is intended to be a living document that can be changed over time to keep track of small and large improvements that the City wishes to complete.

2.0 OVERVIEW OF EXISTING FACILITIES

The City of Sandy WWTP is located at 33400 SE Jarl Road in Boring, Oregon. A site plan showing the major processes, buildings, and other site features at the WWTP is shown in Figure 2-1. A summary of the design influent flows for the WWTP from the 2020 PDR are provided in Table 2-1. A summary of the major equipment sizing and design criteria from the 2020 PDR are provided in Table 2-2. The existing condition of the major processes, building and other site features are discussed in more detail in Section 3.0.

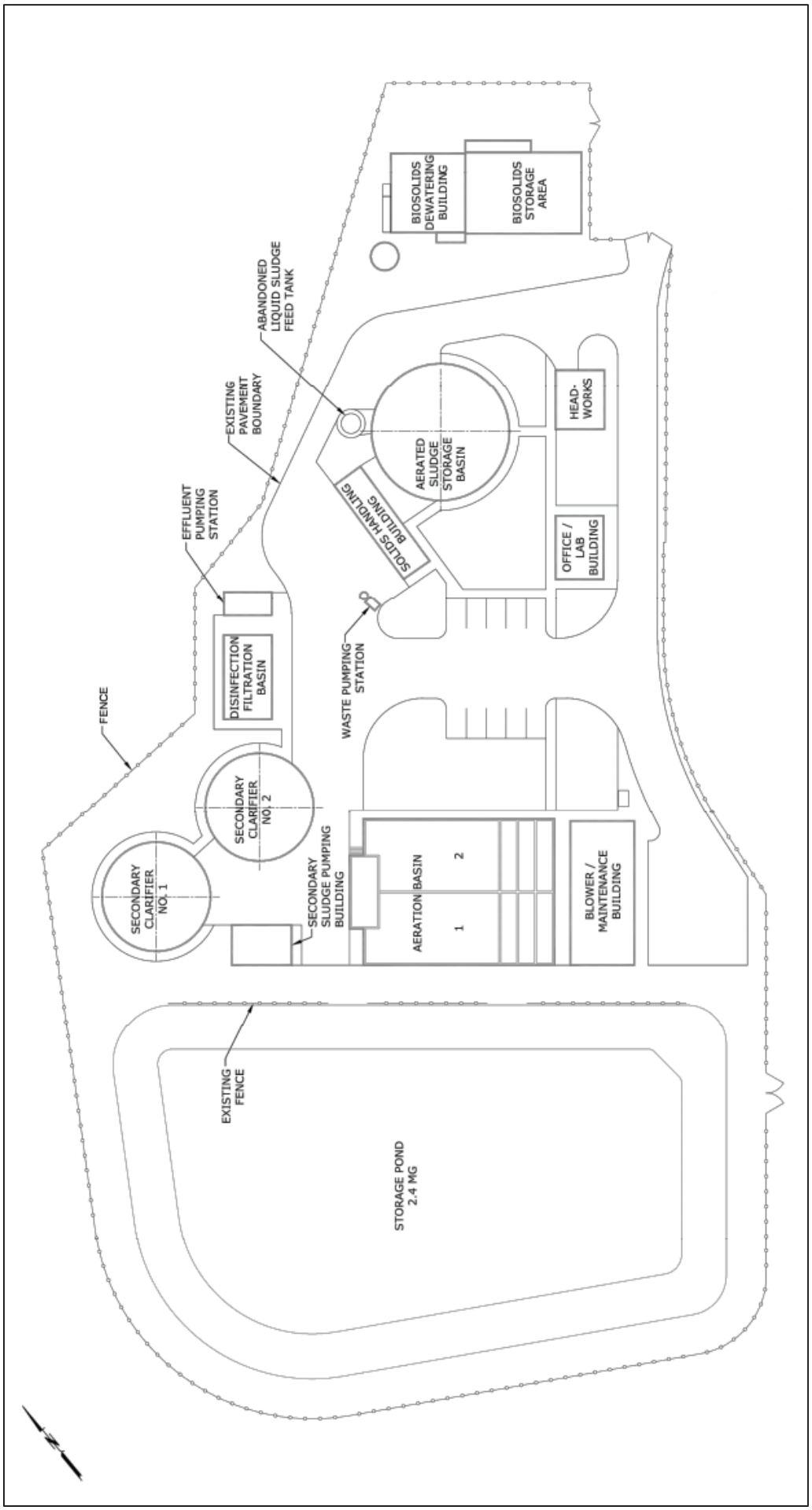


Figure 2-1. Sandy WWTP Site Plan

City of Sandy, OR
March 2021

WEST YOST

p:\c\964\50-20\--1\wp\TM WWTP

Table 2-1. Sandy WWTP Influent Design Flows

Flow Condition	Design Flow, million gallons per day (mgd)						
	Exist	2025	2026[1]	2030	2035	2036[2]	2040
Average Annual Flow (AAF)	1.4	1.5	0.9	1.1	1.4	0.8	1.2
Average Dry Weather Flow (ADWF)	1.1	1.2	0.7	0.9	1.1	0.6	0.9
Maximum Month Dry Weather Flow (MMDWF)	1.4	1.5	0.9	1.2	1.4	0.8	1.2
Maximum Month Wet Weather Flow (MMWWF)	2.7	2.9	1.8	2.2	2.6	1.4	2.3
Peak Day Flow (PDF)	5.9	5.5	3.9	4.8	5.7	3.2	5.0
Peak Instantaneous Flow (PIF)	9.1	9.9	6.4	7.7	9.1	5.6	7.0

Notes:
1. First phase of the Eastside Satellite Plant begins operation in 2026
2. Second phase of the Eastside Satellite Plant begins operation in 2036.

Table 2-2. Sandy WWTP Existing Design Criteria

Parameter	Value
Raw Screening	
Screen Type	Drum Screen
Screen Capacity	6.7 mgd
Screen Channel Width	4 ft
Screen Bar Spacing	1/4-in
Manual Screen	
Type	Bar Screen Rack
Quantity	1
Width	2 ft
Bar Spacing	3/4-inch
Grit Removal	
Type	Vortex
Max Flow	7.0 mgd
Grit Chamber Diameter	10 ft
Air Scour	75 standard cubic feet per minute (scfm)
Grit Chamber Mechanism Drive Motor	1 hp
Grit Pump	250 gpm @ 30 ft TDH, 5 hp
Grit Concentrator	250 gpm
Grit Classifier Screw Conveyor Drive	1 hp
Influent Flow Measurement	
Type	Parshall flume with level sensor
Throat width	12-inch
Capacity	9.2 mgd
Aeration Basins	
Number of Trains	2

Table 2-2. Sandy WWTP Existing Design Criteria

Parameter	Value
Total Basin Volume	740,000 gal
Selector Cells (3 per train)	75,000 gal, ea
Aerobic Cells (1 per train)	145,000 gal, ea
Average Sidewater Depth	17.79 ft
Diffuser Type	Fine Bubble Disc, 7 in dia.
Submersible Mixers (Total 4)	4 hp
Internal Mixed Liquor Recycle Pumps (Total 2)	750 gpm @ 12.0 ft TDH, 5 hp ea
Utility Pumps (Total 2)	2,800 gpm @ 12 ft TDH, ea
Blowers (No. 1-3)	
Type	Multi-stage Centrifugal
Capacity	1,350 scfm
Motor	100 hp
Blowers (No. 4)	
Type	Positive Displacement
Capacity	1,199 scfm
Motor	60 hp
Secondary Clarifiers	
Quantity	2
Capacity	3.5 mgd, ea.
Surface Overflow Rate at Capacity	1,500 gal/day per ft^2
Diameter	54 ft
Side-water Depth	15 ft
Mechanism Drive	3/4 hp
RAS Pumps	
Quantity	2
Capacity	600 gpm @ 23 ft TDH, ea
Motor	7.5 hp
WAS Pumps	
Quantity	2
Capacity	260 gpm @ 23 ft TDH, ea
Motor	5 hp
Filters	
Type	Disk Filters
Number of Units	2
Number of Disks per Unit	6
Capacity, total	6 mgd
Average Flow Rate	2 gpm/ft^2
Disk Drive	1/2 hp, ea

Table 2-2. Sandy WWTP Existing Design Criteria

Parameter	Value
Backwash Pump Quantity	2
Backwash Pump Drive	2 hp, ea
High Pressure Wash Pump Quantity	2
High Pressure Wash Pump Drive	40 hp, ea
Ultraviolet (UV) Disinfection	
Type	Medium Pressure
Number of Channels	1
Peak Flow Rates	7.0 mgd
Dosage	30,010 microwatt sec/cm^2
Headloss	17.7 in
Aerated Sludge Storage Basin	
Center Well	90,000 gallons
Cell No. 1:	90,000 gallons
Cell No. 2:	180,000 gallons
Decant Pumps	
Quantity	3
Capacity	50 gpm @ 22 ft TDH
Motor	1/2 hp
Sludge Transfer Pump	
Quantity	2
Motor	10 hp
Diffusers	
Center Well	270, 7-in dia fine bubble membrane disc
Cell No. 1 and No. 2	16, coarse bubble
Sodium Hypochlorite Storage & Metering Facility	
Number of Tanks	2
Tank Volume	1,000 gallons, ea
Number of Metering Pumps	2
Metering Pump Capacity	5 gph
Waste Pump Station	
Pump Station Type	Wet Pit with valve vault
Wet Pit Diameter	4 ft
Pumps	
Type	Submersible
Quantity	2
Capacity	350 gpm @ 22 ft TDH, ea
Motor	3 hp

3.0 PRELIMINARY DESIGN EVALUATION

This section summarizes the existing condition of each process area at the WWTP, the improvements recommended in the 2020 PDR, an evaluation of the 2020 PDR recommendations and a modified set of improvements recommended for implementation under this Project. Drawings of the proposed improvements are provided in Appendix A.

3.1 Headworks Facility

3.1.1 Existing Conditions

The existing headworks consists of a drum screen in a 4-foot wide channel with 1/4-inch openings; a manual screen in a 2-foot wide bypass channel; a 10-foot diameter vortex grit removal basin; and a Parshall flume for measuring influent flow. The grit basin is equipped with an airlift pump that pumps grit from the bottom of the basin and discharges it to a grit classifier. The grit classifier removes water and organic material from the grit and conveys the grit via a screw conveyor to a dumpster. The drum screen also discharges screenings to the same dumpster.

The headworks facility has the following deficiencies:

- The headworks equipment is over 20 years old and is reaching the end of its useful life.
- The drum screen does not have adequate capacity to treat future peak wet weather flows.
- Solids and rags leak through the side seals on the drum screen and influent flow periodically overflows the bypass channel isolation gate. This results in poor removal of solids and rags from the influent flow.
- There is no means of removing the screen from the channel to perform routine maintenance on the screen.
- The paddle mixer in the grit removal basin failed recently.
- The grit pump and grit pump discharge piping need replacement.
- There is no redundant mechanical screen or grit removal equipment at the headworks facility.
- The hydraulic grade line of the headworks facility is not compatible with future planned primary clarifiers, which are required to treat the additional solids load from the future Eastside Satellite MBR facility. The headworks facility will need to be relocated to a higher elevation to allow primary clarifiers to be installed at the WWTP.

3.1.2 Previous Preliminary Design Recommendations and Discussion

The 2020 PDR recommended the following improvements for the headworks facility:

- Replace the drum screen in-kind.
- Replace the vortex grit removal equipment including paddle mixer, grit pump, grit concentrator, grit classifier, and screw conveyor in-kind.
- Install a motorized crane next to the screen to improve maintenance accessibility.

- Replace the headworks equipment control panel to improve control from the Supervisory Control and Data Acquisition (SCADA) system.
- Repair/replace the conduit and wiring between field equipment and motor control centers (MCCs) in the blower building.

After reviewing the existing conditions of the headworks facility and the 2020 PDR recommendations, West Yost recommends the City make limited investments in the existing headworks facility for the following reasons:

- The biggest issue impacting operation of the headworks facility is peak flows and system hydraulics. The current headworks is simply not designed for the nearly 10 millions of gallons of (MGD) peak flows that are believed to enter the facility during peak storm events.
- The main bearing on the existing drum screen has been replaced and the screen is functioning adequately.
- Ultimately, the headworks facility will need to be relocated to a higher elevation to support the future installation of primary clarifiers as part of the major planned expansion when the Eastside Membrane Bioreactor (MBR) facility is constructed.

As a result, West Yost recommends a modified approach for addressing the deficiencies at the headworks facility as summarized in the following section.

3.1.3 Modified Preliminary Design Recommendations

Based on the analysis summarized above, it recommended that the following improvements, which will improve permit compliance, treatment performance, and maintenance access be implemented at the headworks facility under this Project:

- Install a motorized gantry crane next to the existing drum screen to assist in removing the screen from the channel for routine maintenance.
- Replace the paddle mixer in the grit basin.
- Replace the grit pump and grit pump discharge piping.
- Implement structural improvements to prevent influent flow from overflowing the bypass channel isolation gate and bypass the screen.

These recommended upgrades are shown on Drawings S000 and M001 included in Appendix A.

3.2 Equalization Basin

3.2.1 Existing Conditions

The existing flow equalization facilities consist of a flow control structure, an equalization basin and utility pumps that drain the basin and discharge flow into the aeration basins. The flow control structure was installed in 2018 and is designed to split flow from the headworks facility to the aeration basin and the equalization basin using two fixed weirs. The weir elevations are set to allow flow to the equalization basin when influent flow exceeds 2.0 mgd. The existing flow equalization facilities have the following deficiencies:

- The existing flow control structure and equalization basin do not include any instrumentation to measure flow to the equalization basins or water surface level in the basins. As a result, the basin frequently overfills.
- Large plumes of algae have been observed to build up in the equalization basin.
- The existing utility pumps that drain the basin back into the aeration basin are constant speed pumps and are oversized. Therefore, when operation staff begin draining the equalization basin, large slugs of flow with high concentrations of algae are discharged into the aeration basins. The presence of algae in the equalization basins return flow can inhibit the biological treatment in the aeration basins and result in permit violations.

3.2.2 Previous Preliminary Design Recommendations and Discussion

The 2020 PDR recommended the following improvements to the flow equalization facilities, which were focused on adding instrumentation to measure flow to the equalization basins and water level in the basins:

- Build a concrete flow control structure in the equalization basin and extend the existing 16-inch Polyvinyl Chloride (PVC) bypass pipe from the aeration basin to this flow control structure
- Install a walkway out to the concrete flow control structure.
- Install a 350 gallons per mile (gpm) submersible pump within the flow control structure to allow for drainage of the equalization basin back to the aeration basin as needed.
- Install a magnetic flow meter on the new bypass pipe and an ultrasonic level transmitter in the equalization basin.

After reviewing the existing conditions of the flow equalization facilities and the 2020 PDR recommendations, a slightly different approach is recommended for the equalization basin upgrades. Instead of building a new flow control structure, it is recommended that existing facilities be modified to better control and measure flow to the equalization basin. It is also recommended that floating aerators be added to the equalization basin to reduce the formation of algae in the basins.

3.2.3 Modified Preliminary Design Recommendations

To meet the deficiencies noted above, the following improvements are recommended for the equalization basin:

- Evaluate the design of the flow control structure using the existing Visual Hydraulics model and modify the elevation of the weirs to reduce the frequency at which raw sewage is discharged into the equalization basins. Proposed modifications include removing the existing baffles and static weir plates in the flow control structure and installing a motorized weir gate in the structure to control flow to the equalization basin.
- Install a level sensor in the existing flow control structure to measure the level over the proposed weir gate. This level measurement can be used to determine flow to the equalization basin and can also be used to send an alarm to operators and the SCADA system to inform them that flow is diverted to the equalization basin.
- Install a level sensor in the equalization basin to allow operators and the SCADA system to know the depth of the basin.

- Install floating aerators in the equalization basin to limit algae growth.
- Install motorized plug valves on the discharge piping of the existing utility pumps, which can be used to adjust the output from the pumps. This will allow operations staff to return water from the equalization basin back into the treatment plant at a rate that does not overwhelm the treatment process.

These recommended upgrades are showing on Drawings C001 and M003 included in Appendix A.

3.3 Aeration Basins

3.3.1 Existing Conditions

The existing aeration basins are split into two trains each consisting of two anoxic zones and two aerobic zones. The anoxic zones are equipped with submersible mixers and the aerobic zones are equipped with a floor-mounted grid of fine bubble diffusers. A common influent channel conveys raw sewage from the headworks facility into the first anoxic zone, first aerobic zone, or second aerobic zone of either train. Recycled activated sludge (RAS) is discharged into either the upstream or downstream end of the common influent channel where it is mixed with the raw/screened sewage before entering the aeration basins. Mixed liquor from both aeration basin trains is collected in a common effluent channel that directs flow to the secondary clarifiers. The common effluent channel also directs a portion of the flow to an internal mixed liquor recycle (IMLR) pump station that is configured to allow a portion of the mixed liquor to be returned to any of the four zones in each aeration basin train. Bypass piping allows flow from the first aerobic zone of each aeration basin train to bypass the second aerobic zone and be discharged into the common effluent channel. Air is delivered to the fine-bubble diffusers with three 1,350 scfm, 100 hp multi-stage centrifugal blowers and one 1,199 scfm, 60 hp positive displacement blower.

The aeration basins have the following deficiencies:

- Air leaks have been identified in the ductile iron air piping. Some of the air leaks have been repaired, but the air piping is in poor condition.
- The aeration basins do not have an effective aeration control system. There are two dissolved oxygen (DO) probes in the aeration basins. However, the blowers are constant speed and the air piping drop legs delivering air to the fine bubble diffusers in the aerobic zones are not equipped with flow meters and modulating valves. Therefore, airflow cannot be adequately adjusted to meet oxygen demand. This results in periods of low DO concentrations that impairs biological oxygen demand (BOD) and ammonia removal, resulting in permit violations.
- A significant amount of foam builds up in the aeration basins on a regular basis. The low DO in the aeration basins contributes to the foam build-up. Also, the mixed liquor must pass under several flow control slide gates as it flows through the aeration basins. This configuration does not allow foam to exit the aeration basins.
- The openings in the walls separating each zone of the aeration basins are located on the same side of the aeration basin. This configuration does not create a serpentine flow path through the various zones. Instead, the configuration allows flow to short circuit directly from the influent opening to the effluent opening in each zone. This results in inadequate mixing in each zone and inadequate treatment time in each zone.

- When the bypass piping connecting the first aerobic zone to the mixed liquor effluent channel is used, raw sewage entering the aeration basins will receive very little treatment, because of the short-circuiting issue noted above.
- The influent wastewater does not have adequate alkalinity and prevents the nitrification process from occurring in the aeration basins because the pH is lowered to below recommended levels. The low pH inhibits biological treatment, which results in permit violations.
- The configuration of the mixed liquor effluent channel results in more flow from the eastern train entering the IMLR pump station. Therefore, nitrified effluent from the western train is not adequately returned to the anoxic zones for dentification.
- There is not adequate means of balancing the flow from the mixed liquor effluent channel into the two secondary clarifiers.

3.3.2 Previous Preliminary Design Recommendations and Discussion

The 2020 PDR recommended the following improvements for the aeration basins:

- Replace two multi-stage centrifugal blowers with two new variable speed blowers.
- Install new motor-operated butterfly valves on the air piping drop legs serving each train.

After review, West Yost recommends a slightly different approach for the aeration basin upgrades. We do not recommend replacing the existing blowers as recommended in the 2020 PDR, nor do we think the addition of actuated butterfly valves on the existing aeration header will provide adequate aeration control. As the "heart" of the treatment process, much work is needed in the aeration basin to address the biological process and operational issues. Our recommendations are summarized in the following section.

3.3.3 Modified Preliminary Design Recommendations

A Biowin© biological process model was developed to evaluate the performance of the aeration basins and determine the improvements needed to address the deficiencies discussed above. The process modeling is summarized in the technical memorandum (TM) included in in Appendix B. Summary of key findings from the process model include:

- Optimization of the secondary process treatment system through mechanical upgrades and operational changes to the aeration basins is necessary to meet the current effluent limitations at the anticipated 2025 wet weather flows and load conditions.
- The key capacity limitation is the solids loading on the secondary clarifiers during peak flow conditions and operating the aeration basins in a fully aerobic mode with an inlet step feed will maximize treatment capacity by lowering the solids loadings to the clarifiers.
- With the recommended changes, the steady-state BioWin© modeling predicts the WWTP will be able to meet the effluent limitations following filtration. However, the State Point model predicts clarifier failure at flows exceeding 7.0 mgd which is about 2.0 mgd lower than the defined peak instantaneous flow conditions.
- The steady-state modeling approach used for this analysis does provide a conservative assessment of the available capacity for handling peak flow conditions. However, the dynamic modeling needed to fully optimize the treatment process performance for short-

term peak flow conditions is complex and requires a significant amount of process data and wastewater characterization that is not available.

- The addition of a third clarifier would eliminate performance concerns with the secondary clarifier system and would allow the aeration basins to be operated at a higher mixed liquor suspended solids (MLSS) concentration, increasing overall performance of the secondary process. However, once the new satellite treatment system is constructed, the overall loadings to the plant will decrease. Therefore, it would not be prudent to construct a new secondary clarifier facility at this time.
- It may also be possible to further lower MLSS concentrations in peak flow conditions by using the Aerated Sludge Storage Basin (ASSB) for contact stabilization. Additional modeling analysis is needed to assess this possible strategy.

Based on the results of the process modeling, it is recommended that the aeration basins be operated as described below and as summarized in Table 3-1 to improve performance and address the deficiencies discussed above:

- Anoxic/Aerobic Zone Configuration:
  - Install a divider wall in the last cell of each train, dividing those cells into two smaller cells, creating five cells in each train (Cells A1 – A5 and B1 – B5)
  - Configure the first two cells in each train as swing zones
  - Operate the swing zones in anoxic mode during the dry season and aerobic mode during the wet season
  - Operate the last three cells in each train as aerobic zones year round
- Step-Feed Operations:
  - During the dry season, it is recommended that all flow be discharged into the first swing zone
  - During the wet season, it is recommended that half the raw/screened sewage be discharged into the first swing zone of each train and the other half be discharged to the second aerobic zone of each train.
- IMLR Flows
  - During the dry season, when the first two cells of each train are being operated in anoxic modes, the IMLR pumps should be operated to return nitrified mixed liquor to the anoxic zones for denitrification. The IMLR flows should be set to the maximum 1.08 mgd per train.
  - During the winter season, when all cells are being operated in aerobic mode, the IMLR should be off.
  - The IMLR piping should be modified so that IMLR flows are discharged to the first cell of each train only.
- RAS Flows
  - It is recommended that the RAS pump be modified so that they can achieve a return rate of 50 percent of influent flow during current max day conditions (1,800 gpm).
  - The RAS pumps should be operated at a return rate of 100 percent of influent flows for influent flows up to 2.6 mgd.

- When influent flows exceed 2.6 mgd, the RAS pump should be operated at their max pumping rate 1,800 gpm.

Table 3-1. Sandy WWTP Summary of Aeration Basin Operational Recommendations

Parameter	Wet Season Operation	Dry Season Operation
Cell A1 and B1	Aerobic	Anoxic
Cell A2 and B2	Aerobic	Anoxic
Cells A3 – A5 and B3 – B5	Aerobic	Aerobic
Raw/Screened Sewage Discharge Location	33 – 50 percent to Cell A1/B1 50 – 67 percent to Cell A4/B4	100% to Cell A1/B1
RAS Rate	50 – 100 percent of Influent, 1,800 gpm max	50 – 100 percent of Influent, 1,800 gpm max
IMLR Rate	0 gpm	1,500 gpm
Aerobic Solids Retention Time (aSRT)	6.5 days	4.0 days, min
MLSS Concentration, max	1,900 mg/L	2,900 mg/L

Recommended aeration basin mechanical improvements required to implement the proposed operational changes and to address the deficiencies discussed above, are summarized as follows:

- Install a concrete baffle wall to divide the two existing aerobic cells (largest cells in each aeration train) into two smaller aerated cells;
- Replace slide gates on the influent channel with downward opening weir gates to allow control of flow into each zone;
- Modify the RAS and IMLR piping so that RAS and IMLR flows are discharged to the first zone of each train under all conditions;
- Remove the aeration piping and diffusers and install the following aeration system components:
  - Two new stainless-steel air headers, one serving each train of the aeration basins.
  - Three grids of fine bubble diffusers in each aeration basin train: one grid in the anoxic zones. one grid in the first two aerobic zones, and one grid in the final aerobic zone.
  - New air piping drop legs for each fine bubble diffuser grid.
  - New flow meters and motorized butterfly valves on each air piping drop leg.
  - Three DO probes in each train of the aeration basins.
- Install VFDs on the three existing multi-stage centrifugal blowers and implement a control strategy tied to new air drops with air mass flow meters and actuated butterfly valves;
- Implement the following improvements to create a serpentine flow path through each aeration basin train and prevent scum accumulation in each cell:
  - Provide new openings in the wall between Cell A2 and A3 and the wall between Cell B2 and B3. The new opening will be near the center of the basins.

- Provide openings in the new wall between Cells A4 and A5 and the new wall between Cells B4 and B5. The openings shall be near the outer edge of the basins.

- Add fiberglass reinforced plastic (FRP) baffles at the opening to Cells A4 and B4 to direct flow toward the center of the basins and limit short-circuiting of flow through those cells. Replace the slide gates on the effluent channel and gate between the aeration basin zones with downward opening gates to prevent foam from accumulating in the aeration basins;
- Install a concrete divider wall in the middle of the effluent channel to dedicate a single secondary clarifier to each aeration basin train to improve the flow split between the secondary clarifiers;
- Install new piping below the effluent channel to direct mixed liquor into the IMLR pump station.
- Install a gate on the overflow cutout on the utility pump station.
- If project funding allows, it is recommended to investigate a way to measure flow going into each secondary clarifier. This is placed on a Wish List of improvement included in Appendix E.

These recommended upgrades are shown on Drawings S001, S002, S003, S004, M002, M004, and M007 included in Appendix A.

3.4 RAS/WAS Pump Station

3.4.1 Existing Conditions

The RAS/ WAS pumps station consists of two 600 gpm, 7.5 hp centrifugal RAS pumps and two 100 gpm WAS pump located in the basement of a concrete masonry unit (CMU) block building north of the aeration basins and west of the secondary clarifiers. The RAS/WAS Pump Station has the following deficiencies:

- The RAS/WAS pump station building ventilation system cannot provide the minimum of six air changes per hour (ACH) required by the National Fire Protection Association (NFPA) 820 Standard for a Class 1, Division 2 area.
- The RAS/WAS pump station building does not have a lower explosive limit (LEL) gas sensor, oxygen sensor, or audio/visual gas alarm required by NFPA 820
- The RAS pumps do not have adequate capacity based on the findings of the process modeling TM provided in Appendix B.

3.4.2 Previous Preliminary Design Recommendations and Discussion

The 2020 PDR did not recommend any improvements for the RAS/WAS pump station. Based on West Yost's biological process modeling, it is recommended that the RAS pumping capacity be increased as summarized in the following section.

3.4.3 Modified Preliminary Design Recommendations

To meet the deficiencies noted above, the following improvements are recommended for the RAS/WAS pump station:

- Upgrade the HVAC system to ensure proper ventilation within the basement and building and to meet the requirements of NFPA 820.
- Install LEL gas detectors, oxygen sensors, and audio/visual gas alarms in the RAS/WAS Pump Station.
- Replace the RAS pump motors with new 20 hp, inverter duty rated motors to increase the capacity of each pump to 900 gpm.
- Install variable frequency drives (VFDs) for each RAS pump.
- Modify RAS pump discharge piping to accommodate increased pump capacity.

One opportunity that has been proposed by Veolia that was not able to be included in the current preliminary design evaluation is the potential for using ASSB Cells 1 and 2 as a contact zone during peak flows. West Yost believes this idea has merit and could potentially increase the peak WWTP capacity. Under this scenario, RAS would be pumped to ASSB Cell No.1, flow through Cell No.2 after which it would be pumped to the aeration basin. To implement this process change, the following would be required:

- A new valve vault would be constructed on the existing 8" RAS pipe;
- An 8" RAS pipeline extension would be constructed from the valve vault to ASSB Cell No.1;
- A new submersible RAS Return Pump Station (RPS) would be constructed next to the ASSB to return RAS from ASSB Cell No.2 to the aeration basin; and
- A new 8" return pipe would be installed from the RPS to the new valve vault.

If implemented, these upgrades would also allow pressate from the belt filter press to be diverted to the ASSB during peak storm events to reduce flow to the storm water pump station.

These recommended upgrades are showing on Drawings M006 included in Appendix A.

3.5 Secondary Clarifiers

3.5.1 Existing Conditions

There are two existing secondary clarifiers at the WWTP. Each clarifier is 54-feet in diameter with a 15-foot side water depth; and is equipped with a center feed column, energy dissipating inlet (EDI), flocculation well, cantilevered effluent launders with a scum baffle, a multiple uptake pipe/draft tube type sludge collection mechanism, a scum skimmer arm and a scum box. The secondary clarifiers have the following deficiencies:

- The clarifier mechanisms are over 20 years old, have reached the end of their useful life and need to be replaced.
- Scum/foam accumulates in the clarifiers.
- The sludge collection uptake pipes get clogged with rags.
- The effluent weirs are not level causing short circuiting of the flow through the units.

3.5.2 Previous Preliminary Design Recommendations and Discussion

Ovivo Eimco and Rebuild-It Services Group performed a site visit and inspection of the secondary clarifiers in June 2020. Based on the findings of that site visit and inspection, it was recommended in the 2020 PDR that the following components be replaced:

- Sludge/scum collector mechanism drive.
- Scum skimmer arm.
- Scum beach flush valves.
- Seals on sludge box.
- Sludge uptake pipe valves.
- Spray nozzles.
- Effluent weirs.
- Effluent baffles.

Rehabilitation of the secondary clarifiers and, especially, leveling the launder weirs is an important part of the project. There are a few items West Yost recommends adding to the project if funding allows as summarized in the following section.

3.5.3 Modified Preliminary Design Recommendations

The secondary clarifier improvements summarized in the 2020 PDR are recommended for implementation under this Project. It is also recommended that the following improvements be implemented:

- Replace the existing scum beach and box with a system consisting of two scum beaches and boxes, one on either side of the cantilevered launder. This will allow scum to be removed on each side of the launder.
- Replace the section of scum baffle near the new scum beaches with a deeper baffle to prevent scum from bypassing the baffle.
- If project funding allows and depending on improving gravity flow from the scum boxes, it is recommended the scum pump station be upgraded or replaced. This item is one of the items included on the Wish List of improvements in Appendix E.

These recommended upgrades are showing on Drawings M005 included in Appendix A.

3.6 Filters and UV Disinfection

3.6.1 Existing Conditions

The existing Filter and UV Disinfection Facility consists of two filter basins equipped with cloth disk filters and a UV disinfection channel equipped with 24 medium pressure UV lamps. The existing facility has the following deficiencies:

- The filter media was replaced in 2020 with new cloth media that was anticipated to allow the initial design capacity of 6 MGD to be achieved.
- However, the current filter operation appears to be limited to a capacity of approximately 3 MGD. This is at least partially due to the poor secondary effluent quality that typically flows to the filters during high flow conditions.
- It is anticipated that the recommended aeration basin and secondary clarifier upgrades will improve secondary effluent quality under higher flow conditions but it is unknown at this time how much additional filter capacity will be "recovered".
- The existing Trojan 4000 UV disinfection system is over 20 years old and has reached the end of its useful life but Veolia has indicated they are still able to get parts and that replacement of the UV system is not the highest priority in the treatment plant.
- The existing 14" outfall pipeline that connects the UV channel effluent wet well is designed with a horizontal flared inlet which allows the pipe to become airlocked.

3.6.2 Previous Preliminary Design Recommendations and Discussion

The 2020 PDR recommended the following improvements for the Filter and UV Disinfection Facility:

- Replace the existing UV system with a new higher capacity UV disinfection system;
- Perform channel modifications required to accommodate the new UV disinfection system; and
- Install a new programmable logic controller (PLC) and operator interface for the new equipment.

3.6.3 Modified Preliminary Design Recommendations

West Yost recommends the following Filter/UV area upgrades:

- Replace the existing horizontal flared inlet on the existing 14-inch outfall pipeline with a 90-degree fluted end bend that points down to help prevent air locking of the pipeline;
- Provide baffles in the filter influent channel to better control the flow split between the filter trains.
- Consider installation of a new 3 MGD tertiary treatment train consisting of a skid-system with new secondary effluent diversion pumps, new cloth media disk filters, new medium-pressure UV system, flow meter and composite sampler; and
- Rehabilitate the metal building components on the Filter/UV area cover and replace the sacrificial anode on the cathodic protection system for the structure.

These recommended upgrades are showing on Drawings C001 included in Appendix A.

3.7 Aerated Sludge Storage Basin

3.7.1 Existing Conditions

The existing ASSB is a circular structure that is split into three cells. Cell No. 1 is a circular cell located at the center of the ASSB with a volume of 90,000 gallons. The two other cells form a "donut" around the center cell. Cell No. 2 has a volume of 180,000 gallons and Cell No. 3 has a volume of 90,000 gallons. WAS

and secondary clarifier scum are discharged into Cell No. 1 where it is thickened and then overflows into Cell No. 2. Sludge from Cell No. 2 is pumped to a belt filter press with a submersible pump. Filtrate from the belt filter press flows back to Cell No. 3. Decant pumps in Cells No. 2 and No. 3 convey supernatant from those cells back to the Headworks Facility. All three cells are equipped with floor-mounted diffusers that are used to provide mixing, remove ammonia, and prevent anaerobic degradation of stored sludge. Air is supplied to the ASSB with two positive displacement 800 scfm, 25 hp blowers.

A liquid sludge feed tank with recirculation pump is located next to the ASSB. The tank was previously used to mix sludge with lime and provide a sufficient hydraulic grade line for conveyance to the belt filter press. The tank and recirculation pump are currently not in use because the equipment needs to be repaired or replaced.

The ASSB has the following deficiencies:

- The submersible pump in Cell No. 2, which pumps sludge to the belt filter press, cannot meet the design flow and pressure requirements for the belt filter press.
- The ASSB structure and components are in poor condition.
- The walkway around the center cell (Cell No. 1) of the ASSB consists of a single plank of wood and handrailing that is not approved by the Occupational Safety and Health Administration (OSHA). This is a safety hazard for operators.
- The ASSB does not provide adequate sludge detention time to meet the requirements for Class B biosolids.
- There are four davit cranes at the ASSB that do not have adequate reach to remove equipment out of the ASSB and require too much force to crank.
- The existing walkway leading from the side of the ASSB to the center of the ASSB needs to be repaired and re-coated.
- The two existing blowers do not have adequate capacity.

3.7.2 Previous Preliminary Design Recommendations and Discussion

The 2020 PDR recommended the following improvements for the ASSB:

- Replace the existing center chamber walkway with 3-foot wide platform with OSHA approved handrailing; and
- Replace the four davit cranes around the ASSB with new cranes that have adequate reach and require less force to crank.

West Yost recommends more extensive upgrades to the ASSB and abandoning the proposed walkways and handrails as summarized in the following section.

3.7.3 Modified Preliminary Design Recommendations

The improvements recommended in the 2020 PDR address some operational and health and safety issues at the ASSB, but do not address solids treatment process deficiencies that would go a long way toward improving solids dewatering performance and reducing polymer consumption. West Yost recommends the following ASSB upgrades be included in the project:

- Remove the walkway around the center cell (Cell No.1) of the ASSB and do not install a new walkway
- Repair, sandblast, and paint the existing walkway leading from the side of the ASSB to the center of the ASSB.
- Re-route the belt filter press filtrate so that it is conveyed to the aeration basins via the Waste Pump Station without passing through the ASSB (see Section 3.9.3 for further discussion on re-routing of these flows)
- Rehabilitate the ASSB aeration system as follows:
  - Replace the existing aeration piping and diffusers with new piping and diffusers
  - Design the new aeration system to provide adequate mixing and to maintain a DO of 1 to 2 mg/L in each cell of the ASSB.
  - Provide four separate zones of diffusers: one in Cell No. 1, two in Cell No. 2, and one in Cell No.3
  - Provide a separate air piping drop leg for each zone of diffusers, each with a flow meter and modulating butterfly valve. The valve and flow meter will be used to control the amount of air provided to each cell of the ASSB.
  - Install a DO probe in each cell of the ASSB.
  - Install one new 800 scfm, 25 hp positive displacement blower to provide air to the ASSB along with the two existing blowers.
- Convert ASSB Cell No. 3 into an aeration/decant zone for thickening and feeding solids to the belt filter press. One of the existing decant pumps will be relocated from ASSB Cell No. 2 to ASSB Cell No. 3 so there is a decant pump on each end of Cell No.3.

These recommended upgrades are showing on Drawings C002 and M008 included in Appendix A.

3.8 Chemical Storage and Metering Facilities

3.8.1 Existing Conditions

There are two chemical storage and metering facilities at the WWTP: a sodium hypochlorite facility and a sodium hydroxide facility. The sodium hypochlorite facility consists of two 1,000 gallons storage tanks, a diaphragm metering pump skid with two metering pumps and appurtenances, and an emergency eye wash/shower. The equipment is located on the top floor of the RAS/WAS Pump Station.

The sodium hydroxide feed system is located near the headworks and consists of chemical storage totes and a diaphragm metering pump skid. The system is used to increase the pH of the raw wastewater upstream of the aeration basin, to address the low alkalinity issues.

The existing chemical facilities have the following deficiencies:

- The sodium hypochlorite storage and metering facility is not capable of disinfecting the process water system year-round. This creates a health and safety issue for the operators using the water.

- The current sodium hydroxide storage and metering facility at the headworks uses totes and is a temporary system that is manually controlled and does not allow the chemical metering pump discharge rate to be adjusted based on influent flow or process needs.

3.8.2 Previous Preliminary Design Recommendations and Discussion

The 2020 PDR recommended the following chemical storage and metering facility improvements:

- Install a new sodium hypochlorite metering pump system to pump sodium hypochlorite from the existing storage tank into the process water system to provide year-round disinfection of the process water.
- Replace the temporary sodium hydroxide feed system with a permanent system that allows the chemical feed rate to be adjusted based on influent flow and process needs.

West Yost agrees that a more permanent sodium hydroxide storage and feed system is needed, but recommends it be constructed at an alternate location that will also allow the sodium hypochlorite feed pumps for the utility water and RAS systems to be installed in a common building as summarized in the following section.

3.8.3 Modified Preliminary Design Recommendations

Several different configurations of the proposed chemical system improvements were considered. The most cost-effective approach recommended for implementation under this Project includes the following improvements:

- Install a new 16-foot by 24-foot concrete pad on the east side of the existing RAS/WAS Pump Station.
- Install an 8,000-gallon, insulated, double-walled, polypropylene tank with a mixer on the concrete pad for storage of 25 percent sodium hydroxide. It is assumed that 25 percent solution will be delivered to the site and that no on-site dilution will be needed.
- Install a fiberglass shed building on the concrete pad equipped with the following:
  - A sodium hydroxide metering pump skid with two pumps and required appurtenances.
  - A sodium hypochlorite metering pump skid with two pumps and required appurtenances.
  - A heater and ventilation fan.
  - Lighting.
  - Required LEL gas sensors, oxygen sensors, and audio/visual alarms.
- Install an emergency eye wash/shower with a 20 gpm, on-demand, tepid water heater on the new concrete pad.
- Install chemical piping required to allow sodium hydroxide to be injected into the RAS pump discharge header.
- Install chemical piping required to allow sodium hypochlorite to be injected into the process water piping and into the RAS pump discharge header.
- Chemical storage and metering facilities shall be designed to provide a minimum of 15-feet of clearance around the secondary clarifiers to allow adequate space for maintenance vehicles to drive around the clarifiers.

These recommended upgrades are showing on Drawings C001 and M005 included in Appendix A.

3.9 Waste Pump Station and Stormwater Control

3.9.1 Existing Conditions

The existing Waste Pump Station consists of a circular wet pit with two 350 gpm, 3 hp submersible pumps and an at-grade rectangular valve vault. The wet pit receives flow from the following sources and discharges it into the 24-inch pipeline that conveys raw sewage from the Headworks Facility to the Aeration Basins:

- Filter backwash water.
- Dewatering Building and Sludge Storage Facility floor drains, roof drains and foundation drains.
- Solids Handling Building roof drains and foundation drains.
- Sanitary sewer flow from the Maintenance Building.

Although the Waste Pump Station receives some stormwater runoff from the WWTP site, the majority of stormwater runoff from the site is discharged into Tickle Creek through Outfall 003. This configuration allows for the potential release of hazardous materials or chlorinated process water into Tickle Creek. To prevent accidental discharge, an inflatable plug has been inserted into the outfall. The plug is removed during storm events and re-installed during dry weather. If drainage accumulates in the outfall during dry weather conditions when the plug is installed, the flow is pumped back to the WWTP with a temporary pump.

3.9.2 Previous Preliminary Design Recommendations and Discussion

The 2020 PDR recommended the following improvements to the Waste Pump Station and stormwater control system:

- Install a new manhole on the existing 15-inch storm drain that discharges into Outfall 003.
- Install new piping to connect the new manhole to the existing Waste Pump Station.
- Install an overflow weir in the manhole that will direct stormwater drainage from the 15-inch storm drain into the Waste Pump Station during normal rain events but allow stormwater drainage during peak events to flow into the Outfall 003.

West Yost believes the proposed storm water upgrades do not provide the assurance City and Veolia staff desire related to ongoing and consistent compliance with the City's National Pollutant Discharge Elimination System (NPDES) 1200z stormwater permit. Recommendations are summarized in the following section.

3.9.3 Modified Preliminary Design Recommendations

The following improvements are recommended for implementation under this Project because they will provide a more comprehensive solution for managing onsite stormwater by directing it entirely back to the headworks downstream of the influent flow meter and composite sampler. In addition, ASSB Cell No. 3 would be freed up for use as the solids decant zone by directing pressate from the belt filter press to

the storm water pump station to be recycled and treated in the aeration basin. Recommended Waste Pump Station and storm water control upgrades include the following:

- Re-route all storm drain piping to discharge into the Waste Pump Station, except for the 10-inch foundation drains from the secondary clarifiers and Filter/UV Facility and the 8-inch overflow piping from the Filter/UV Facility.
- Re-route the belt filter press pressate piping to discharge into the Waste Pump Station.
- Replace the existing submersible pumps with two new 650 gpm, 20 hp pumps with VFDs.
- Replace the pump discharge piping with larger piping to accommodate the larger pumps.
- Install a new valve vault with new valves to accommodate the larger pump discharge piping.
- Installed a new 6-inch diameter force main to convey flow from the Waste Pump Station to the 24-inch pipeline that conveys raw sewage from the Headworks Facility to the Aeration Basins.

These recommended upgrades are showing on Drawings C002 included in Appendix A.

3.10 Site Improvements

The following site improvements are recommended for implementation under this Project:

- Install a new LEL gas sensor, oxygen sensor and audio/visual alarms at the Dewatering Building
- Install new lighting throughout the site as described in Section 3.11

3.11 Electrical and Instrumentation and Control (I&C) Improvements

3.11.1 Previous Preliminary Design Recommendations and Discussion

The 2020 PDR recommended the following electrical and instrumentation and control (I&C) improvements throughout the plant:

- Inspect the MCCs and Switchgear inspected and have it serviced by a qualified electrician. After the inspection, apply labels to electrical equipment as determined by the assessment.
- It is noted that physical ingress to some electrical equipment is currently not possible because of field modifications to the equipment in the past. These situations will be identified and corrected to help ensure operations staff safety.
- Replace the PLC hardware.
- Replace the SCADA system computer.
- Upgrade the Cimplicity SCADA software to accommodate the Windows 10 operating system.
- Provide Alarming system in the upgraded SCADA.
- Update the screens to incorporate modern graphics that are easy to navigate.
- Modify the graphics for the new UV Disinfection System.
- Install high speed internet to improve remote monitoring.
- Install Ethernet Network between several buildings.

West Yost worked with The Automation Group, Inc. (TAG) and Landis to further evaluate the electrical and I&C upgrades recommended in the 2020 PDR and determine what improvements are recommended for meeting the objectives of this Project. The major control system components are discussed in Section 3.11.2 and other electrical and I&C improvements are discussed in Section 3.11.3.

3.11.2 Control System Components Evaluation

TAG considered alternatives for each component of the control system recommended for upgrade in the 2020 PDR, evaluated the alternatives, and identified a preferred alternative for each component. The components that were evaluated include:

1. PLC Architecture
2. HMI/SCADA
3. Ethernet Connections via copper CAT6 Shielded vs. Fiber
4. Alarm Dialer via software vs. direct connection (Hardware)
5. Reporting Software
6. Secure Remote Connection

A technical memorandum summarizing the evaluation performed on each of these components is included in Appendix D. The key recommendations from the evaluation are:

- Provide a new SCADA system at the WWTP that is separate from the drinking water and distribution/collections systems. This is to prevent a single failure from affecting the rest of the City.
- Retain as much of the existing PLC system as possible, but replace components needed to upgrade the system to a platform that is fully supported by the manufacturer.
- Re-write the PLC software logic to enhance the process control with the added/upgraded processes.
- Connect new devices to the upgraded PLC system and SCADA by extending the ProfiNet Network to smart communications modules on the new devices
- Use copper CAT6 shielded wire cables to connect PLCs to the new SCADA system. The CAT6 cables can be installed in existing conduits, which may have some tight bends, and can be installed in the same conduit as the camera system ethernet cables. This makes them preferable versus fiber optic cables which cannot be installed in conduits with tight bends or in the same conduits at the camera system cables.
- No new reporting software is needed at this time.
- Connect the alarm dialer system directly to the PLC. This is a more reliable method than using software as the software requires a PC to run continuously.
- Use a Tosi Box Solution to make a secure remote connection to the WWTP, when needed. This type of system uses a two-part authentication (Physical USB Key and Username/Password), which meets the latest Internet of Things (IOT) requirements for a secure connection.

3.11.3 Modified Preliminary Design Recommendations

Other electrical and I&C improvements required to support the recommended process mechanical and site improvements discussed above are as follows:

- Headworks Facility
  - Provide power from Office/Lab Building for the new jib crane.
  - Replace the four (4) existing column mounted lights with new 4-foot, vaportight, LED fixtures mounted to the steel joists.
  - Disconnect and reconnect the conductors for the grit motor.
  - Provide conduit and CAT6 cabling for camera.
- Equalization Basin
  - Provide conduit and conductors to level transmitter from the RAS Building
  - Provide conduit and conductors to aerators from the RAS Building
- Aeration Basins
  - Provide two (2) Instrumentation panels at the end of the basins. Provide CAT6 cabling back to the Blower Building Control Panel PN-1004.
  - Provide control cabling, conduit and power cabling for four (4) DO Sensors.
  - Provide control cabling, conduit and power cabling for six (7) flow meters.
  - Provide control cabling, conduit and power cabling for six (6) motorized valves.
  - Provide control cabling and conduit for two (2) level sensors.
  - Provide control cabling, conduit and power cabling for four (4) motorized actuators.
  - Provide control cabling and conduit for four (4) motorized slide gates.
- Blower Building
  - Replace existing MCC-A1 section with VFD drives for each of the four (4) blowers and an active harmonic filter.
  - Disconnect and reconnect existing conductors to each of the four (4) blower starters.
  - Provide conduit and CAT6 cabling for two (2) outdoor rated cameras.
  - Provide conduit and CAT6 cabling from new MCC-A1 to Control Panel PN-1004.
- RAW/WAS Pump Station
  - Provide new 400amp, 480/277volt panel at the RAS Building.
  - Provide 400amp conductors in spare conduits in existing conduit duct bank. Provide new conduit from the power vault to the new panel.
  - Provide new conductors and conduit for the two (2) RAS pumps from the new 400Amp panel. Remove existing conductors back to MCC-A.
  - Provide new conductors and conduit for the existing 45kVA transformer from the new 400Amp panel. Remove the existing conductors back to MCC-A.
  - Provide new 120volt branch circuits for the new chemical building from the existing panel CBP-2.
  - Replace existing conductors to the new exhaust fan.

- Secondary Clarifiers
  - Disconnect and reconnect existing conductors from secondary clarifier motors.
  - Replace existing light fixture (2 total) with new LED fixtures on a collapsible pole.
  - Replace eight (8) existing lights with new vapor tight LED fixtures.
- Filters and UV Disinfection Facility
  - Provide a new 100amp, 480/277volt panel from MCC-B for new UV train.
  - Provide new 100amp conductors and conduit from MCC-B to a new panel. Provide a 100amp circuit breaker in MCC-B.
  - Replace eight (8) existing lights with new vapor tight LED fixtures.
- ASSB
  - Remove all electrical connections.
  - Provide new VFD for new Blower No. 3. Provide new conductors and conduit from MCC-C. Provide new circuit breaker in MCC-C
- Waste Pump Station
  - Provide new VFDs (total 2) for the new stormwater pump controllers. Provide new conductors and conduit from MCC-C. Provide a new circuit breaker in MCC-C.
  - Provide a new instrumentation panel in the building. Provide one (1) CAT6 cable to Dewatering Building using the existing 1-inch conduit.
  - Provide conductors and conduit for controls to the VFDs from the control panel.
  - Provide conductors and conduit for three (3) pressure sensors to the control panel.
- Dewatering Building
  - Provide new CAT6 cable and conduit for the new camera to the control panel PN-1050.
  - Provide new conductors and conduit to the new exhaust fan in the electrical room.
- Site Improvements
  - Replace four (4) existing area pole fixtures with new LED fixtures. The poles will be reused.
  - Add five (5) new LED area lights with 20-foot poles.
  - Replace the existing building mounted flood light on the Solids Handling Building with a new LED spotlight.
  - Add (2) new LED spotlights on the roof of the Solids Handling Building.
  - Add (3) new LED spotlights on the roof structure of the Disinfection Filtration Basin.
  - Add three (3) CAT6 cables in the existing spare conduits between the Office Building and the Blower Building.
  - Add three (3) CAT6 cables in the existing spare conduits between the Blower Building and the RAS/WAS Building.
  - Add three (3) CAT6 cables in the existing spare conduits between the Office Building and the Solids Handling Building.
  - Add three (3) CAT6 cables in the existing spare conduits between the Office Building and the Effluent Pumping Building.

— Add three (3) CAT6 cables in the existing spare conduits between the Effluent Pumping Building and the Dewatering Building.

These recommended upgrades are showing on the Electrical Drawings included in Appendix A.

4.0 OPINION OF PROBABLE CONSTRUCTION COST

Table 4-1 summarizes the opinion of probable construction cost (OPCC) for the improvements recommended in this PDR. Table 4-1 also summarizes the costs for the improvements recommended in the 2020 PDR and the difference in cost between the 2020 PDR recommendations and the modified set of recommendations included in this PDR.

The OPCC summarized in Table 4-1 was developed using budgetary quotes from vendors and cost data from similar projects and includes the costs listed below:

- Direct Costs = Direct material, equipment, and labor costs
- Subcontractor Markup = 5 percent of material, equipment, and labor provided by subcontractors
- Mobilization and Demobilization = 5 percent of direct costs + subcontractor markup
- Insurance and Bonds = 3 percent of direct costs + subcontractors markup
- OH&P = 6.5 percent of direct costs + subcontractor markup
- Contingency = 15 percent of direct costs + all other markups

Other key information regarding the cost estimate is as follows:

- A detailed breakdown of the costs summarized in Table 4-1 is included in Appendix C
- The OPCC is a Class 4 estimate based on the Association for the Advancement of Cost Engineering (AACE) International guidelines. Typical accuracy ranges for Class 4 estimates are (-)15 to (-)30 percent on the low side and (+)20 to (+)50 percent on the high side.
- The costs for the RAS diversion to the ASSB discussed in Section 3.0 are not included in the OPCC.

Table 4-1. Opinion of Probable Construction Cost (OPCC) Summary

Item Description	Modified Recommendations	2020 PDR Recommendations	Difference
Headworks Facility	260,000	710,000	(450,000)
Equalization Basin	110,000	0	110,000
Aeration Basin and Blowers	1,400,000	610,000	790,000
Secondary Clarifiers	130,000	350,000	(220,000)
RAS/WAS Pump Station	80,000	0	80,000
Aerated Sludge Storage Basin	560,000	120,000	440,000
Chemical Storage and Metering Facilities	370,000	500,000	(130,000)
Waste Pump Station and Stormwater Control	270,000	70,000	200,000
Site Improvements	510,000	0	480,000
Total Construction Cost	**$3,690,000**	**$2,360,000**	**$1,330,000**
Filter and UV Disinfection Improvements	1,220,000	690,000	530,000
Total Construction Cost + Filter/UV	**$4,910,000**	**$3,050,000**	**$1,860,000**

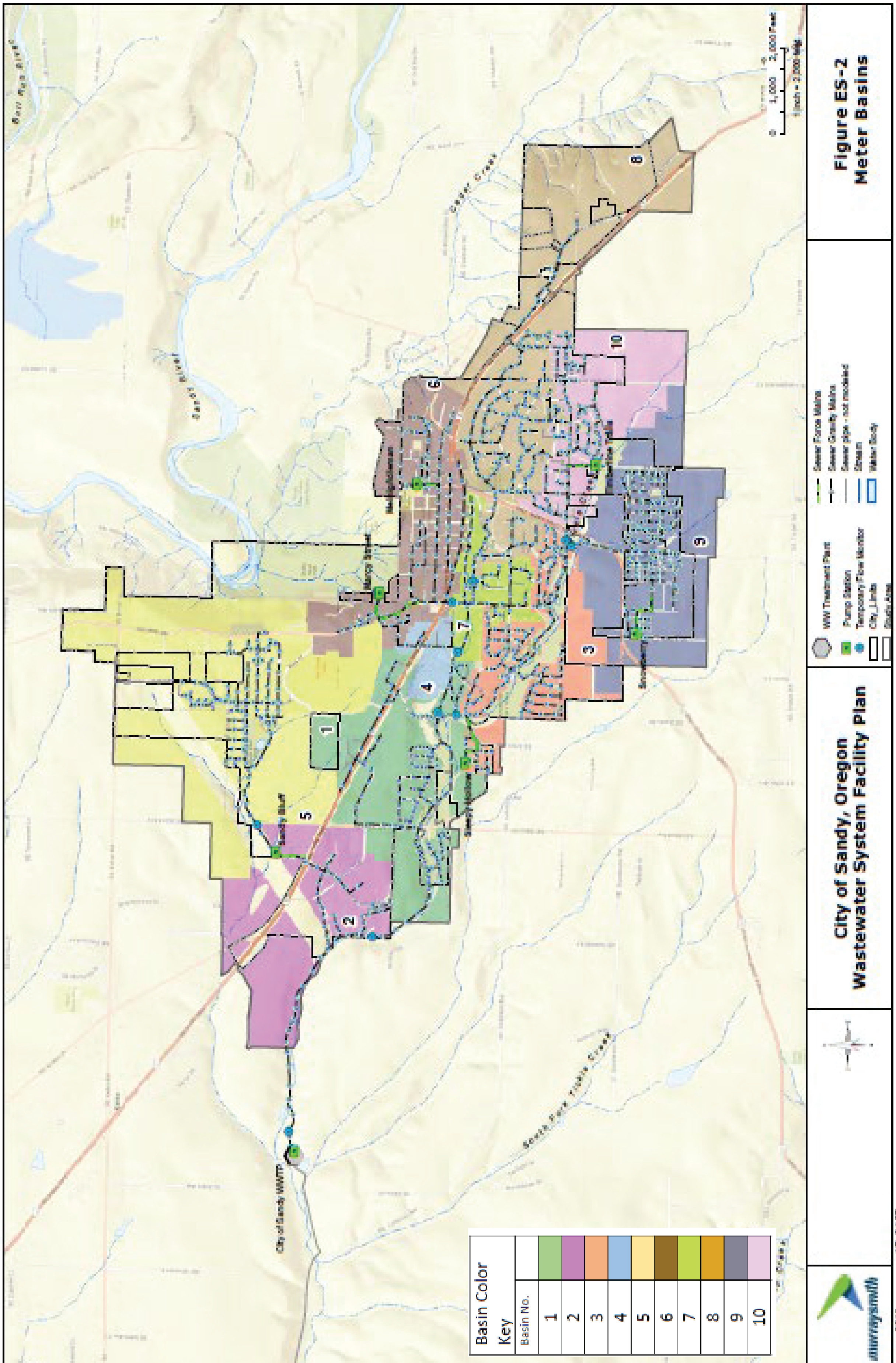


Figure ES-2
Meter Basins
City of Sandy, Oregon
Wastewater System Facility Plan
Basin Color Key
Basin No.
1
2
3
4
5
6
7
8
9
10
Cedar Creek
Sandy River
City of Sandy WWTP
murraysmith
January 2019
17-2137

APPENDIX C

Supplemental Environmental Project Application

Oregon Department of Environmental Quality
Office of Compliance and Enforcement
700 NE Multnomah St., Suite 600
Portland OR 97232

Case Name and No. *United States, et. al v. City of Sandy, Oregon*
90-5-1-1-12501

Project Contact: Jordan Wheeler, City of Sandy
39250 Pioneer Blvd. Sandy, OR 97055

Type of Project (choose one):

☐ **Pollution Prevention** – preventing waste or pollution at the source, by conserving energy or natural resources, or by making process changes (such as chemical substitutions) or by making a process more efficient so that less waste is created for a given amount of product.

☐ **Pollution Reduction –** reducing the amount and/or danger presented by some form of pollution, often by providing better treatment and disposal of the pollutant.

☐ **Public Health Protection**- an example is the medical examination of residents in a community to determine if anyone has experienced any health problems because of the violations at issue.

☐☒ **Environmental Restoration and Protection** –improving the condition of the land, air or water in the area damaged by the violation. For example, restoring a wetland or planting trees along a riparian zone to reduce erosion and provide shade for improved water quality.

☐ **Emergency Planning and Preparedness** – providing assistance to a responsible state or local emergency response or planning entity. Such assistance may include the purchase of computers and/or software, communication systems, chemical emission detection and inactivation equipment, HAZMAT equipment or training.

☐ **Assessments and Audits** to determine if the Respondent is causing any other pollution problems or can run its operation better to avoid future violations.

☐ **Environmental Compliance Promotion**- providing training or technical support to other members of the regulated community to achieve, or go beyond, compliance with applicable environmental requirements.

☐ **Other Projects** that have environmental merit but do not fit within the categories listed above.

Who is conducting the project? (i.e. Respondent or third party entity such as a watershed council or other nonprofit organization)
Clackamas River Basin Council

Location where project will take place: Tickle Creek Trail Corridor, Sandy, Oregon

Project description (Please attach an extra sheet of paper, if necessary):
This project is a restoration project to improve riparian health and water quality protection along a section of the Tickle Creek Stream Corridor between 362nd Ave to nearly Hwy 211 in Sandy. This section of Tickle Creek is about two miles upstream from Sandy's Wastewater Treatment Plant. The 1.8 mile Tickle Creek Trail travels along parts of this corridor and was built in 2010. The stream corridor is surrounded by residential development (see attachment 1).

This project will accomplish three objectives:

1. Reduce non-native plants in the riparian corridor.

Reduce invasive and noxious non-native plants in a 37-acre stream corridor with a focus on Himalayan blackberry, ivy, holly, and knotweed. Some invasive plant control and planting was conducted along portions of the corridor in 2015. However, there were insufficient funds for multiple years of treatments. Additionally, climate change and adjacent land use have accelerated tree mortality and canopy loss in the last five years.

In years one and two (2023 and 2024) of the project, CRBC and their contractors will conduct initial non-native plant control, including mechanical and chemical treatments, and closing off trampled areas. Planting of native trees and shrubs along the stream will occur in Winter 2025

(year 3). Spot treatments of persistent non-native plants will occur in years 3 and 4. (See detailed prescription, attached.)

Areas with unmarked private property within 100' of the creek will be surveyed to maximize the riparian area that can be enhanced for water quality protection.

2. Increase native plants, particularly shade-providing conifers, hardwoods and shrubs.

Plant site appropriate conifers, hardwoods and shrubs at sufficient densities to occupy the site and reduce re-establishment of non-native plants. Where appropriate, plant long-lived confers such as Western redcedar and Douglas-fir to provide shade and future large down wood. The number of plants per acre will vary by site conditions. For example, several acres of riparian and wetland forest have been significantly impacted by blowdown and the loss of tree canopy likely due to an adjacent clearcut. The loss of stream shade and the establishment of high levels of non-native blackberry have reduced the riparian corridor health. This area will be planted at approximately 500 plants per acre. The total plants to be installed across the entire 37 acre project area is estimated to be up to 18,500 (dependent on exact project needs; CRBC will truth the total number of acres and quantity of plants).

3. Mitigate erosion and soil compaction from off-trail disturbance.

Numerous unsanctioned trails and trampled areas have become established in the stream corridor. These areas of off-trail disturbance will be obliterated and restored where feasible, which could include soil rehabilitation, erosion mitigation, mulching, covering exposed ground with logs and debris, and/or replanting. Together, CRBC and City of Sandy will identify areas of off-trail disturbance for treatment.

Attached are aerial maps of the project area.

What environmental benefits are expected?
The primary benefit will be improved riparian corridor health including increasing native plants and reducing erosion along the creek, benefiting water quality and wildlife habitat. This project will remove invasive and noxious plants in the stream corridor that compete with native species and reduce native plant diversity. Native trees and shrubs will be installed after invasive and noxious plants have been reduced. This section of Tickle Creek is unusual for its large trees, understory of vine maple, and other shrubs, carpets of native ferns and oxalis, snags, down wood in the creek, and a variety of birds, and wildlife habitat. There are often sightings of coyotes, and occasional bear and cougars along the trail. The large trees and areas of dense native understory provide shade and future large down wood for Tickle Creek. The extreme summer temperatures and drought in recent years have likely contributed to the acceleration of tree mortality in the corridor, along with impacts from adjacent land use.

How will you measure/assess the benefits?

Treatment areas will be mapped for inspection and if necessary, re-treatment and/or replanting the following year. Photo points will be made in key infestation areas. Mortality of tree seedlings will be monitored and replanted the following late winter. While we will plant heavily for expected mortality, we will replant the following late winter, if mortality is excessive. The project corridor will be monitored and documented by City staff and partners over a three-year period.

Success can also be measured by area treated and percent survival after 2 years. The project goal is to treat at least 75% of the project site and achieve a 75% survival rate of native plants at age two. The area treated will be mapped during treatment. The planting success will be documented using photo points showing conditions before treatment and at Year Two after planting.

What is the total projected cost of the project? Explain. (Qualifying costs are all reasonable costs of executing the SEP and may include costs of preparing the SEP proposal, costs of materials and services, wages paid to employees (appropriate to the work), and wages and proportional overhead for employees of a third party executing the project. Qualifying costs do not include entertainment or refreshment costs related to the SEP.)

The total estimated cost of this project is $200,000 which includes Clackamas River Basin Council oversight costs, noxious weed treatment, shrub and tree planting, off-trail disturbance mitigation, and community outreach and engagement activities. The budget below is calculated based on an assumption of uniform restoration needs across the 37-acre green space; however, actual treatments will vary across the site and total acreages/costs for each implementation activity are expected to be lower, to be determined by detailed survey and site evaluation to be conducted prior to project implementation. Funds not required for restoration implementation can be utilized for community engagement activities, extended maintenance, and/or other relevant project costs. CRBC will manage site preparation, planting, and two years of maintenance treatments; City of Sandy will assume responsibility for maintaining restored areas after this is complete.

City of Sandy will lead communication directed to city residents and park users, focused on project implementation. CRBC will lead communication for volunteer stewardship and community engagement events focused on natural resource stewardship. Both will coordinate on communication activities for consistent messaging.

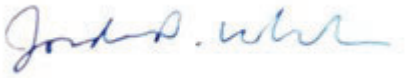
Task/Item	Date	Estimated cost
Project management	Duration of project	$8180 (200 hours for CRBC Riparian Specialist at $35/hr, 20 hours for CRBC Executive Director at $59/hr.)

Pre-planting weed treatments	Summer 2023 – Fall 2024	$80,000 (cutting and spraying in 2023, 3 spray treatments in 2024)
Close off-trail disturbance areas and install mitigation measures (e.g., fencing, erosion control, seeding)	Summer-Fall 2023	$11,500 (200 hours of general labor at $50/hour, plus materials)
Install 18,500 native plants	Winter 2025	$34,500 (includes cost of plants and planting)
Post-planting weed treatments	Spring 2025-Fall 2026	$41,000 (6 spot treatments over 2 years)
Supplemental planting if needed based on survival rate	Winter 2026	$4,000 (includes cost of plants and planting)
Community engagement, including volunteer and educational activities	Duration of project	$2,200 (CRBC outreach staff time and supplies)
Vehicle mileage	Duration of project	$210 (320 miles at $0.655/mi.)
Administrative overhead		$18,180 (10%)
Post-project monitoring and reporting	2027 and 2029	$300
		$200,000 Project Total

What is the timeframe for the project (most projects are completed within one year)?
Include milestones and final completion date.

Action	**Date**	**Notes**
Site inspection and surveys	Spring 2023	Covered by other funding
Finalize plan, contract work	August 2023	
Pre-planting vegetation treatments	August 2023 to October 2024	
Close off-trail disturbance areas and mitigate impacts	Fall 2023	Public Outreach
Native plant installation	Winter 2025	Establish photo points, pre and post planting photos
Post-planting vegetation treatments	Spring 2025 to Fall 2026	
Community engagement	Duration of project	
Planting photo points	Fall 2026	Year 1 after planting
Planting photo points	Fall 2028	Year 3 after planting

Attachments
Attachment 1 Tickle Creek Stream Restoration Project Area Map
Attachment 2 Tickle Creek Stream Restoration Planting Species List

Date : __4/7/2023_____ Signature 

TICKLE CREEK DEQ SUPPLEMENTAL ENVIRONMENTAL PROJECT NOTES

Species for stream corridor restoration along Tickle Creek

Shrubs

Rose Spirea –Spiraea douglasii (Hook or hardhack) 2-6 feet tall.

Snowberry - Symphoricarpos albus: to 6 feet, but can be trimmed lower

Thimbleberry – Rubus parviflorus: 4-6 feet

Salmonberry - Rubus spectabilis: 3-12 feet, branches have prickles for access deterrence

Red huckleberry - Vaccinium parvifolium Sm

Red Elderberry - Sambucus racemosa

Willows (live fascines) – low growing variety that is shade tolerant.

Stink currant - Ribes bracteosum

Ferns

Western Sword Fern - Polystichum munitum

Western Maidenhair Fern - Adiantum aleuticum

Lady Fern -Athyrium filix-femina

Piggyback plant - Tolmiea menziesii

Trillium leaved sorrel - Oxalis trilliifolia

Trees

Western red cedar – Thuja placata

Douglas fir - Pseudotsuga menziesii

APPENDIX D
CAPACITY ASSURANCE PROGRAM (CAP) EVALUATIONS

1. In accordance with Paragraph 23 of the Consent Decree, the City shall implement the Capacity Assurance Program ("CAP"). The CAP will limit new sewer connections or changes to existing connections that result in additional flows to the City of Sandy Treatment Works ("CSTW") without a demonstration, and approval by EPA and ODEQ, that capacity to accommodate the additional flows within the Wastewater Collection and Transmission System ("WCTS") and at the Wastewater Treatment Plant ("WWTP") exists during both dry and peak flows. The CAP will be separated into two time periods, as explained below. Period One is the period between the Effective Date of this Consent Decree and the date the CAP limit is established for Period Two. Period Two establishes a limit on the number of new connections and/or changes to existing connections that result in additional flows (initially determined in accordance with Paragraphs 10, and adjusted over time in accordance with Paragraph 11, of this Appendix) based on established capacity at the WWTP ("CAP Limit") and then-current peak flow to the WWTP. The CAP will continue until the improvements for Continued Compliance identified in the approved Amended Wastewater System Facilities Plan, as required in Paragraph 8 of this Appendix, have been implemented, permitted, and are fully operational, and the City is in compliance with all Permit Waste Discharge Limitations.

RESTRICTIONS DURING PERIOD ONE

2. The time period between the Effective Date of this Consent Decree and establishment of the CAP Limit shall be considered Period One under the CAP.
3. During Period One of the CAP, the City shall limit new sewer connections or changes to existing connections that result in additional flows to the WCTS to 300 Equivalent Residential Units ("ERUs") in increased flow (whether from industrial or residential connections). For purposes of the CAP a new connection or changes to existing connections that result in additional flow will be counted for any physical connection to the CSTW at the time that it adds flow to the WWTP.
4. ERUs shall be calculated in accordance with Paragraphs 15-16 of this Appendix, and included in the quarterly reporting outlined in Paragraph 13 of this Appendix.

5. The City shall take all steps reasonably necessary to effectuate the limitations on new connections and changes to existing connections that result in additional flows, including but not limited to putting in place a moratorium consistent with Oregon and local law during Period One of the CAP, and as necessary during Period Two of the CAP.

RESTRICTIONS DURING PERIOD TWO

6. During Period Two of the CAP, prior to approving any new connections or changes to existing connections that will result in additional flows to the WCTS, the City shall ensure that the CSTW has adequate capacity to collect, carry, transmit, and treat said increased flow, combined with the flow predicted to occur from all other existing sources, including authorized sewer service connections during both peak and normal flow conditions. In performing this analysis, the City shall utilize: (i) the evaluations undertaken in accordance with the Stress Test Work Plan and/or Stress Test Report, ii) Comprehensive Capacity Evaluations (“CCEs”), and iii) perform Connection-Specific Capacity Evaluations ("CSCEs") where appropriate. Once a CAP Limit has been established by EPA and ODEQ in accordance with the process outlined in Paragraph 10 of this Appendix, the City may approve new connections or changes to existing connections resulting in additional flow without approval by EPA and ODEQ until either the CAP Limit has been reached or new Capacity Related Violations occur as set out in Paragraph 7 of this Appendix. All ERUs added and approved Building Permits during this period must be included in the quarterly reporting under Paragraph 13 of this Appendix.

7. If Waste Discharge Limitation exceedances, sewer overflows, or bypasses in violation of the Permit have occurred, the City must demonstrate that capacity in the CSTW exists, that the violations were not due to capacity limitations, and any maintenance required to prevent future violations has been completed or they will be deemed Capacity Related Violations. If the CAP Limit has been reached or Capacity Related Violations have occurred, new connections cannot be authorized and/or added without the City demonstrating capacity exists within the CSTW and receiving approval from EPA and ODEQ. Capacity must be demonstrated by submitting a request to EPA and ODEQ providing i) CCEs as outlined in Paragraph 6 of Appendix E and ii) CSCEs as outlined in

Paragraph 14 of this Appendix. EPA and ODEQ may withhold approval of the City's request to authorize and /or add new connections or make changes to existing connections that result in additional flows under this section if the City has not: i) demonstrated capacity for additional flow and that the new connections will not lead to new violations or ii) Capacity Related Violations have already occurred.

8. The City may seek to end the requirements for Period Two of the CAP by submitting a request for review and approval to EPA and ODEQ demonstrating that the Continued Compliance Improvements identified in the Amended Wastewater System Facilities Plan, as required in Paragraph 9 of Appendix E, have been implemented, permitted, and are fully operational, and the City is in compliance with all Permit Waste Discharge Limitations. EPA and ODEQ will review the report for compliance with the requirements of this Section in accordance with Paragraphs 24-29 of the Consent Decree. Upon approval of the report by EPA and ODEQ, Period Two of the CAP will be deemed ended.

TREATMENT CAPACITY EVALUATION FOR CAP LIMIT

9. **Treatment WWTP Capacity Evaluation** – The City shall carry out a comprehensive evaluation of treatment capacities of its WWTP following completion of the 2020-2023 Wastewater Improvements[1] (as required by Paragraph 20 of the Consent Decree). This evaluation shall include the following:

   a. Hydraulic and Loading Capacity Assessment – A desktop evaluation, stamped by a licensed Professional Engineer in Oregon, of the hydraulic capacity of the entire WWTP using as-built drawings, including the WWTP hydraulic profile, and field survey elevation information (as necessary). This assessment shall include a comparison of the design capacities, detention times and loading rates of each and every WWTP unit process (as modified by the immediate needs projects), to industry guidelines and benchmarks, including the Orange Book, WEF No. FD-08, and Metcalf & Eddy.

   b. Stress Test – A Stress Test of the WWTP in accordance with the following guidance: USEPA's Peak Stress Testing Protocol Framework; Peak Wet Weather

[1] Includes the 2021-2023 WWTP Immediate Needs Upgrades Project, 2021 Basins 2 and 8 Rehabilitation Project, and 2022 Basins 6 and 7 Rehabilitation Project.

Flow Stress Testing Contract No.: GS-10F-0227J; May 2015. The Stress Test shall consider the impacts of peak flows on each unit operation as well as on subsequent compliance with all permit parameters. The Stress Test shall include the following:

i. Baseline Monitoring – Enhanced monitoring shall include during a period of typical WWTP operation, monitoring of influent and effluent for the following: 5 day biochemical oxygen demand ("BOD5"), chemical oxygen demand ("COD"), total suspended solids ("TSS"), volatile suspended solids ("VSS"), dissolved Solids, Total Kjeldahl Nitrogen ("TKN"), ammonia, Total Phosphorus, alkalinity, and pH. Enhanced operational monitoring shall include during a period of typical WWTP operation, sampling multiple times per day for the following: Mixed Liquor Suspended Solids ("MLSS"), Mixed Liquor Volatile Suspended Solids ("MLVSS"), Return Sludge Suspended Solids ("RSSS"), Sludge Volume Index ("SVI"), Return Activated Sludge ("RAS") rate, aeration basin DO levels, and sludge blanket depths. This information shall be used to better quantify typical operating conditions as well as to refine the BioWIN and State Point modeling as described below.

ii. Treatment train-specific flow monitoring – Installation of flow monitoring equipment as necessary as to allow the continuous monitoring of treated flow, RAS, and all other recycles within the treatment train to be used for peak flow testing.

iii. Peak Flow/Solid Loading Rate Tests – A series of test events across a range of peak flow and solid loading rates equivalent to whole WWTP flow and load rates, including multiple tests that cover the range of hydraulic loading rates at which the WWTP has experienced bypasses during wet weather events. During each such test event, continuous monitoring of treated flow, RAS, and all other recycles within the treatment train shall be conducted, as will frequent aeration basin influent, mixed liquor, clarifier effluent and recycle monitoring. Such monitoring shall include influent and effluent BOD5, COD, TSS, VSS, Dissolved

Solids, TKN, ammonia, Total Phosphorus, alkalinity, and pH, as well as frequent operational monitoring of MLSS, MLVSS, SVI, RAS rate, aeration basin DO levels, and sludge blanket depths.

iv. Dye testing - During at least one of the solids loading rate tests specified above, carry out slug dye testing to characterize the hydraulic characteristics of the secondary clarifier. Such testing shall employ fluorescent dye and the use of appropriate instrumentation (such as a fluorimeter) and frequent grab sampling to characterize the effluent dye concentration curve.

c. BioWIN and Clarifier State Point modeling – Utilize the WWTP operational and performance data collected per above to validate and if necessary, calibrate the City's WWTP BioWIN and State Point models (WEF No. FD-08), and then use those models to update the information provided in the 2021 West Yost Technical Memorandum and to characterize plant performance at flows of Max Month Wet Weather, Peak Day and Peak hour. In particular, the City shall collect data necessary to validate the BioWIN model's default input parameters, including those for which no details were previously provided as noted in FT 3 of the 2021 West Yost Technical Memorandum, and shall monitor SVI to validate the assumption made in the State Point analysis.

d. Based upon the results of the above, apply sound engineering judgement to identify the following WWTP capacities, consistent with ODEQ Guidelines for Making Wet Weather and Peak Flow Projections for Sewage Treatment in Western Oregon, based upon the criteria of the WWTP's ability to remain in full compliance with its current NPDES permit:

i. Peak Instantaneous

ii. Peak Daily

Capacities may include the use of equalization to manage brief flow peaks; however, consideration of such use must assume operational strategy(s) that can actually be implemented.

10. **Treatment WWTP Capacity Evaluation Report**– The City shall submit to EPA and ODEQ by September 30, 2023, for review and approval, a report that describes and fully documents its completion of the tasks described in Paragraph 9 of this Appendix, and seeks EPA and ODEQ approval of a CAP Limit. This report shall at a minimum include the following:

    a. A detailed description of the Hydraulic Capacity Assessment carried out and its results. All as-built drawings, the hydraulic profile, and all calculations carried out shall be provided as attachments.

    b. A tabular summary of City design criteria, selected industry guideline used.

    c. A detailed description of each baseline and peak testing event, and a summary of all the flow and monitoring data collected during each event. For each event in which there is dye testing, a discussion of the results of that testing including the effluent dye concentration curve, shall be provided. All raw data and event operational logs/notes shall be included as attachments.

    d. A detailed description of the BioWIN and Clarifier State Point models calibration, and a discussion of the impact of those calibrations on the model predictions of the WWTP's peak capacities. The detailed model inputs and outputs shall be provided as attachments.

    e. A detailed description of how the City utilized the results of the evaluations required by this section to determine the Sandy WWTP peak capacities. The report shall fully document the bases of the City's determinations.

    f. A description of any bypass events or compliance issues at the WTTP that occurred between Consent Decree signing and the Report, and any remedial actions taken.

    g. A CAP Limit which will be calculated as follows:

        i. Peak Daily capacity of the upgraded WWTP (as established by the Stress Test, in MGD) minus the peak flow rate in the 5-year/24 hour storm (as simulated by the Model, in MGD) = Available Capacity in MGD.

        ii. The CAP Limit in ERUs will be equal to Available Capacity in MGD multiplied by 1000. (CAP Limit = [Available Capacity in MGD x 1000])

EPA and ODEQ will respond to the request for approval and/or provide comments on the WWTP Treatment Capacity Evaluation Report within 45 Days of receipt in accordance with Paragraphs 24-29 of the Consent Decree. Upon approval of the report by EPA and ODEQ, the CAP Limit will be deemed established.

SEEKING TO AMEND THE CAP LIMIT

11. The City may seek to amend the CAP Limit at any time by submitting to EPA and ODEQ for review and approval a report providing evidence that capacity has been expanded in the CSTW, such as a CCE, and that there is information sufficient to determine and demonstrate a new CAP Limit can be set without future NPDES permit violations occurring, and setting forth the proposed new CAP Limit. EPA and ODEQ will make best efforts to respond in writing to approve and/or provide comments or request new information within 45 days of receipt in accordance Paragraphs 24-29 of the Consent Decree. Upon approval of the report by EPA and ODEQ, the CAP Limit will be deemed amended.

EXEMPTION FOR ESSENTIAL SERVICES

12. The City may authorize a new sewer service connection or authorize changes to existing connections that result in additional flows, even if it cannot certify that it has adequate treatment, transmission, or collection capacity, for the following:

    a. essential services such as health care facilities, public safety facilities, public schools, and, subject to EPA/ODEQ review and approval, government and other public facilities; and

    b. cases where a pollution or health or safety condition exists, including failed septic systems.

    Any new sewer service connections, or changes to existing connections that result in additional flows, for essential services will count toward the CAP Limit in Period Two, and shall be included in quarterly reporting.

QUARTERLY REPORTING

13. The City shall submit quarterly reports of new sewer connections or changes to existing connections that result in additional flows, including the number of ERUs and how they were calculated, to EPA and ODEQ.

CONNECTION-SPECIFIC CAPACITY EVALUATIONS (CSCEs)

14. For any developments, industrial or residential, which will result in connections above 50 ERUs, the City shall conduct a connection specific capacity evaluation to ensure capacity exists in the WCTS. Capacity to collect and convey at and below the point of connection shall be evaluated for the 5-year event using the Collection System Model.

EQUIVALENT RESIDENTIAL UNIT (ERU)

15. For the purposes of the Capacity Assurance Plan, an ERU shall be assumed to generate a peak flow of 1,000 gallons per day.[2] For the purposes of assigning ERUs to each connection to the WCTS, the following assumptions shall be used:

Type of Use/Facility	ERUs
Single-family (incl. manufactured homes, and townhomes with three or more bedrooms)	1
Duplex (incl. manufactured homes)	2
Triplex (incl. manufactured homes)	3
Multi-family (4 or more units)	0.7 per household unit

[2] Based in part on the Sandy Code of Ordinances, Section 13.16.020 for average flow ERU assignment. Peak flow for residential facilities is assumed to be 4.0 times average flow as per Figure 1, Recommended Standards for Wastewater Facilities; Policies for the Design, Review, and Approval of Plans and Specifications for Wastewater Collection and Treatment Facilities 2014 Edition; A Report of the Wastewater Committee of the Great Lakes - Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers Member States. Other peaking factors assigned based on expected flow variation patterns.

Accessory Dwelling Unit ("ADU")	0.7
Room & Board Facilities	1 per 3 tenant rooms
Hotel/motel	1 per 3 rental rooms
Restaurants	1 per 8 seats
Tavern/lounges	1 per 15 seats
Food cart(s)	0.1 per cart
Hospitals/similar care facilities	1 per 3 beds
Auto service stations	1 per 6 pumps
Car washes	1 per 330 gpd predicted daily flow
Theaters and meeting venues	1 per 330 seats
Churches	1 per 260 seats
Laundromats	1 per 4 washers
Bakeries	1 per 6 employees
Mortuaries (without residence)	1 per 12 employees
Schools without showers	1 per 80 students
Schools with Showers	1 per 40 students
Colleges without residential facilities	1 per 40 students
Dormitories	1 per 6 two-person rooms
Offices	1 per 2,000 square feet
Retail	1 per 12,000 square feet

Other Commercial	1 per 333 gpd predicted flow

16. Industrial users and high-volume/high-strength dischargers (collectively, IUs) shall be assigned ERUs based upon predicted wastewater flow volume, patterns and strength as follows:

    Assigned Flow ERUs = Higher of average or peak flow ERU value, where:

    - Average flow ERUs = Predicted average facility discharge volume, gpd ÷ 250 gpd
    - Peak flow ERUs = Predicted daily peak flow rate, gpd ÷ 1,000 gpd

    If the IUs' waste is expected to have strength characteristics different than typical sanitary sewage, the impact of its wastewater on the WWTP shall also be evaluated based upon the expected average and maximum monthly loadings of BOD5 and maximum day loadings of TSS on the aeration basins and the final clarifiers following the addition of the proposed IU connection, as compared to the benchmarks identified in accordance with Paragraph 9.a**.** of this Appendix.

    This evaluation shall at a minimum consider: i) aeration basin organic loading (pounds BOD5 per day per 1000 cubic feet of aeration basin capacity), aeration basin F/M ratio (pounds BOD5 per day per pound MLVSS), both at Maximum Monthly conditions; and ii) secondary clarifier peak hourly surface overflow rate (in gallons per day per square foot of clarifier surface area).

17. References

    "Orange Book" refers to the Criteria for Sewage Works Design manual, publication number 98-37 (revised January 2022), Department of Ecology, State of Washington.

    "WEF No. FD-08" refers to Clarifier Design: WEF Manual of Practice No FD-08.

    "Metcalf & Eddy" refers to Wastewater Engineering: Treatment and Resource Recovery, Metcalf & Eddy, 5th Edition.

    "2021 West Yost Technical Memorandum" refer to the February 22, 2021 West Yost Technical Memorandum, Sandy WWTP Secondary Process Evaluation

APPENDIX E
AMENDED WASTEWATER SYSTEM FACILITIES PLAN REQUIREMENTS

1. In compliance with Paragraph 22 of the Consent Decree, an Amended Wastewater System Facilities Plan, consistent with the guidelines "Preparing Wastewater Planning Documents and Environmental Reports for Public Utilities," and the requirements of the State Revolving Fund, shall be submitted for review and approval to EPA and ODEQ. The Amended Wastewater System Facilities Plan shall propose alternatives to bring the City into compliance, and ensure continued compliance, with the terms and conditions of the Permit. A schedule for completion of CSTW improvements shall be included in the Plan. The Amended Wastewater System Facilities Plan shall comply with the requirements of this Appendix.
2. The Amended Wastewater System Facilities Plan shall include an evaluation of the capacity increases that have been achieved in the CSTW thus far, either through plant improvements (based on performance during wet weather events that have occurred in 2022) or infiltration and inflow ("I&I") reductions, and how they compare to the results anticipated in the 2019 Facilities Plan and 2021 WWTP Preliminary Design Report. This evaluation shall include a review and evaluation of data collected from the completed I&I reduction work in the Basins, to determine if the type and extent of work carried out there achieved the anticipated/desired level of I&I reductions.
3. Wet season rainfall and flow monitoring program – The City shall carry out a wet season (November 1 to April 30) rainfall and flow monitoring program to collect the data necessary to support validation or as necessary recalibration of its Collection System Model in accordance with CIWEM 2017. Monitoring shall consist of the following:
    a. Rainfall monitoring – The City shall install and operate a minimum of 3 automatic recording/telemetered rainfall gauges. Such gauges shall be capable of measuring 0.01 inches of rainfall and shall be distributed to characterize local rainfall patterns. The rainfall gauges shall be installed in locations throughout the system to provide representative rainfall data, and operated, and maintained in accordance with the gauge manufacturers' recommendations.
    b. Flow Monitoring – The City shall install and operate a network of flow monitors and level sensors to facilitate its evaluation of the effectiveness of its Rainfall

Derived Infiltration and Inflow ("RDII") reduction efforts and to support the development, validation, and recalibration of its Collection System Model.

i. Flow monitors shall be telemetered Area/Velocity ("A/V") meters capable of the following: Consistently providing accurate and reliable monitoring data. At a minimum, velocity, depth, and flow shall be accurately measured and recorded, under both open channel and surcharged conditions, and shall be recorded in at most 5-minute intervals. The equipment must allow the collection of data remotely via cellular telemetry.

ii. Level sensors shall also be telemetered.

iii. Both A/V meters and level sensors shall be capable of measuring surcharge depths above the pipe invert to the manhole rim.

iv. Flow meters and level sensors shall be installed in locations throughout the system to provide representative flow data and to monitor each individual sewer basin's flow rates as well as to support successful model development, calibration, and validation.

v. Flow meters shall be operated, and maintained in accordance with manufacturer recommendations.

c. Data QA/QC – The City shall implement QA/QC practices, consistent with industry standards in Section 3 of CIWEM 2017 and the WRc Guide to Short Term Flow Surveys in Sewers (1987), including weekly data reviews, consistent data qualification procedures and consistent and complete QC documentation protocols.

d. Data collection will be considered sufficient for proceeding with Collection System Modeling if the following conditions are met:

i. Flow monitoring and rainfall collection must continue through at least February 28, 2023.

ii. Flow and rainfall observations are recorded, reviewed, deemed acceptable quality, and 95% complete during at least one or both of the following:

1. At least one storm with 72-hour rainfall in exceedance of the 1.17-year storm (2.75 inches in 72 hours), AND at least 2 other storms with 2.0 inches in 72 hours (1.08-year frequency); or
2. Plant flows exceed flows of 6 MGD at least once, and exceed 4 MGD at least two times.

4. Collection System Model Development/Validation/Recalibration – The City shall develop and maintain a calibrated hydrologic/hydraulic model of its WCTS ("the Collection System Model") to establish existing system wet weather response and hydraulic conditions and limitations and to support implementation of the CAP. The Collection System Model shall be configured, calibrated, and verified in accordance with current good industry practice, as per CIWEM 2017, and shall:

a. Accurately predict the hydrologic response of each Basin to an appropriate range of wet weather events by each of the City's ten individual sewer basins. At a minimum, the following precipitation events shall be considered:

1. OR 5-year 24 hour storm
2. OR 5-year 6 hour storm with Atlas 14 first quartile distribution

ii. Accurately predict flow rate and hydraulic grade line ("HGL") of wastewater in all portions of the collection system explicitly represented in the Collection System Model in storm events including those listed above in Paragraph 4.a.;

iii. Accurately predict surcharge and releases (e.g., Sanitary Sewer Overflows) in all portions of the collection system explicitly represented in the Collection System Model;

iv. Utilize dynamic wave routing, including representative simulation of downstream backwater impacts on upstream flows and HGLs; and

v. Support accurate analysis of alternative measures for addressing capacity limitations.

b. Collection System Model configuration/calibration/verification

i. The Collection System Model shall be configured based upon accurate hydrologic and collection system attribute information, including that

taken from as-built drawings and as necessary, acquired through field survey activity.

ii. Dry weather and wet weather calibration shall be carried out using the validated data collected in the monitoring program described in Paragraph 3 above. Calibration shall be carried out in accordance with current good industry practice and the criteria presented in Table 5-1 from the CIWEM 2017. In particular, the following wet weather calibration criteria will be applied:

Table 5-1 Storm Verification Targets

Parameter	General	Critical Locations	Comments
Shape	Good match (NSEC if used >0.5)	Good match (NSEC if used >0.5)	An evaluation technique may be used to compare the shape such as the Nash-Sutcliffe Efficiency Co-efficient (NSEC) method together with a visual check. More information on this approach is included in **Appendix G**
Time of peaks and troughs	±0.5 hour	±0.5 hour	The timing of the peaks and troughs should be similar having regard to the duration of the event
Peak depth (un-surcharged)	±0.1m or ±10% whichever is greater	±0.1m	
Peak depth (surcharged)	+0.5m to – 0.1m	±0.1m	Relaxation may be appropriate in deep sewers. Where coupled 1D-2D models are used the 'critical locations' criteria should apply
Peak flow	+ 25% to -15%	±10%	
Flow volume	+20% to -10%	±10%	Excluding poor / missing data

iii. Collection System Model documentation: Fully document configuration, attribute data, initial and final calibration parameters, and calibration performance. Last to include 45-degree scatterplots of individual event peak flow rate and peak depth and total volume for each calibration point.

5. The City shall provide a report to EPA and ODEQ that describes in detail rainfall monitoring, flow monitoring, Collection System Model development and the calibration process, and that at a minimum includes:

a. Rainfall monitoring – The report shall describe the location and type of each rain gauge employed to collect rainfall data during the monitoring period. The

methodology used to review and qualify rainfall data shall be described, data excluded from use due to quality issues identified, and the results of the data review shall be summarized in a chart like the attached Example 1. Both raw and edited rainfall data shall be provided in a spreadsheet as attachments.

b. Flow monitoring - The report shall describe the location and type of each flow monitoring installation used to collect flow and HGL data during the monitoring period. The methodology used to review and qualify depth and velocity data shall be described, data issues at each meter location discussed, data excluded from use due to quality issues identified, and the results of the data review shall be summarized in a chart like the attached Example 1. Site installation sheets and scatterplots of all dry and wet weather data shall be provided as an attachment.

c. Collection System Model software – The report shall identify all software (including versions) utilized, and if not widely utilized within the industry for collection system modeling, shall provide information regarding the capabilities and limitations of that software.

d. Collection System Model configuration – The report shall describe how all hydrologic processes are represented in the model and shall provide as appendices all initial and final hydrologic parameters. The report shall also describe and illustrate with map(s) and/or schematics, all portions of the system explicitly included in the hydraulic model and shall include as appendices all attribute data input to the model.

e. Collection System Model calibration and verification – The report shall describe in detail the dry and wet weather calibration processes and rainfall/flow monitoring data utilized, the calibration criteria employed (as per the CIWEM 2017) and the calibration results achieved. The report shall provide:

    i. A discussion of the overall calibration achieved, limitations of the model and recommendations for future model refinement;

    ii. Specifically identify each dry weather and wet weather calibration or verification period and shall describe why each such period was selected;

    iii. Summary tables of calibration and verification peak flow, peak depth, and total event volume model-to-meter statistics;

iv. For each calibration location/meter -45-degree calibration/verification peak flow, peak depth, and total event volume scatterplots; and

v. For each calibration location/meter, calibration/verification meter-to-model comparative hydrographs.

6. Comprehensive Capacity Evaluation. As part of the Amended Wastewater System Facilities Plan, the City shall conduct a Comprehensive Capacity Evaluation ("CCE"). The CCE shall be carried out to evaluate and document the then-current peak wet weather capacity of the Sandy collection system and the peak wet weather and longer-term capacities of the Sandy wastewater treatment plant. This will be achieved by a combination of monitoring, modeling, and engineering analyses as described in detail below:

a. The CCE shall, at a minimum, consist of the following activities:

i. Wet season rainfall and flow monitoring program in Paragraph 3 of this Appendix;

ii. Collection System Model Validation/Recalibration in Paragraph 4 of this Appendix;

iii. Collection System Model Capacity Evaluation. The City shall carry out a series of simulations to identify any portions of the collection system with inadequate conveyance capacity. For this evaluation, inadequate capacity will be any sewer predicted to surcharge to within 3-feet of the ground surface or would be expected to result in a backup to private property based on expected lowest fixture elevations. This evaluation shall consist of two steps:

a. First, the City shall use the model to simulate the performance of the existing system during the OR 5-year Storm and shall identify any portions of the collection system with inadequate conveyance capacity. If any such portions are identified, those portions shall be deemed to have no additional capacity for new connections until measures are completed to increase that capacity.

b. The City shall then simulate increased base flow in the portions of the interceptors and main trunk sewers with adequate conveyance capacity

to identify how much additional flow is required to reach inadequate conveyance capacity conditions in that same OR 5-year storm event. The City shall identify the additional baseflow capacity in gallons per day rate for each interceptor and main trunk sewer and provide that information on a sewer map.

iv. Collection System Record Review and Evaluation. The City shall carry out a review of the last three years of its collection system complaints and maintenance records, to identify all instances of capacity-related overflow or private property backup. For each such instance identified, the City shall provide an evaluation of how the responsible precipitation event compared to the OR 5-year event.

v. Treatment Plant Capacity Evaluation in Paragraph 9 of Appendix D;

vi. Integrated WCTS and WWTP Evaluation and Identification of Currently Available Capacity

a. The City shall utilize the results of the evaluations and analyses described in subparagraphs i-v above, to identify the available additional baseflow capacity for the WWTP and for each portion of the specified interceptors and main trunk sewers.

7. Subsequent CCEs shall be carried out and Reports submitted following the completion of significant collection system or WWTP projects implemented by the City to address specific capacity limitations and to support the submission of requests by the City for increase in the CAP connection limitation(s).

8. Permit Compliance. The Amended Wastewater System Facilities Plan shall include an evaluation of the City's expected compliance with the Permit, including Capacity Related Violations, to be conducted for both current conditions and with anticipated growth over the next 10 years.

9. The Amended Wastewater System Facilities Plan shall include a set of improvements identified as "Continued Compliance Improvements." "Continued Compliance Improvements" shall mean improvements which when completed, and permitted, will allow for sufficient capacity to collect, treat, and discharge to meet permit requirements,

including discharge limitations during peak flow, for at least ten years, including expected population growth through the tenth year.

10. Alternatives. Utilizing all of the above information, as well as data on predicted population growth over the next 20 years, the City shall conduct an evaluation of all viable alternative measures to improve capacity in the WCTS and WWTP, including both short-term and long-term improvements to address increased flow, to ensure compliance with the terms and conditions of the Permit, and shall at a minimum include consideration of the following measures:

    (1) Expansion of current tertiary treatment configurations (additional aeration basin, clarifier), and tertiary filtration;

    (2) Converting the existing plant to a Membrane BioReactor System ("MBR");

    (3) Hybrid installation of an MBR train at the existing plant, and conversion of the existing aeration basin, secondary clarifier and tertiary filtration train to wet weather operation only;

    (4) Pumping wastewater to adjacent treatment facility;

    (5) Detention in a new pump station and equalization basin, or within the existing collection system by limited surcharging;

    (6) Satellite MBR concept.

    (7) Any other temporary or permanent measures the City wishes to consider.

11. References

"CIWEM 2017" refers to

CIWEM Chartered Institution of Water and Environmental Management
Urban Drainage Group

Code of Practice for the Hydraulic Modelling of Urban Drainage Systems 2017.

www.ciwem.org/groups/udg

ATTACHMENT B: AMERICAN RESCUE PLAN ACT (ARPA) CONTRACT CLAUSES

ATTACHMENT B - ARPA/SLFRF REQUIRED CONTRACT CLAUSES

☐ **Contractor must be registered in SAM.gov. -** The Contractor shall register in the System for Award Management (SAM), which is the primary registrant database for the U.S. Federal Government and shall update the information at least annually after the initial registration and maintain its status in the SAM through the Term of this Agreement. Information regarding the process to register in the SAM can be obtained at Sam.gov

☐ **Whistleblower -** Contractor receiving ARPA funds shall under or through this contract post notice of the rights and remedies provided to whistleblowers under No Fear Act Pub. L. 107-174. 29 CFR § 1614.703 (d).

☐ **Inspections; Information** - Contractor shall permit, and cause its subcontractors to allow the State of Oregon, the federal government and any party designated by them to:

- Examine, visit and inspect, at any and all reasonable times, the property, if any, constituting the Project.
- Inspect and make copies of any accounts, books and records, including, without limitation, its records regarding receipts, disbursement, contracts, and any other matters relating to the Project, and to its financial standing, and shall supply such reports and information as reasonably requested.
- Interview any officer or employee of the Contractor, or its subcontractors, regarding the Project.

☐ **Equal Opportunity -** Contractor shall comply with Executive Order 11246 of September 24, 1965, entitled "Equal Employment Opportunity," as amended by Executive Order 11375 of October 13, 1967, and as supplemented in Department of Labor regulations (41 CFR chapter 60).

☐ **Copeland "Anti-Kickback" Act -** Contractor shall comply with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

☐ **Debarment and Suspension (Executive Orders 12549 and 12689)** - A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2

CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

☐ **Prohibition on purchasing telecommunications or surveillance equipment, services, or systems.** As required by 2 CFR 200.216, federal grant or loan recipients and subrecipients are prohibited from obligating or expending loan or grant funds to procure or obtain; extend or renew a contract to procure or obtain; or enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that use covered telecommunications equipment, video surveillance services or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities). Prohibitions extend to the use of Federal funds by recipients and subrecipients to enter into a contract with an entity that "uses any equipment, system, or service that uses covered telecommunications equipment or services" as a substantial or essential component of any system, or as critical technology as part of any system. Certain equipment, systems, or services, including equipment, systems, or services produced or provided by entities subject to the prohibition are recorded in the System for Award Management exclusion list.

☐ **Preference to United States made goods.** - As appropriate and to the extent consistent with law, the contractor should, to the greatest extent practicable under a Federal award, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). The requirements of this section must be included in all subawards including all contracts and purchase orders for work or products under this award. For purposes of this section:
(1) "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.
(2) "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

Additional Clauses for Contracts Over $10,000:

Creating a contract over $10,000 that complies with ARPA requirements must include the additional below sections as verbatim:

☐ **Procurement of recovered materials over $10,000. -** The Contractor must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired during the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

☐ **Termination for cause and for convenience** - Contractor shall address termination for cause and for convenience, including the manner by which it will be affected and the basis for settlement.
The Contract Owner shall have the option, in its sole discretion, to terminate this Agreement, at any time during the term hereof, for convenience and without cause. The Contract Owner shall exercise this option by giving Contractor written notice of termination. The notice shall specify the date on which termination shall become effective.

Additional Clauses for Contracts Over $100,000:

Creating a contract over $100,000 that complies with ARPA requirements must include the additional below section(s) as verbatim:

☐ **Certification form located in Appendix I. Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)** - Contractors that apply or bid for an award exceeding $100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.

☐ **Note: Only include for contracts that involve the employment of mechanics or laborers.** The Contract Work Hours and Safety Standards Act requires all contractors—prime and sub—to pay laborers and mechanics performing on a federal service contract and federal and federally assisted construction contract over $100,000, 1.5 times their basic rate of pay for all hours worked over 40 in a workweek. Employers are liable to employees for these unpaid wages. The failure of a contractor to comply with this Act may also result in liability under the False Claims Act. Employees who are due unpaid wages under the Contract Work Hours and Safety Standards Act may file a complaint with the Wage and Hour Division within the U.S. Department of Labor. The DOL may then enforce the provisions of the Act against violators.

Additional Clauses for Contracts Over $150,000:

Creating a contract over $150,000 that complies with ARPA requirements must include the additional below section(s) as verbatim:

☐ Contractor shall comply with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h)), section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR part 15).

Additional Clauses for Contracts Over $250,000 (the simplified acquisition threshold as of 2022):

Creating a contract over $250,000 that complies with ARPA requirements must include the additional below section(s) as verbatim:

☐ Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate. Upon any breach of this Agreement by Contractor, the Contract Owner shall have all remedies available to it both in equity and/or at law.

Appendix I

Certification Regarding Lobbying
(Awards to Contractors and Subcontractors in Excess of $100,000)

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signed:_____
Title: _____
Date: _____

ATTACHMENT C: WIFIA CONSULTANT PROGRAM REQUIREMENTS

ATTACHMENT C – FEDERAL REQUIREMENTS

Water Infrastructure and Innovation Act (WIFIA)

Consultants at all tiers are required to comply with certain Federal requirements as a condition of Water Infrastructure Finance and Innovation Act (WIFIA) funding for the Click or tap here to enter project name. as part of the Sandy Clean Waters Program (Program or SCWP). Those Federal laws, regulations, and similar requirements are provided in this exhibit.

Consultants providing goods and services are required to:

- Ensure compliance with these WIFIA Program Requirements to the extent each requirement applies to a company's services for the Program,
- Ensure compliance with these WIFIA Program Requirements by all a company's subcontractors, at all tiers, to the extent each requirement applies to a subcontracted company's services for the Program; and
- Ensure the goods and services provided for the Program are compliant with, and support construction in compliance with, these WIFIA Program Requirements.

Nothing in this exhibit shall reduce a contractor's obligations under the contractor's existing contract. In the event of a conflict between this exhibit and the contractor's contract, the more stringent interpretation shall apply. Portions of this exhibit are drawn from Federal law, regulation, Executive Order, or suggested language. Terminology used in this exhibit shall be interpreted as used in the corresponding Federal law, regulation, or Executive Order. Some clarifications regarding terminology are provided as appropriate to relate this exhibit to typical contracts for the Program.

Economic and Miscellaneous Authorities

A. Debarment and Suspension, Executive Order 12549, 51 FR 6370, February 21, 1986

Contractor certifies that it will not knowingly enter into a contract with anyone who is ineligible under the 40 CFR Part 32 to participate in the Project[3]. Suspension and debarment information can be accessed at http://www.sam.gov. Contractor represents and warrants that it has or will include a term or conditions requiring compliance with this provision in all its subcontracts under this Agreement[4].

B. New Restrictions on Lobbying, 31 USC 1352 (Federal Lobbying Restrictions)

Recipients of federal financial assistance may not pay any person for influencing or attempting to influence any officer or employee of a federal agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress with respect to the award, continuation, renewal, amendment, or modification of a federal grant, loan, or contract. These requirements are implemented for USEPA in 40 CFR Part 34, which also describes types of activities, such as legislative liaison activities and professional and technical services, which are not subject to this prohibition. Upon award of this contract, Contractor shall complete and submit to the Owner[5] the certification and disclosure forms in Appendix A and Appendix B to 40 CFR Part 34. Contractor shall also require all subcontractors and suppliers of any tier awarded a subcontract over $100,000 to similarly complete and submit the certification and disclosure forms pursuant to the process set forth in 40 CFR 34.110.

C. Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment (Effective August 13, 2020)

The John S. McCain National Defense Authorization Act for Fiscal Year 2019 (P.L. 115- 232), at Section 889, prohibits EPA financial assistance recipients, including WIFIA borrowers, from expending loan funds to procure or obtain; extend or renew a contract to procure or obtain; or enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that use covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in the Act, "covered telecommunications equipment or services" means:

a) Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

b) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology

Company (or any subsidiary or affiliate of such entities).

c) Telecommunications or video surveillance services provided by such entities or using such equipment.

d) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

The Act does not prohibit:

a) Procuring with an entity to provide a service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements.

b) Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.

Civil Rights, Nondiscrimination

D. Civil Rights Obligations

Contractor shall comply with the following federal non-discrimination requirements:

a) Title VI of the Civil Rights Act of 1964, which prohibits discrimination based on race, color, and national origin, including limited English proficiency (LEP).

b) Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination against persons with disabilities.

c) The Age Discrimination Act of 1975, which prohibits age discrimination.

d) Section 13 of the Federal Water Pollution Control Act Amendments of 1972, which prohibits discrimination on the basis of sex.

e) 40 CFR Part 7, as it relates to the foregoing.

ATTACHMENT D: SRF FUNDING REQUIREMENTS

APPENDIX C: DBE GOOD FAITH EFFORTS

At a minimum the Borrower or its prime contractor must take six affirmative steps (which apply to any procurement of construction, supplies, equipment or services) to demonstrate good faith effort to utilize minority (MBE), women-owned (WBE) and small (SBE) businesses. The six steps are:

1) To include qualified small, minority and women's businesses on solicitation lists;

2) To assure that small, minority and women's businesses are solicited whenever they are potential sources;

3) To divide total requirements, whenever economically feasible, into smaller tasks or quantities to permit maximum participation by small, minority or women's businesses;

4) To establish delivery schedules whenever the requirements of the work permit, which will encourage participation by small, minority and women's businesses;

5) To use the services and assistance of the Small Business Administration (http://pro-net.sba.gov) and the Office of Minority Business Enterprise of the U.S. Department of Commerce (http://www.mbda.gov) to identify appropriate small, minority and women businesses; and

6) To require subcontractors to take all of the affirmative action steps described above and set forth in 40 CFR 35.3145(d) in any contract awards or procurements.

The Borrower shall, and shall cause its contractors to, document compliance with the above requirements on forms found at Tab 6 of the Manual for Construction Projects.

Additional resources available to recipients and contractors include the following:

EPA Office of Small and Disadvantaged Business Utilization:
Phone: 206 – 553 – 2931
Web Site: www.epa.gov/osdbu

Oregon Certification Office for Business Inclusion and Diversity
775 Summer Street N.E., Room 200
Salem, OR 97301-1280

Phone: 503 – 986 – 0123
Web Site: www. http://www.oregon4biz.com/How-We-Can-Help/COBID/

APPENDIX D: APPLICABLE FEDERAL AUTHORITIES AND LAWS ("CROSS-CUTTERS")

ENVIRONMENTAL LEGISLATION:

Archaeological and Historic Preservation Act of 1974, PL 93-291.
Clean Air Act, 42 U.S.C. 7506(c).
Coastal Barrier Resources Act, 16 U.S.C. 3501, et seq.
Coastal Zone Management Act of 1972, PL 92-583, as amended.
Endangered Species Act 16 U.S.C. 1531, et seq.
Executive Order 11593, Protection and Enhancement of the Cultural Environment.
Executive Order 11988, Floodplain Management.
Executive Order 11990, Protection of Wetlands.
Farmland Protection Policy Act, 7 U.S.C. 4201, et seq.
Fish and Wildlife Coordination Act, PL 85-624, as amended.
National Historic Preservation Act of 1966, PL 89-665,as amended.
Safe Drinking Water Act, Section 1424(e), PL 92-523, as amended.
Wild and Scenic Rivers Act, PL 90-542, as amended.
Federal Water Pollution Control Act Amendments of 1972, PL 92-500.
Migratory Bird Conservation Act, 16 U.S.C. 715, et seq.
Magnuson-Stevens Act – Essential Fish Habitat, 16 U.S.C. 1851, et seq.

ECONOMIC LEGISLATION:

Demonstration Cities and Metropolitan Development Act of 1966, PL 89-754, as amended.
Section 306 of the Clean Air Act and Section 508 of the Clean Water Act, including Executive Order 11738, Administration of the Clean Air Act and the Federal Water Pollution Control Act with Respect to Federal Contracts, Grants or Loans.

SOCIAL LEGISLATION:

The Age Discrimination Act of 1975, Pub. L. No. 94-135, 89 Stat. 713, 42 U.S.C. §6102 (1994).
Civil Rights Act of 1964, Pub. L. No. 88-352, 78 Stat. 252, 42 U.S.C. §2000d (1988).
Section 13 of PL 92-500; Prohibition against Sex Discrimination under the Federal Water Pollution Control Act.
Rehabilitation Act of 1973, Pub. L. No. 93-1123, 87 Stat. 355, 29 U.S.C. §794 (1988), including Executive Orders 11914 and 11250).
Executive Order 12898, Environmental Justice in Minority Populations
Exec. Order No. 11,246, 30 F.R. 12319 (1965), *as amended by* Exec. Order No. 11,375, 32 F.R. 14303 (1967), *reprinted in* 42 U.S.C. §2000e (1994), and its regulations at 41 C.F.R. §§60-1.1 to 60-999.1.

MISCELLANEOUS AUTHORITY:

Uniform Relocation and Real Property Acquisition Policies Act of 1970, PL 92-646.
Executive Order 12549 and 40 CFR Part 32, Debarment and Suspension.
Disclosure of Lobbying Activities, Section 1352, Title 31, U.S. Code.

APPENDIX E: DAVIS-BACON PROVISION

Part 1

(1) Minimum wages.

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

Subrecipients may obtain wage determinations from the U.S. Department of Labor's web site, www.dol.gov.

(ii)(A) The subrecipient(s), on behalf of EPA, shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The State award official shall approve a request for an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the subrecipient(s) agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the subrecipient (s) to the State award official. The State award official will transmit the request, to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210 and to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification request within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the subrecipient(s) do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the award official shall refer the request and the local wage determination, including the views of all interested parties and the recommendation of the State award official, to the Administrator for determination. The request shall be sent to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt of the request and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii)(B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(2) Withholding. The subrecipient(s), shall upon written request of the EPA Award Official or an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the (Agency) may, after written notice to the contractor, sponsor, applicant, or

owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to the subrecipient, that is, the entity that receives the sub-grant or loan from the State capitalization grant recipient. Such documentation shall be available on request of the State recipient or EPA. As to each payroll copy received, the subrecipient shall provide written confirmation in a form satisfactory to the State indicating whether or not the project is in compliance with the requirements of 29 CFR 5.5(a)(1) based on the most recent payroll copies for the specified week. The payrolls shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on the weekly payrolls. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at https://www.dol.gov/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the subrecipient(s) for transmission to the State or EPA if requested by EPA , the State, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the subrecipient(s).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the State, EPA or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency or State may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees--

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program

shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

(5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the EPA determines may by appropriate, and also a clause requiring the subcontractors to include these clauses in any

lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and Subrecipient(s), State, EPA, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

Part 2

Contract Provision for Contracts in Excess of $100,000.

(a) Contract Work Hours and Safety Standards Act. The subrecipient shall insert the following clauses set forth in paragraphs (a)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Item 3, above or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (a)(1) of this section the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (a)(1) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (a)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The subrecipient upon the request of the EPA Award Official or an authorized representative of the Department of Labor, shall withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (a)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (a)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (a)(1) through (4) of this section.

(b) In addition to the clauses contained in Item 3, above, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in 29 CFR 5.1, the Subrecipient shall insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and

mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Subrecipient shall insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the Oregon Department of Environmental Quality and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

5. Compliance Verification

(a) The subrecipient shall periodically interview a sufficient number of employees entitled to DB prevailing wages (covered employees) to verify that contractors or subcontractors are paying the appropriate wage rates. As provided in 29 CFR 5.6(a)(6), all interviews must be conducted in confidence. The subrecipient must use Standard Form 1445 (SF 1445) or equivalent documentation to memorialize the interviews. Copies of the SF 1445 are available from EPA on request.

(b) The subrecipient shall establish and follow an interview schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. Subrecipients must conduct more frequent interviews if the initial interviews or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. Subrecipients shall immediately conduct necessary interviews in response to an alleged violation of the prevailing wage requirements. All interviews shall be conducted in confidence.

(c) The subrecipient shall periodically conduct spot checks of a representative sample of weekly payroll data to verify that contractors or subcontractors are paying the appropriate wage rates. The subrecipient shall establish and follow a spot check schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, if practicable, the subrecipient should spot check payroll data within two weeks of each contractor or subcontractor's submission of its initial payroll data and two weeks prior to the completion date the contract or subcontract. Subrecipients must conduct more frequent spot checks if the initial spot check or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. In addition, during the examinations the subrecipient shall verify evidence of fringe benefit plans and payments thereunder by contractors and subcontractors who claim credit for fringe benefit contributions.

(d) The subrecipient shall periodically review contractors and subcontractors use of apprentices and trainees to verify registration and certification with respect to apprenticeship and training programs approved by either the U.S Department of Labor or a state, as appropriate, and that contractors and subcontractors are not using disproportionate numbers of, laborers, trainees and apprentices. These reviews shall be conducted in accordance with the schedules for spot checks and interviews described in Item 5(b) and (c) above.

(e) Subrecipients must immediately report potential violations of the DB prevailing wage requirements to the EPA DB contact listed above and to the appropriate DOL Wage and Hour District Office listed at https://www.dol.gov/whd/local/.

APPENDIX F
EQUAL EMPLOYMENT OPPORTUNITY

During the performance of this contract the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.

(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: *Provided, however*, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

APPENDIX G: CERTIFICATION REGARDING LOBBYING
(Contracts in Excess of $100,000.00)

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the Borrower, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signed _____

Title _____

Date _____

Recipient _____