

3.0 CAPACITY EXPANSION AGREEMENT

THIS 3.0 CAPACITY EXPANSION AGREEMENT (“Agreement”) is entered into on _____, 2018, by and between the Plum Creek Water Reclamation Authority, a political subdivision and public corporation of the State of Colorado (“PCWRA”), and the following PCWRA Members, collectively herein designated the “Participants”:

- The Town of Castle Rock, a home rule municipal corporation (“the Town”); and
- Castle Pines North Metropolitan District, a quasi-municipal corporation and political subdivision of the State of Colorado (“CP North”); and
- Castle Pines Metropolitan District, a quasi-municipal corporation and political subdivision of the State of Colorado (“CP Metro”).

RECITALS

- A. PCWRA holds in its name and operates certain wastewater treatment facilities known as PCWRA Plant #1, and all appurtenances relating thereto, which treatment facilities and appurtenances are herein designated the “Plant.”
- B. As of the date of execution hereof, each of the Participants owns current capacity¹ rights in the Plant as set forth in Exhibit A² attached hereto and incorporated herein by reference.
- C. The Town has indicated it is reaching its maximum available and useable capacity in the Plant, which has triggered the need to commence design for expansion of the Plant under state and/or federal laws and regulations.
- D. Demand for wastewater treatment has increased due to growth within the boundaries of the Town and CP North and such growth is expected to continue for the reasonably foreseeable future.
- E. Based upon the needs and demands as above-recited, PCWRA has determined that it is necessary to fund and carry out a construction and reconstruction project, hereinafter referred to as the “Project,” which will include enlargement and enhancement of Plant components to increase Plant capacity to accommodate anticipated additional wastewater flows, and, in addition to increasing Plant treatment capacity, will also include biosolids treatment, handling, and disposal functions. The Project is more fully described in Exhibit C, attached hereto and incorporated herein by reference.
- F. The Participants stipulate that proper notice has been provided pursuant to Section 7.04 of the

¹ For purposes of Exhibit A, the term “capacity” refers to the quantity of liquid the Plant is capable of treating within a specified period of time (generally expressed as MGD), and therefore includes both hydraulic capacity and chemical/biological treatment capacity, but does not include PCWRA’s capacity for storing, handling, treating, and/or disposing of biosolids.

² Exhibit A is intended to serve three functions: (a) to show the capacity owned by each Member and Special Connector of PCWRA prior to the Project and the anticipated capacity after completion of the Project; (b) to identify the anticipated costs of the capacity increase and the allocation of those costs to the Participants; and (c) to identify the Project Costs that do not result in capacity increases and the allocation of those costs to each Member and Special Connector.

Plum Creek Wastewater Authority Establishing Agreement, dated December 14, 1989 as the same has been or may be amended from time to time, (the “Establishing Agreement”).

- G. The Participants have agreed that the cost and capacity to be allocated to each as a result of the Project will be as shown on Exhibit A pursuant to paragraph 3 below.
- H. Under the terms of the Establishing Agreement, the parties hereto are required to enter into an Expansion Agreement, setting forth, at a minimum, the scope of the expansion, the cost thereof, and the pro rata amount of the Participants’ respective financial participation in the Project.
- I. The Town has already contributed funds for the Project in the amounts shown on Exhibit B under the heading Funding Contributions to Date, attached hereto and incorporated herein by reference, which funds have been held in and disbursed from escrow accounts referred to respectively as the “Design Escrow Account,” the “Preconstruction Phase Services Escrow Account,” and the “Construction Phase Engineering Services Escrow Account.”
- J. Each of the Participants has contributed funds for the Project referred to as “Work Package One” in the respective amounts shown on Exhibit B under the heading Funding Contributions to Date, which funds have been held in and disbursed from an escrow account referred to as the “Work Package One Escrow Account.”
- K. Each Participant’s remaining proportionate obligations, if any, for any of the cost-categories referenced in Recital I and/or J above will be paid in accordance with paragraph 5.e. of this Agreement.
- L. The execution of this Expansion Agreement is a prerequisite for PCWRA to enter into construction contracts for the expansion.
- M. Each Participant has made a reasonable preliminary showing of its ability to pay its respective obligations under this Expansion Agreement.
- N. Silver Heights Water and Sanitation District (“Silver Heights”) and Castleton Center Water and Sanitation District (“Castleton Center”) (collectively, the “Special Connectors”) will contribute to the Project costs as required by their respective Special Connector Agreements, but neither is or shall be a party to this Agreement, nor shall either be deemed a Participant or an intended beneficiary of this Agreement.
- O. The design phase of the Project has been substantially completed as of the date of execution hereof, and no Participant has raised any objection to any aspect of the Project design.

NOW THEREFORE, in consideration of the foregoing recitals which are hereby incorporated into this Agreement by reference and the mutual covenants and stipulations hereinafter set forth, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. EXPANSION PROJECT. Through PCWRA, the Participants shall fund and carry out a construction and reconstruction project (the “Project”), which will include enlargement and enhancement of Plant components to increase Plant capacity to accommodate anticipated additional wastewater flows, and, in addition to increasing Plant treatment capacity, will also include biosolids treatment, handling, and disposal functions. The Project is more fully described in Exhibit C, attached hereto and incorporated herein by reference.

2. PROJECT IMPLEMENTATION.

a. Project Manager. PCWRA shall have control of and act as Project Manager for the Project.

b. PCWRA Member Authorization. Pursuant to the Establishing Agreement, only Participants not in material breach of this Expansion Agreement shall vote on PCWRA's consideration of matters related to the Project and only Participants not in material breach of this Expansion Agreement have the right to acquire through PCWRA any use or benefit of the wastewater treatment capacity developed through the Project.

c. Project Representative. PCWRA may, after consultation with the Participants, engage a qualified Project Representative (owner's representative) on behalf of PCWRA and the Participants, to act as an advisor to PCWRA in its capacity as Project Manager, to facilitate open communications among all parties, to help to avoid adversarial interactions, to promote a sense of trust and teamwork in order to accomplish the smooth execution of the Project, to see that the Project is completed in conformity with plans and specifications and other contract documents for the Project, and to perform other duties ordinarily within the scope of a large project owner's representative.

d. PCWRA Authority; Design Changes. PCWRA shall have full responsibility and authority to conduct and manage the design and construction of the Project as efficiently and economically as reasonably possible. PCWRA will investigate and implement any changes to the Project that will enable it, to the extent reasonably practicable, to furnish the required capacity at a cost less than the current estimated cost for the Project as originally planned or to furnish greater capacity at the same cost, without diminishing the quality of the design, materials or workmanship, or significantly increasing the anticipated costs to operate the Plant. In no event shall PCWRA knowingly change the Project so as to reduce the capacity thereof below the post-Project amounts set forth in Exhibit A, except by a unanimous decision of the PCWRA Board of Directors eligible to vote on Project matters. Further, PCWRA shall not cause or permit any change in the Project which would result in costs greater than the then-current estimate, unless such changes are necessary to prevent even greater cost increases resulting from following the original plan. PCWRA shall not have the authority to plan, design, or construct a Project in such a way that violates any provision of this Agreement or of the Establishing Agreement.

e. Project Schedule. The Project schedule, including all phases of design and construction and indicating the times (numbers of days or dates) for starting and completing the various stages of the Project, shall be as depicted graphically in the format of Exhibit D, attached hereto and incorporated herein by reference. Subject to subsection 2.f.ii below, the Project schedule will be subject to modification by PCWRA based upon negotiations with the Engineer and Contractor (as defined in Sections 4.a and 4.b below, respectively), and will, as modified, be reflected in the design and construction contracts for the Project.

f. Coordination of Design. It is acknowledged that the Participants and PCWRA are acquainted with the general concepts and plan for the Project and that the Participants have had the opportunity for full discussion concerning the same. PCWRA shall give careful consideration to any further comments and suggestions of all Participants relating to the plan, design and construction of the Project. All Participants shall be entitled to attend any and all preconstruction meetings, and to meet and confer at any reasonable time with PCWRA staff about the Project, and PCWRA will permit all Participants to inspect all plans and design at any stage of the design phase.

i. Design Review; Bar. Each Participant has had sufficient opportunity to review the preliminary and final Project design, and is and shall be conclusively barred from asserting any claims against PCWRA or any other Participant which are based upon matters either appearing in or omitted from the design. Claims against the Engineer or the Engineer's consultants for errors and omissions based upon matters appearing or omitted from the design are not barred by this provision.

ii. Notice of Change. PCWRA shall give timely written notice to all Participants of any proposed changes in the plan, design, schedule, cost, or construction of the Project, other than correction of typographical errors. In the event of any such change, each Participant shall thereupon have five (5) business days after receiving such written notice within which to review and comment on such proposed changes. Any comments shall be submitted in writing to the PCWRA Manager and shall be referred immediately by the PCWRA Manager to the Design Engineer. PCWRA shall direct the Design Engineer to review and give due consideration to any and all comments submitted in accordance herewith. PCWRA shall carefully consider the Design Engineer's recommendations as to the comments on both preliminary and final design of the Project, but PCWRA shall make the final decisions concerning such comments.

g. Site Access. Any Participant may have reasonable access to the Project site at any time to observe the development or construction of the Project.

h. Limited Liability. PCWRA shall have no liability to any Participant on account of any act or decision involving the exercise of its judgment or discretion unless the act or decision was clearly erroneous in light of the circumstances at the time it was made.

3. OWNERSHIP; FINAL CAPACITY SHARES. The ownership of the anticipated new capacity resulting from the Project will be as set forth in Exhibit A, which shall be revised at the time of substantial completion of the Project using the same methodology described in Exhibit A as attached hereto on the date of execution of this Agreement. The revised Exhibit A shall clearly show the methodology and calculations (including without limitation the financial contribution of each Participant) used to determine capacity shares of each Participant and Special Connector after substantial completion of the Project. The physical facilities and improvements of the Project shall be held in the name of PCWRA both during and after construction. The term "Substantial Completion" shall be further defined in the construction contract and related documents (the "Contract Documents") but in this context is generally intended to mean the stage in the progress of the work on the Project when the Project is sufficiently complete in accordance with the Contract Documents so that PCWRA can utilize the portions of the Plant included in the Project for their intended use.

4. PROJECT DESIGN AND CONSTRUCTION CONTRACTS.

a. Design and Construction Phase Engineering. PCWRA has entered into a written contract with the engineering firm of Burns and McDonnell (the "Engineer"), for the preparation of the Project design and for additional construction phase engineering services.

b. Construction. The Project will be constructed using a "construction manager at risk" contract. As Project Manager, PCWRA will contract with a Construction Manager who will be responsible for (a) establishing a Guaranteed Maximum Price (GMP) to be approved by PCWRA in accordance with the terms of the Contract Documents; and, (b) shall ensure timely and quality completion of the Project at a cost within the GMP, including but not limited to securing all permits, providing all services, furnishing any and all required materials and labor, and entering into and causing to be performed all subcontracts necessary to achieve complete, correct and timely completion of the complete construction of the Project in accordance with the Contract Documents, and (c) warrant all of such work and services. The "Contractor" as referenced in this Agreement means Construction Manager at Risk. The selection of the Contractor shall be done in accordance with applicable legal requirements, if any. It is further acknowledged and agreed that PCWRA has already engaged a Contractor to perform certain defined construction services for the Project and obtain steel and other materials before an anticipated increase in prices for construction and materials, the scope of which engagement is termed "Work Package One."

5. PROJECT FUNDING.

a. Total Project Cost Estimate. The current estimate of total costs for the Project (the “Project Costs”) is \$ 36,166,532. The breakdown of estimated Project Costs by Project categories and showing the major subcategories for each is shown on Exhibit A.

b. Estimated Cost-Allocation Between Existing Customers and New Customers. The Participants generally subscribe to the principle that “growth pays its own way” and for this reason agree that it is important to distinguish between Project Costs attributable to capacity increases on the one hand (“New Customer Benefits”), and Project Costs attributable to system enhancements and extension of the useful life of facilities on the other (“Existing Customer Benefits”). It is acknowledged and agreed that the estimated New Customer Benefits and Existing Customer Benefits are as identified on Exhibit A.

c. Estimated Cost-Allocation by Participant and Special Connectors. Each Participant’s and Special Connector’s share of the Project Costs of the Project will be based on the actual per gallon cost of the New Customer Benefits, if any, and the Existing Customer Benefits allocated to such Participant or Special Connector as the case may be, as shown on Exhibit A.

It is expressly acknowledged that Exhibit A as currently attached hereto reflects estimates only, and that both the Project Costs for the Participants and the amount of capacity that will ultimately be obtained by each of the Participants may change *pro rata* as the design, construction bidding, and construction of the Project progresses.

d. Establishment of Expansion Fund. Upon the execution hereof, PCWRA shall establish an interest-bearing escrow account, called the “3.0 Capacity Expansion Fund,” to be funded by deposit of the amount allocated to each entity as listed in Exhibit B, and to be administered by PCWRA but not to be construed as revenues of PCWRA. Each Participant shall make its required contribution to the 3.0 Capacity Expansion Fund no later than sixty (60) days after the execution hereof.

i. 3.0 Capacity Expansion Fund Held in Trust; Payments. The 3.0 Capacity Expansion Fund shall be an interest-bearing special and separate trust account wholly segregated from funds and securities of PCWRA. PCWRA shall never commingle such with funds or assets held by PCWRA, and shall never at any time use, loan, or borrow the same in any way. All accrued interest shall remain in the 3.0 Capacity Expansion Fund and be credited to the Participants and Special Connectors according to the dates and amounts of their payments into the 3.0 Capacity Expansion Fund. Payments and disbursements shall be made from the 3.0 Capacity Expansion Fund in accordance with the contracts entered into by PCWRA to implement the Project, and for such other necessary and appropriate expenditures as required for Project purposes, and for no other purpose.

ii. Accounting; Reports; Access. So long as the 3.0 Capacity Expansion Fund is managed by PCWRA pursuant to this Agreement, PCWRA shall submit a monthly written report to each Participant containing a detailed statement and accounting of fund activity for the immediately preceding month, including a statement regarding the manner in which any funds have been expended. Any member of PCWRA shall have the right at any reasonable time to examine all of PCWRA’s records regarding the status of the 3.0 Capacity Expansion Fund, and the details of fund activity.

iii. Construction Cost Increases. If the final approved GMP as set forth in the Contract Documents, and/or any change orders, acts of God, or other factors result in construction costs which exceed the amounts in the 3.0 Capacity Expansion Fund and therefore result in revised estimate of Project Costs, each of the Participants³ shall make additional deposits to the 3.0 Capacity Expansion

³ PCWRA will assess the Special Connectors additional proportionate amounts as well.

Fund as necessary to cover its proportionate share of the revised estimate of Project Costs, and PCWRA will make interim payments as necessary. PCWRA shall keep a proper and detailed accounting of all such interim payments, if any, and of the Participants' and Special Connectors' respective additional deposits, if any. Any interim payments by PCWRA pursuant to this subparagraph iii. shall be reimbursed immediately to PCWRA from the 3.0 Capacity Expansion Fund after sufficient additional deposits have been made by the Participants and Special Connectors, without interest.

iv. Closeout. Any funds remaining in the Expansion Fund after the Project has been finally accepted by PCWRA shall be returned forthwith to the Participants in proportion to the respective contribution of each, together with a proportionate share of interest, if any, earned on the amounts on deposit in the Expansion Fund based upon the date(s) of each Participant's contributions.

e. Escrow Funds; Advances. It is understood and agreed that the contributions of CP Metro and CP North to the 3.0 Capacity Expansion Fund as shown in Exhibit B include amounts sufficient to proportionately reimburse the Town for the escrow account funding referenced in Recital I and J above, and the contribution of the Town to the 3.0 Capacity Expansion Fund as shown in Exhibit B reflects a corresponding credit, so that, as of the establishment of the 3.0 Capacity Expansion Fund and the deposit of all Participant contributions in accordance with Exhibit B, the proportionate obligations of the Participants are met. No interest shall be charged to any Participant on amounts included for reimbursement for the said escrow account funding, provided that the Participant deposits the full amount of its obligation as set forth in Exhibit B within the time period stated in paragraph 5.d. above. Upon establishment of the 3.0 Capacity Expansion Fund, PCWRA shall transfer any balances remaining in the Design Escrow Account, the Preconstruction Services Escrow Account, and the Work Package One Escrow Account, including accrued interest, if any, to the 3.0 Capacity Expansion Fund.

Prior to or separate from such deposits into the Expansion Fund, it is understood that PCWRA will advance sufficient funds from its reserves to pay for such other incidental and miscellaneous expenses as may be incurred prior to the commencement of construction, up to the estimated amount of such costs set forth in Exhibit A. PCWRA shall keep a proper and detailed accounting of all such payments and advances and of transfers and deposits into the 3.0 Capacity Expansion Fund. Any payments and advances by PCWRA shall be reimbursed immediately to PCWRA from the 3.0 Capacity Expansion Fund upon establishment of the same, without interest. The exact amount of the Participants' respective obligations to the 3.0 Capacity Expansion Fund will not be known until the final completion of the Project, and it is understood that the contribution figures listed in Exhibit B are estimates only.

6. CAPACITY IMPACTS OF NEW REGULATIONS OR UNFORESEEN OCCURRENCES.

Nothing herein is intended as a guarantee of any certain amount of capacity, by PCWRA to any Participant or by any Participant or member to any other Participant or member. It is agreed that PCWRA will use its best efforts to prevent any reduction in capacity, but is also recognized that future governmental action, laws, regulations or treatment requirements, and/or unforeseen events such as natural disasters, may, despite PCWRA's best efforts to prevent it, reduce the amount of useable capacity in the Plant, in which event such reduction shall be proportionate to the ownership of capacity at the time of the reduction. The Participants each acknowledge that in such events additional expenditures may be required in order to secure the use of capacity entitlements identified herein.

7. CLAIMS; PENALTIES. Any losses, claims, expenses or damages of any kind, or any penalties asserted against PCWRA or any Participant arising out of the design, construction, operations, maintenance, repair or replacement of the Plant, shall be considered a PCWRA maintenance cost, and shall be recovered from all customers using the Plant by means of the PCWRA service charge, but no liability or obligation resulting from any denial of capacity reserved hereunder to a Participant not in breach of its obligations under this Agreement shall be treated as an expense of maintenance or operation. Nothing in this Section shall be construed to prevent PCWRA or any Participant from recovering damages against any person, including PCWRA or a Participant, for such person's violation of any applicable standards, rules or regulations of any

governmental authority having jurisdiction.

8. RELATIONSHIP OF THIS AGREEMENT TO ESTABLISHING AGREEMENT. In the event of a conflict or inconsistency between this Agreement and the Establishing Agreement, this Agreement shall control. Without limiting the generality of the preceding sentence, it is expressly acknowledged and agreed that for purposes of the Project, Agreement supersedes the financing arrangements set forth in Section 7.05 of the Establishing Agreement. Notwithstanding the foregoing, unless expressly and specifically modified herein, nothing in this Expansion Agreement shall be deemed or construed to amend, modify, nullify, or work a novation of the Establishing Agreement.

9. AGREEMENT BINDING. This Expansion Agreement binds and benefits the Parties, and their respective elected officials, employees, agents, successors and assigns.

10. APPROPRIATIONS. Notwithstanding any provision of this Expansion Agreement to the contrary, the parties hereto agree that the rights and obligations under this Expansion Agreement are contingent upon all funds necessary for work or expenditures contemplated under this Expansion Agreement being budgeted, appropriated and otherwise made available by the respective parties. The parties acknowledge that this Expansion Agreement is not intended to create a multiple-fiscal year direct or indirect debt or financial obligation of any of the parties hereto, except to the extent that capital improvement funds that are lawfully appropriated can be lawfully carried over to subsequent years. Notwithstanding the foregoing, it is understood and agreed that if the governing body of any Participant fails or refuses to appropriate sufficient funds to meet such Participant's required contribution to the final Project Costs, such Participant's post-Project capacity shall be reduced in proportion to the shortfall in contribution by such Participant, and shall be distributed to the other Participants in proportion to their respective final contributions to the Project Costs.

IN WITNESS WHEREOF, the parties have executed this Expansion Agreement, effective the day and year first above written.

[signatures on following page]

ATTEST:

TOWN OF CASTLE ROCK

Lisa Anderson, Town Clerk

Jason Gray, Mayor

Approved as to form:

Approved as to content:

Robert J. Slentz, Town Attorney

Mark Marlowe, Director of Castle Rock Water

ATTEST:

**PLUM CREEK WATER RECLAMATION
AUTHORITY**

Shauna Nolte, Administrative Assistant

Weston Martin, Authority Manager

Approved as to form:

Darryl L. Farrington, PCWRA Attorney

ATTEST:

**CASTLE PINES NORTH
METROPOLITAN DISTRICT**

Denise Crew, Secretary

David McEntire, President

ATTEST:

**CASTLE PINES METROPOLITAN
DISTRICT**

Craig Sundquist, Secretary

Richard Munday, Chairperson

INDEX OF EXHIBITS

Exhibit A

Expansion Capacity Allocation Chart
(with methodology)

Exhibit B

Project Funding

Exhibit C

Project Scope

Exhibit D

Project Schedule

EXHIBIT A

| 3.0 Capacity Expansion Project - Changes in Capacity Ownership | | | | | | |
|---|--------------------------------|----------------|--------------------------------|----------------|--------------------------------|----------------|
| | Existing Capacity (MGD) | % | Capacity Addition (MGD) | % | Expanded Capacity (MGD) | % |
| TCR | 4.55 | 70.69% | 2.59 | 86.33% | 7.14 | 75.66% |
| CPNMD | 0.89 | 13.89% | 0.41 | 13.67% | 1.30 | 13.82% |
| CPMD | 0.90 | 14.02% | 0.00 | 0.00% | 0.90 | 9.56% |
| SH | 0.05 | 0.70% | 0.00 | 0.00% | 0.05 | 0.48% |
| CC | 0.01 | 0.20% | 0.00 | 0.00% | 0.01 | 0.14% |
| PCWRA | 0.03 | 0.50% | 0.00 | 0.00% | 0.03 | 0.34% |
| Totals | 6.44 | 100.00% | 3.00 | 100.00% | 9.44 | 100.00% |

| Percent Asset Allocation Impact to Existing & New Customers | | |
|--|--------------------------------|--------------|
| | Total RCNLD per process | |
| PCWRA Existing Asset Groups | | |
| Headworks and Grit Removal | 3,215,440.55 | |
| Solids Stabilization System | 3,162,633.52 | |
| Tertiary Filter Replacement | 1,265,922.55 | |
| UV Disinfection Replacement | 1,145,478.11 | |
| Total Impacted RCNLD PCWRA Assets | 8,789,474.73 | 27.3% |
| Existing Customer Cost | | |
| | | |
| | | |
| PCWRA IGMP Asset Groups | IGMP per Group | |
| Headworks and Grit Removal | 9,400,000.00 | |
| Solids Stabilization System | 14,700,000.00 | |
| Tertiary Filter Replacement | 4,800,000.00 | |
| UV Disinfection Replacement | 3,300,000.00 | |
| Total IGMP | 32,200,000.00 | |
| | | |
| New Customer Cost | 23,410,525.27 | 72.7% |

EXHIBIT A

| 3.0 Capacity Expansion Project Estimated Costs as of November 28, 2018 | | | |
|---|----------------------|--------------------------|----------------------|
| | | Existing Customer | New Customer |
| Contract Admin Assistance | 105,480.00 | | 105,480.00 |
| Design Engineering | 1,317,414.00 | | 1,317,414.00 |
| Preconstruction | 70,363.00 | | 70,363.00 |
| Construction Work Package 1 | 11,580,434.00 | 3,161,458.48 | 8,418,975.52 |
| Construction Phs Engineering | 1,078,323.00 | | 1,078,323.00 |
| Construction Work Package 2 IGMP | 21,514,518.00 | 5,873,463.41 | 15,641,054.59 |
| Owner Project Contingency | 500,000.00 | | 500,000.00 |
| Total Cost of Project | 36,166,532.00 | 9,034,921.90 | 27,131,610.10 |
| Existing Customer Credit for Investment | | | |
| Existing Asset Net Book Value | 5,392,984.70 | (5,392,984.70) | 5,392,984.70 |
| | | 3,641,937.20 | 32,524,594.80 |

| 3.0 Capacity Expansion Costs by Member/Special Connector | | | | | |
|---|---------------|---------------------|--------------|-------------------|--------------|
| TCR | | CPN | | CPMD | |
| Existing Customer | New Customer | Existing Customer | New Customer | Existing Customer | New Customer |
| 2,755,505.12 | 28,079,566.84 | 503,315.72 | 4,445,027.96 | 348,332.77 | - |
| 9% | 91% | 10% | 90% | 100% | 0% |
| 30,835,071.96 | | 4,948,343.68 | | 348,332.77 | |
| 85.26% | | 13.68% | | 0.96% | |
| | | | | | |
| SH | | CC | | PCWRA | |
| Existing Customer | New Customer | Existing Customer | New Customer | Existing Customer | New Customer |
| 17,391.79 | - | 4,969.08 | - | 12,422.71 | - |
| 100% | 0% | 100% | 0% | 100% | 0% |
| 17,391.79 | | 4,969.08 | | 12,422.71 | |
| 0.05% | | 0.01% | | 0.03% | |

Exhibit A reflects estimates only

EXHIBIT B

PCWRA WWTP 3.0 MGD EXPANSION PROJECT BUDGET SUMMARY

| PROJECT COSTS & FUNDING | | | PROJECT COST ALLOCATION | | | | | |
|--|--|------------------------|-------------------------|-----------------------|---------------------|------------------|-----------------|--------------------|
| Description | Agreement/Info | Total | Castle Rock | CPNMD | CPMD | SH | CC | PCWRA |
| | | | 85.26% | 13.68% | 0.96% | 0.05% | 0.01% | 0.03% |
| Committed Project Costs | | | | | | | | |
| Contract Admin Assistance | Project One/CR - 07/28/17 | \$ 105,480 | \$ 89,930.75 | \$ 14,431.89 | \$ 1,015.92 | \$ 50.72 | \$ 14.49 | \$ 36.23 |
| Design Engineering | Burns & McDonnell/PCWRA - 09/06/17 | \$ 1,317,414 | \$ 1,123,208.48 | \$ 180,250.00 | \$ 12,688.48 | \$ 633.52 | \$ 181.01 | \$ 452.51 |
| Preconstruction | Moltz Construction/PCWRA - 05/01/18 | \$ 70,363 | \$ 59,990.50 | \$ 9,627.14 | \$ 677.69 | \$ 33.84 | \$ 9.67 | \$ 24.17 |
| Construction Work Package 1 | Moltz Construction/PCWRA - 09/28/18 | \$ 11,580,434 | \$ 9,873,313.70 | \$ 1,584,447.39 | \$ 111,535.29 | \$ 5,568.81 | \$ 1,591.09 | \$ 3,977.72 |
| Construction Phase Engineering | Burns & McDonnell/PCWRA - Pending | \$ 1,078,323 | \$ 919,362.89 | \$ 147,537.31 | \$ 10,385.71 | \$ 518.54 | \$ 148.16 | \$ 370.39 |
| Owner Project Costs | CDPHE permitting, Doug CO permitting, etc. | \$ 33,677 | \$ 28,712.53 | \$ 4,607.72 | \$ 324.36 | \$ 16.19 | \$ 4.63 | \$ 11.57 |
| Committed Project Costs_(A): | | \$ 14,185,691 | \$ 12,094,519 | \$ 1,940,901 | \$ 136,627 | \$ 6,822 | \$ 1,949 | \$ 4,873 |
| Estimated Future Project Costs | | | | | | | | |
| Construction Work Package 2 ^{*1} | Moltz Construction/PCWRA - TBD - anticipated 01/19 | \$ 21,514,518 | \$ 18,342,972.74 | \$ 2,943,639.42 | \$ 207,214.00 | \$ 10,345.92 | \$ 2,955.98 | \$ 7,389.94 |
| Owner Project Contingency | Permits, Utilities, GMP CO's, Ind testing, owner contracts, etc. | \$ 466,323 | \$ 397,580.37 | \$ 63,802.81 | \$ 4,491.32 | \$ 224.25 | \$ 64.07 | \$ 160.18 |
| Estimated Future Project Costs_(B): | | \$ 21,980,841 | \$ 18,740,553 | \$ 3,007,442 | \$ 211,705 | \$ 10,570 | \$ 3,020 | \$ 7,550 |
| Total Estimated Project Costs_(A+B): | | \$ 36,166,532 | \$ 30,835,072 | \$ 4,948,344 | \$ 348,333 | \$ 17,392 | \$ 4,969 | \$ 12,423 |
| Funding Contributions To-Date | | | | | | | | |
| Contract Admin Assistance | Castle Rock encumbrance ^{*2} | \$ (105,480) | \$ (105,480) | \$ - | \$ - | \$ - | \$ - | \$ - |
| Design Engineering | PCWRA/CR - Design Escrow Agrmt - 11/28/17 | \$ (1,317,414) | \$ (1,317,414) | \$ - | \$ - | \$ - | \$ - | \$ - |
| Preconstruction | CPNMD/PCWRA/CR - Precon Escrow Agrmt - 04/24/18 | \$ (70,363) | \$ (70,363) | \$ - | \$ - | \$ - | \$ - | \$ - |
| Construction Work Package 1 | CPMD/CPNMD/PCWRA/CR - WP#1 Cnstrct Escrow Agrmt - 08/31/18 | \$ (13,891,957) | \$ (11,834,637) | \$ (1,903,143) | \$ (154,177) | \$ - | \$ - | \$ - |
| Construction Phase Engineering | PCWRA/CR - Cnstrct Phs Engring Escrow Agrmt - 11/06/18 | \$ (1,078,323) | \$ (1,078,323) | \$ - | \$ - | \$ - | \$ - | \$ - |
| Misc PCWRA Expenditures | CDPHE, Doug CO Permitting, etc. | \$ (33,677) | \$ - | \$ - | \$ - | \$ - | \$ - | \$ (33,677) |
| Funding Contributions To-Date_(C): | | \$ (16,497,214) | \$ (14,406,217) | \$ (1,903,143) | \$ (154,177) | \$ - | \$ - | \$ (33,677) |
| Committed Project Cost Balance To-Date_(A+D): | | \$ (2,311,523) | \$ (2,311,699) | \$ 37,758 | \$ (17,549) | \$ 6,822 | \$ 1,949 | \$ (28,804) |
| Total Estimated Project Cost Balance_(A+B+D): | | \$ 19,669,318 | \$ 16,428,855 | \$ 3,045,200 | \$ 194,156 | \$ 17,392 | \$ 4,969 | \$ (21,254) |

Notes

^{*1} Moltz Work Package 2 Estimated Cost is based on WP2 IGMP 60% design cost estimate by Moltz - Final guaranteed maximum price contract amount is anticipated Dec 2018

^{*2} Project One contract is with Castle Rock

Memorandum



Date: June 19, 2018
To: Wes Martin
From: Andrew Waddoups
Subject: Plum Creek WWTF Capacity vs. Permit Scope Drivers

This memorandum discusses the scope of work related to the Plum Creek Wastewater Treatment Facility 3.0 MGD Expansion project. The primary goal of the project is to increase the treatment capacity of the plant. In order to do this, the project team is modifying entire treatment processes rather than adding capacity to the existing treatment systems. The reasoning for this approach is to improve overall plant efficiency and replace obsolete or non-functioning treatment processes within the existing facility. We view the process upgrades as benefiting all members of the Authority since the upgrades are required for the facility to remain within permit compliance. As such, we believe that each Authority member should contribute to the cost of the improvements relative to their share of the treatment capacity.

To understand the reasoning for selecting specific process improvements, it is important to understand how the treatment goals of individual process work together. As a biological nutrient removal (BNR) facility with strict effluent limits, the treatment processes must be considered as a whole because failure of any single process will impact the ability of the facility to meet the effluent requirements (permit limits).

As part of permitting for the increased capacity, the State will review the design criteria for each individual process. The permitted capacity of the facility is limited by the individual unit processes. For instance, the permitted capacity of the facility can not be higher than the capability of the influent pumping system. The unit process upgrades proposed as part of this project are required in order to obtain an increased process capacity for the treatment facility.

The following is a brief description of the processes being altered and an explanation of how the process fits into the treatment facility and process goals.

Headworks and Grit Removal - The headworks provides screening and grit removal to remove non-biodegradable materials from the treatment process. The headworks must be able to treat the peak influent flow since there is no equalization ahead of the process. The existing influent pumps are unable to meet the capacity demand of the future flows. In addition, the existing influent channels are not optimized to split flow between multiple process trains.

The grit removal system removes fine, inorganic materials from the wastewater stream. Grit in the wastewater is carried by the collection system, which is specifically designed to convey grit rather than let it settle in the collection system. Once grit reaches the treatment facility, it is removed at the headworks so that it does not become trapped in the deep process tanks of the

June 19, 2018

Page 2

facility. Grit also impacts the life expectancy of pumps, aeration systems and dewatering equipment downstream of the headworks.

Both the screening and grit removal systems are critical to the facility and this process expansion. This project will increase the capacity of the grit removal system, but it is also replacing the system that is currently failing. The existing system failure is easily seen by the accumulation of grit in the secondary process tanks. As this facility is further expanded, there will reach a point where the operators will have limited ability to take down an entire process train for cleaning. It is critical that the grit system works well and all three process trains can remain in operation for long periods of time.

The headworks improvements benefit all members of the Authority. This project will replace obsolete and non-functioning processes. Building a new treatment process also allows construction while the existing headworks remains active since it is not possible to shut down the existing headworks while the plant remains operational. The proposed headworks improvements will reuse the existing screens, which are functional. The rest of the existing process will be abandoned since it is a fully depreciated treatment process.

Solids Stabilization System – The secondary treatment process supports biological growth to provide the desired treatment. The biology is maintained at a specific age to optimize growth rates and treatment capabilities. The solids stabilization system digests the biology that is wasted from the secondary process to maintain the desired biology age.

The wasted biology is full of biomass, nutrients, and energy. The solids stabilization system is used to break down the biomass and make it less reactive. The existing system is undersized for the current loadings, and substantially undersized for the expanded flows. Since the existing system is undersized, the treatment process does not have adequate time to break down the biology. This means that the dewatering centrifuges must run longer and use more energy to dewater the solids than if the system was sized for digestion. The existing system is also at the end of its useful life.

The new treatment process proposed as part of the expansion will reduce the total volume of solids through digestion as well as minimize nutrient return to the secondary process. By reducing the volume of solids, the new process will extend the life of the existing centrifuges and reduce the operating cost of the dewatering system. By reducing nutrient return streams to the secondary treatment process, the new process will free up treatment capacity in the existing process trains, reduce blower loadings to the existing trains, and likewise extend the life of the existing equipment.

June 19, 2018

Page 3

The selected solids handling system was reviewed in the capacity analysis study. The process was selected as being the most beneficial for the Authority based on the treatment abilities, capital cost, and long-term operating costs. This process is replacing an obsolete and non-compliant process that is completely depreciated.

Tertiary Filter Replacement – The State requires tertiary filtration in order to reuse wastewater. While the existing filters are adequate to meet the reuse requirements for irrigation, they are not adequate to meet the phosphorous limits when sending reuse water to Reuter Hess. In order to meet the 0.05 ppm phosphorous limit, a different filter technology is required.

It is also understood that in addition to tight phosphorous limits, regulators are considering very low total nitrogen limits. The Plum Creek Facility is able to meet current total nitrogen limits, however a tertiary denitrification process would allow for more consistent results with less chance of excursions for future ultra-low limits. The selected sand filter is able to provide adequate removal for low phosphorous limits and act as a denitrification filter for future low nitrate limits. The existing cloth media filters are not capable of providing adequate phosphorous or nitrate reduction.

The existing tertiary filters have a total capacity of approximately 9.3 MGD. The proposed sand filters have a capacity of approximately 12.0 MGD. The higher capacity will allow more water to be treated to reuse standards and Reuter Hess Standards. With minor modifications, the process also allows the Authority to meet future nitrate limits and consistently meet the limits within the Nutrient Incentives Program. This program allows the Authority to delay Regulation 31 compliance for up to an additional 10 years. This portion of the work replaces a completely depreciated asset and allows the facility to meet permit compliance limits. For this reason, we believe it benefits all Authority members.

UV Disinfection Replacement – The existing UV disinfection system currently meets permit limits but is limited by capacity. The system could be modified/rebuilt to meet the capacity of this expansion; however it is close to the typical maximum capacity of this type of UV system. The existing system can not be modified to meet future flows beyond this expansion. The selected alternative is to use a newer technology and system configuration to reduce operating cost and allow future expansion of the UV disinfection system.

The new UV system will meet the peak hour capacity requirements of this expansion and provide permit compliance for all members of the Authority.

Project Schedule



| Activity ID | Activity Name | Original Duration | Start | Finish | Total Float | 2019 | | | | | | | | | | | | 2020 | | | | | | | | | | | |
|--|--|-------------------|-------------|-------------|-------------|--|-----|-----|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|-----|--|
| | | | | | | Qtr 4 | | | Qtr 1 | | | Qtr 2 | | | Qtr 3 | | | Qtr 4 | | | Qtr 1 | | | Qtr 2 | | | Qtr 3 | | |
| | | | | | | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | |
| PCWRA - Capacity Expansion Construction | | | | | | 30-Jul | | | | | | | | | | | | | | | | | | | | | | | |
| Preconstruction | | | | | | 23-Jan-20, Preconstruction | | | | | | | | | | | | | | | | | | | | | | | |
| A1000 | 90% Construction Documents Review | 10 | 13-Aug-18 A | 24-Aug-18 A | | Construction Documents Review | | | | | | | | | | | | | | | | | | | | | | | |
| A1370 | NTP - Pre-Construction Activites | 190 | 31-May-18 A | 28-Sep-18 A | | NTP - Pre-Construction Activites | | | | | | | | | | | | | | | | | | | | | | | |
| A1440 | 60% Estimating and Reconciliation | 44 | 15-May-18 A | 24-Aug-18 A | | Estimating and Reconciliation | | | | | | | | | | | | | | | | | | | | | | | |
| A1450 | Work Package 1 Development, Bidding, Equipment F | 33 | 18-Jul-18 A | 24-Aug-18 A | | Package 1 Development, Bidding, Equipment Pricing | | | | | | | | | | | | | | | | | | | | | | | |
| A1460 | Work Package 1 Pricing to PCWRA, TOCR | 2 | 24-Aug-18 A | 27-Aug-18 A | | Package 1 Pricing to PCWRA, TOCR | | | | | | | | | | | | | | | | | | | | | | | |
| A1480 | Work Package 2 Development, Sub and Supplier Bid | 60 | 17-Sep-18 A | 31-Dec-18 | 33 | Work Package 2 Development, Sub and Supplier Bidding | | | | | | | | | | | | | | | | | | | | | | | |
| A1490 | Complete 100% IFC Documents | 5 | 25-Sep-18* | 01-Oct-18 | -7 | Complete 100% IFC Documents | | | | | | | | | | | | | | | | | | | | | | | |
| A1500 | Process Equipment Vendors Release Submittals | 35 | 02-Oct-18 | 19-Nov-18 | -7 | Process Equipment Vendors Release Submittals | | | | | | | | | | | | | | | | | | | | | | | |
| A1020 | Procurement ATAD - Grit System, Pumps, | 150 | 20-Nov-18 | 24-Jun-19 | 138 | Procurement ATAD - Grit System, Pumps, | | | | | | | | | | | | | | | | | | | | | | | |
| A1030 | Procurement Tertiary Filter - UV and Non-Pot Pump | 110 | 20-Nov-18 | 26-Apr-19 | 25 | Procurement Tertiary Filter - UV and Non-Pot Pump | | | | | | | | | | | | | | | | | | | | | | | |
| A1560 | Procure WAS Aeration Equipment (In Tank Compone | 40 | 20-Nov-18 | 18-Jan-19 | -7 | Procure WAS Aeration Equipment (In Tank Components | | | | | | | | | | | | | | | | | | | | | | | |
| A1570 | Procure WAS Compressors, Blowers and CP | 120 | 20-Nov-18 | 10-May-19 | 321 | Procure WAS Compressors, Blowers and CP | | | | | | | | | | | | | | | | | | | | | | | |
| A1410 | NOAA Weather Impacts 2018 | 6 | 21-Dec-18* | 31-Dec-18 | 0 | NOAA Weather Impacts 2018 | | | | | | | | | | | | | | | | | | | | | | | |
| A1420 | NOAA Weather Impacts 2019 | 24 | 02-Jan-19* | 04-Feb-19 | 0 | NOAA Weather Impacts 2019 | | | | | | | | | | | | | | | | | | | | | | | |
| A1430 | NOAA Weather Impacts 2020 | 16 | 02-Jan-20* | 23-Jan-20 | 0 | NOAA Weather Impacts 2020 | | | | | | | | | | | | | | | | | | | | | | | |
| Work Package 1 | | | | | | 25-Apr-19, Work Package 1 | | | | | | | | | | | | | | | | | | | | | | | |
| A1010 | Work Package 1 Award | 0 | 28-Aug-18 A | | | Package 1 Award, 28-Aug-18 A | | | | | | | | | | | | | | | | | | | | | | | |
| A1470 | Notice to Proceed Work Package 1, Contract Amendr | 0 | 24-Sep-18* | | -10 | Notice to Proceed Work Package 1, Contract Amendment, 24-Sep-18* | | | | | | | | | | | | | | | | | | | | | | | |
| A1650 | L&E and GESC Approval | 20 | 10-Sep-18 A | 10-Oct-18 | -6 | L&E and GESC Approval | | | | | | | | | | | | | | | | | | | | | | | |
| A1660 | Furnish and Install OX Ditch 1-2 Air Piping Bid Item 8 | 60 | 24-Sep-18 | 18-Dec-18 | 34 | Furnish and Install OX Ditch 1-2 Air Piping Bid Item 8 | | | | | | | | | | | | | | | | | | | | | | | |
| A1510 | Install GESC and SSA (Inspection Req'd) Bid Item 4 | 7 | 11-Oct-18 | 19-Oct-18 | 25 | Install GESC and SSA (Inspection Req'd) Bid Item 4 | | | | | | | | | | | | | | | | | | | | | | | |
| A1040 | Site Demolition and STR Excavation- Bid Item 2 | 35 | 22-Oct-18 | 11-Dec-18 | -6 | Site Demolition and STR Excavation- Bid Item 2 | | | | | | | | | | | | | | | | | | | | | | | |
| A1540 | Existing Facilities Potholing - CM and As-Building | 10 | 22-Oct-18 | 02-Nov-18 | 4 | Existing Facilities Potholing - CM and As-Building | | | | | | | | | | | | | | | | | | | | | | | |
| A1600 | Site Mobilization | 3 | 22-Oct-18 | 24-Oct-18 | 11 | Site Mobilization | | | | | | | | | | | | | | | | | | | | | | | |
| A1090 | Transformer Relocation - Pending Coordination and C | 120 | 05-Nov-18 | 25-Apr-19 | 259 | Transformer Relocation - Pending Coordination and Design | | | | | | | | | | | | | | | | | | | | | | | |
| A1520 | Site Piping and Process Reroutes - Bid Item 1 | 20 | 05-Nov-18 | 04-Dec-18 | 4 | Site Piping and Process Reroutes - Bid Item 1 | | | | | | | | | | | | | | | | | | | | | | | |
| A1530 | Site Electrical Reroute - Bid Item 3 | 10 | 12-Dec-18 | 26-Dec-18 | -6 | Site Electrical Reroute - Bid Item 3 | | | | | | | | | | | | | | | | | | | | | | | |
| A1050 | Process Building, Site Excavation - Bid Item 5 | 25 | 19-Dec-18 | 24-Jan-19 | -6 | Process Building, Site Excavation - Bid Item 5 | | | | | | | | | | | | | | | | | | | | | | | |
| A1060 | Process Building, Excavation Shoring Install - Bid item | 30 | 04-Jan-19 | 14-Feb-19 | -6 | Process Building, Excavation Shoring Install - Bid item 6 | | | | | | | | | | | | | | | | | | | | | | | |
| A1550 | WAS Tank Demo and New Piping - Bid Item 7 | 20 | 21-Jan-19 | 15-Feb-19 | -7 | WAS Tank Demo and New Piping - Bid Item 7 | | | | | | | | | | | | | | | | | | | | | | | |
| Work Package 2 Bid Items | | | | | | 17-Jun-20, Work P | | | | | | | | | | | | | | | | | | | | | | | |
| A1580 | Work Package 2 Award | 0 | 02-Jan-19 | | 33 | Work Package 2 Award, 02-Jan-19 | | | | | | | | | | | | | | | | | | | | | | | |
| A1590 | Notice to Proceed Work Package 2, Contract Amendr | 5 | 02-Jan-19 | 08-Jan-19 | 33 | Notice to Proceed Work Package 2, Contract Amendment | | | | | | | | | | | | | | | | | | | | | | | |
| A1640 | Alternate - SCADA Upgrade | 180 | 09-Jan-19 | 20-Sep-19 | 239 | Alternate - SCADA Upgrade | | | | | | | | | | | | | | | | | | | | | | | |
| A1120 | Project Electrical -Transformer / SWBD - GD1 & Ductb | 220 | 20-Jun-19 | 30-Apr-20 | -7 | Project Electrical -Transformer / | | | | | | | | | | | | | | | | | | | | | | | |
| A1240 | Project Masonry | 100 | 02-Jul-19 | 20-Nov-19 | 25 | Project Masonry | | | | | | | | | | | | | | | | | | | | | | | |
| A1290 | Project Doors, Frames and Hardware | 40 | 21-Aug-19 | 16-Oct-19 | 92 | Project Doors, Frames and Hardware | | | | | | | | | | | | | | | | | | | | | | | |
| A1670 | Project Final Grading, Asphalt and Site Concrete | 10 | 14-Nov-19 | 27-Nov-19 | 191 | Project Final Grading, Asphalt and Site Concrete | | | | | | | | | | | | | | | | | | | | | | | |
| A1300 | Precast Installation | 5 | 21-Nov-19 | 27-Nov-19 | 25 | Precast Installation | | | | | | | | | | | | | | | | | | | | | | | |
| A1260 | Project Roofing Contractor | 22 | 02-Dec-19 | 02-Jan-20 | 25 | Project Roofing Contractor | | | | | | | | | | | | | | | | | | | | | | | |
| A1150 | Project Fire Sprinkler | 20 | 04-Dec-19 | 02-Jan-20 | 86 | Project Fire Sprinkler | | | | | | | | | | | | | | | | | | | | | | | |
| A1140 | Project Overhead Door Installer | 10 | 03-Jan-20 | 16-Jan-20 | 25 | Project Overhead Door Installer | | | | | | | | | | | | | | | | | | | | | | | |
| A1280 | Coatings and Finishes | 40 | 03-Jan-20 | 27-Feb-20 | 129 | Coatings and Finishes | | | | | | | | | | | | | | | | | | | | | | | |
| A1110 | Project HVAC Mechanical Contractor | 60 | 17-Jan-20 | 09-Apr-20 | 54 | Project HVAC Mechanical Contractor | | | | | | | | | | | | | | | | | | | | | | | |
| A1160 | Project Plumbing Contractor | 60 | 17-Jan-20 | 09-Apr-20 | 25 | Project Plumbing Contractor | | | | | | | | | | | | | | | | | | | | | | | |
| Tertiary Filter/UV Building Modifications Bid Item XX | | | | | | 14-May-20, Tertiary Filter/UV | | | | | | | | | | | | | | | | | | | | | | | |
| A1220 | Concrete and Masonry Demo at Tertiary Filters | 40 | 09-Jan-19 | 05-Mar-19 | 33 | Concrete and Masonry Demo at Tertiary Filters | | | | | | | | | | | | | | | | | | | | | | | |
| A1610 | Isolate Existing Tank | 4 | 09-Jan-19 | 14-Jan-19 | 69 | Isolate Existing Tank | | | | | | | | | | | | | | | | | | | | | | | |
| A1400 | Filter Basin Structural Modifications - Walls, Beams, Iv | 30 | 06-Mar-19 | 16-Apr-19 | 33 | Filter Basin Structural Modifications - Walls, Beams, Misc Slabs | | | | | | | | | | | | | | | | | | | | | | | |
| A1850 | Place Masonry Walls | 25 | 17-Apr-19 | 21-May-19 | 324 | Place Masonry Walls | | | | | | | | | | | | | | | | | | | | | | | |

█ Actual Level of Effort
 █ Critical Remaining Work
 ▶ summary
█ Remaining Work
 ◆ Milestone

