



January 4, 2024

Diana Miller, District Manager  
Perry Park Water and Sanitation District  
5676 West Red Rock Drive  
Larkspur, CO 80118

Subject: Process Design Report Approval  
Regulation 22 Site Location Approval No. 3251 (ES.22.SA.07218)  
Perry Park Water and Sanitation District, Waucondah WWTF Aerobic Digestion Facilities  
Colorado Discharge Permit System (CDPS) No. CO0022551  
Douglas County  
ES Project No. ES.22.CWPDR.07219

Dear Diana Miller:

The Water Quality Control Division (Division), Engineering Section has received and reviewed the Process Design Report (PDR) including preliminary plans, and PDR Checklist for the Perry Park Water and Sanitation District's Waucondah WWTF Aerobic Digestion Facilities project.

This PDR approval does not constitute approval for construction. Perry Park Water and Sanitation District must submit a self-certification form when the final design documents are complete. Please refer to items 1 and 2 of the *Conditions of Approval* section of this letter for specific requirements associated with the acceptance of the self-certification form.

The PDR submittal, as reviewed, meets the requirements of the *State of Colorado Design Criteria for Domestic Wastewater Treatment Works, WPC-DR-1* (Design Criteria) and is hereby approved as listed below. **The approved maximum month hydraulic and organic design capacities are 0.32 MGD and 855 lbs of BOD per day, respectively.**

**This PDR approval addresses the following:**

1. All calculations and associated information included in the PDR.
2. Waste Activated Sludge:
  - a. Replacement of the existing airlift pumping system with two centrifugal pumps (1 duty, 1 standby) to transfer sludge from the secondary clarifier to the aerobic digesters. Pumps located in pump vault near secondary clarifier. Each pump is rated for a minimum of 115 gpm.
3. Solids Stabilization:
  - a. Decommissioning of existing aerobic process tanks, aeration equipment, and solids holding tank.
  - b. Conventional Aerobic Digestion:
    - i. Two partially below grade concrete aerobic digesters. Each digester has an operating capacity of 121,800 gallons. The solids may be concentrated using a decant mechanism, and the supernatant is conveyed to a manhole upstream of the Rotating Biological Contactors. Digesters are designed to meet the requirements of Class B solids. At maximum month loading and a solids concentration of 1 percent, the digesters are designed to provide a minimum 80 day SRT at 10 degrees C. Digested solids are transferred from each digester to the sludge holding basin by a solids transfer pump located in each digester. Each pump is rated for a minimum of 150 gpm.
    - ii. Aeration system: Aeration sized based on an AOR of 682 lbs/day and required air flow rate of approximately 900 scfm. The air is transferred to the digested sludge using course bubble diffusers and three positive displacement blowers (2 duty, 1 standby shared with the sludge holding tank) with each blower having a capacity of 450 scfm. Blowers are housed in new blower building and provide aeration for treatment and mixing. Each blower equipped with a motor driven by a VFD.
  - c. Sludge Holding:
    - i. One partially below grade concrete aerated sludge holding basin. Basin has an operating capacity of approximately 118,000 gallons. Air is transferred to the sludge



using coarse bubble diffusers and two positive displacement blowers (1 duty, 1 standby shared with the digesters) with each blower having a capacity of 450 scfm. Basin equipped with decant mechanism to withdraw supernatant, which is connected with digester decant to be returned to the secondary treatment process. Sludge holding transfer pump conveys the digested sludge to solids load out point. Pump is rated for a minimum of 150 gpm.

Conditions of Approval:

1. In accordance with Regulation 22, Section 22.13 (1, par. 3), upon completion of final design (plans and specifications) documents, including all addenda, and prior to commencement of construction, each Colorado registered professional engineer(s) in responsible charge of the final design documents (plans & specifications) shall complete and submit a Self-Certification Form to the Division.
2. In accordance with Regulation 22, Section 22.13 (1, par. 4), if the Division discovers discrepancies between the facilities as described in the PDR and those finally constructed, the applicant will either agree to make modifications to resolve the inconsistency to the Division's satisfaction or the approval of the design will be null and void.
3. Upon completion of construction and prior to commencement of operation, a written certification must be submitted to the Division stating that the project facilities were built in accordance with the approved plans, specifications, and change orders. The certification must be signed by the applicant's registered engineer. This form is available at <https://www.colorado.gov/cdphe/wq-facility-design-and-approval-forms> under the "Domestic wastewater construction complete form" heading.
4. Any change orders or addenda that change the treatment plant's capacity, water quality, or processes, must be submitted to this office for review and approval.
5. When construction is estimated to be within 14 days of completion, please notify the Division. A representative of the Division may schedule a site visit to conduct a final construction inspection before the facility commences operations.
6. Please note that during construction and operation activities, the provisions specified in the Design Criteria, Sections 2.2.0, 2.3.17 and 2.3.18, must be implemented and followed. This review does not relieve the applicant/owner from compliance with all Federal, State, and local regulations and requirements prior to construction nor from responsibility for proper engineering, construction, and operation of the treatment plant.
7. No point source discharges of water and/or contaminants from this treatment plant to the waters of the state are authorized during construction unless a permit for such discharges has been issued by the Division. If you have any questions regarding permit issues or requirements, please contact the Permits Section at 303-692-3510.
8. In accordance with the Design Criteria, Section 2.4.0, all treatment plants shall develop suitable operations and maintenance manuals.
9. In accordance with Chapter 11 of the Design Criteria, all treatment plants shall develop management and operating plans for ultimate use or disposal of biosolids. Biosolids management plans shall conform to Federal Requirements in 40 CFR 503. All disposal options shall also conform with Federal Requirements 40 CFR 257 and 40 CFR 503, Colorado Biosolids Regulation 64, and the requirements of the Colorado Regulations Pertaining to Solid Waste Disposal Sites and Facilities, as applicable.
10. All biosolids and/or similar waste material removed from the project site during the abandonment, demolition, replacement, and/or expansion of any treatment process must be properly disposed at an approved site.

Facility Classification under Regulation 100:

In accordance with the current Operators Certification Board Regulations, this wastewater treatment plant is a Class B Domestic Wastewater Treatment Facility and the collection system is a Class 1 wastewater collection system.

Documents reviewed:

- Site Application Amendment for Perry Park Water and Sanitation District by GMS, Inc. dated November 2022.
- Process Design Report for Perry Park Water and Sanitation District by GMS, Inc. dated February 2023.
- PDR checklist for Perry Park Water and Sanitation District by GMS, Inc.
- Preliminary Plans for Perry Park Water and Sanitation District by GMS, Inc. dated December 2023.
- Miscellaneous correspondence.

The Engineering Section is interested in gaining feedback about your experience during the engineering review process. We would appreciate your time to complete a Quality-of-Service Survey regarding your experience during the engineering review process leading up to issuance of this decision letter. The Engineering Section will use your responses and comments to identify strengths, target areas for improvement, and evaluate process improvements to better serve your needs. Please take a moment to fill out our survey [here](#).

If you should have any questions, please contact Kristen Harris by phone at 303-692-3538 or by email at [Kristen.harris@state.co.us](mailto:Kristen.harris@state.co.us).

Sincerely,

Kristen Harris, P.E.  
Senior Review Engineer  
Engineering Section  
Water Quality Control Division  
Colorado Department of Public Health and Environment

cc: Scott Monroe, Perry Park Water and Sanitation District  
Joshua Armstrong, GMS, Inc.  
Mark Morton, GMS, Inc.  
Caitlin Gappa, Douglas County Health Department  
Michael Emming, WQCD Engineering Review Unit Manager