



## Drinking Water Permitting and Engineering

### Checklist #4 Engineering Plans and Specifications Review & Approval

Public Water System Name: \_\_\_\_\_

This checklist is a brief outline of the surface water treatment plan and specification regarding the proposed surface water treatment plant optimization (increase in capacity, treatability, rapid mix, materials, filtration rate, alternative technologies, chlorination, and storage tank construction). Sealed plans, capacity report, and specifications meeting, but not limited to, the minimum requirements cited here shall be prepared under the supervision of a Georgia licensed professional engineer and submitted to Georgia Environmental Protection Division (EPD) for approval.

This checklist is not a substitute for Georgia Rules for Safe Drinking Water, Chapter 391-3-5 and cannot be accepted in lieu of the required engineering documents. *Failure to submit the following items may delay project approval.*

If you have any questions or inquiries regarding preparation, submissions and approval requirements for the Engineering Plans and Specifications - Checklist #4, please contact the Division's Drinking Water Permitting and Engineering Unit at (404) 463-1511. Additional helpful information and rules are obtainable at the website <https://epd.georgia.gov/watershed-protection-branch-technical-guidance>.

**Submission of engineering plans and specifications for construction of a public water system in conformity to [Section 391-3-5-.05](#) of the Georgia Rules for Safe Drinking Water and [Section 1.6](#) of the Georgia Minimum Standards for Public Water System new, modified or expanded operations including but not limited to:**

- Pumping operations facilities (raw and finished water)
- Source of raw water reservoir facility
- Chemical application facility
- Treatment facility
- Filtration operation facility
- Finished water storage facilities & contact time studies (CTS)

- Laboratory facility
- Finished water distribution systems
- Enhance Surface Water Treatment (Aeration, Softening, Taste & Odor, Corrosion Control, Iron & Manganese, etc.)
- Distribution system pressure optimization improvements
- Waste handling and disposal facility (Filter-to -Waste Facility)

**STEPS 3 through 5: Submission of Engineering Plans and Specifications and Permit Application**

**STEP 3: Submit engineering plans and specifications**

- (1) Submit Public Water System Project Submittal Form and Attach to Submittal Package;
- (2) Submit two set of engineering plans and specifications for review and approval prior to the construction of the project to include:
  - a. The plans and specifications must carry the stamp of a registered engineer or other registered professional licensed and authorized in the State of Georgia and duly qualified and capable of designing water systems and computing flows and pressures in the proposed water system projects;
  - b. The plans and specifications shall include a map of the area to be served by the public water system, including, but not limited to: geographical location of the project, location of all existing and proposed streets in the service area, location of the source of water supply and the treatment facilities, and elevations of the principal parts of the public water system;
  - c. Detailed plans of the location and the construction of the proposed site (source of water, reservoir, chemical storage, rapid mix, basins, filter beds, storage tank, water mains, valves, fire hydrants and appurtenances);
  - d. Detailed plans of the location and construction of the water treatment facilities including layout and relationship of the various units of the treatment facility, general piping, pumps, reservoirs, flow measuring devices, controls, points of chemical application, water sampling points, plant control laboratory, chemical feed equipment and chemical storage area. Sufficient dimensions and elevations shall be provided to make all parts of the plans readily understandable;
  - e. The dimensions of the plan sheets must be within the following limits: twenty (20) to thirty (30) inches in height and twenty-four (24) to forty-two (42) inches in length, and shall be of sufficient clarity to be microfilmed;
  - f. Each plan sheet shall have printed thereon the name and location of the public water system, name and registration stamp of the professional engineer, scale, true and magnetic north, and shall be bound together and numbered consecutively;
  - g. If the plans are solely for extensions to an existing public water system, only such

information as is necessary for comprehension of the plans and construction of the project will be required;

h. Specifications will be separate from the plans and shall have printed thereon the name and location of the public water system, name and stamp of the professional engineer, and shall be bound together and numbered consecutively;

i. Specifications for the construction of the public water system shall accompany all plans for new or existing public water systems and shall describe the plans for the whole and for each unit or component of construction of the proposed public water system, including where necessary, testing and disinfection, painting, laboratory equipment, metering and recording devices and related material;

j. The specifications may be omitted for extensions or additions to existing systems provided the proposed construction is in accordance with specifications previously approved and on file with the Division; and

k. Manufacturers' brochures of specifications of materials are not acceptable for purposes of this requirement.

Upon receipt of the engineering plans and specifications for the construction of water treatment plant, EPD will send a letter of acknowledgement within 5 days of receipt to the public water system's engineer.

EPD will analyze and review the engineering plans and specification in conformity to the applicable sections of the Georgia Minimum Standards for Public Water System within 90 days. If needed, EPD will request additional information or clarification of the engineering plans and specifications and any non-conformance to the requirements of the Georgia Minimum Standards for Public Water System.

Upon complete review and acceptance of the engineering plans and specifications, EPD will send an approval letter to the public water system's engineer.

#### **STEP 4: Public Water System Begins Plant Construction**

- (3) If there are significant deviations from the proposed plans and specifications, submit a notice of significant deviation to EPD before construction or installation of these changes, in conformance to [Section 391-3-5-.05\(5\)](#) of the Georgia Rules for Safe Drinking Water and [Section 1.8 - Changes in Plans and Specification After Approvals](#), of the Georgia Minimum Standards for Public Water Systems.

Upon receipt from the applicant of any notice of significant deviation from the approved plans and specifications, EPD will coordinate a site visit in consultation with public water system engineer or applicant to verify revised plans and specifications before any construction or installation in conformity to [Section 1.8 - Changes in Plans and Specification After Approvals](#), of the Georgia Minimum Standards for Public Water Systems.

- (4) After construction is completed, submit engineer's certification from a registered professional engineer and affixed with their professional engineering seal stating that construction was completed in accordance with: the approved construction plans and specifications, [Section 391-3-5-.05\(6\)](#) of the Georgia Rules for Safe Drinking Water and

[Section 1.8 - Changes in Plan and Specifications and Section 1.9 - Engineer's Certification](#), of the Georgia Minimum Standards for Public Water Systems.

- (5) Submit proof that the new water system has retained the services of certified operators consistent with the public water system classification as specified in [Section 391-3-5-.39](#) of the Georgia Rules for Safe Drinking Water.

Upon receipt of construction certification by a licensed professional engineer and proof of certified operator, EPD and the water system will schedule a date convenient to all parties for site visit to conduct in-plant demonstration or “start-up” study. The study must be conducted over a sufficient time to treat all expected raw water conditions over a period of 30 days. The study must demonstrate the new water plant is capable of complying with all applicable drinking water standards at all times, including [Sections 391-3-5-.09\(1\)\(p\); 391-3-5-.18; 391-3-5-.19; and 391-3-5-.20](#) of the Georgia Rules for Safe Drinking Water.

Upon completion of the in-plant demonstration trial run, submit the finished water quality test results. EPD will evaluate the results, and may request additional information if necessary, and upon satisfactory submission of all required test results, EPD will begin the approval process of permit application to operate a public water system.

#### **STEP 5: Submission of Permit Application to Operate a Public Water System**

- (6) Submit application for a permit to operate a public water system in conformity to [Section 391-3-5-.17](#) of the Georgia Rules for Safe Drinking Water, for a new water system in accordance with and a notice of readiness for plant start-up run or trial run for a new water systems, high-rate filtration, package plant installation, membrane system construction and alternative technology construction, EPD and the water system consulting engineers will schedule dates for start-up plant operation of thirty-day trial run and collection of finished water quality sampling test results in conformance to [Sections 391-3-5-.09\(1\)\(p\)1-.3., 391-3-5-.12, 391-3-5-.18, and 391-3-5-.19](#) of the Georgia Rules for Safe Drinking Water.

Upon receiving the permit application to operate a public water system, EPD will review to determine completeness and conformity to Rule [Section 391-3-5-.17](#). EPD may request additional information if necessary to process the permit application in addition to any in-plant demonstration tests or trial run results conducted over a sufficient or minimum time (30 days).

Upon receiving a satisfactory plant demonstration study results conducted over a sufficient time, and any additional information requested, EPD will submit to the Director a processed permit application for his/her approval.

Please call (404) 463-1511 if you have any questions regarding this checklist. Additional helpful information and rules are obtainable at the website <https://epd.georgia.gov/watershed-protection-branch-technical-guidance>.