

## Water Quality Division (WQD) Construction Variance Guidance

### Pilot Studies and Variance Requests Water and Wastewater Projects

#### *PURPOSE*

The construction permitting process is a collaborative effort between the applicant and DEQ so the applicant can obtain a permit for a successful design that meets DEQ's construction standards. Early and frequent communication will be the most effective means to ensure the process proceeds smoothly.

The purpose of this guidance document is to:

- a.** identify the members of, and the meeting schedule for, the WQD Variance Committee,
- b.** clarify when Pilot Studies and/or variances may be required, and
- c.** provide a uniform process for review of water and wastewater projects that require Pilot Studies and/or variances as part of the permitting process.

Nothing within this guidance document may supersede an existing rule or statute. In the event of a conflict between this guidance document and any DEQ rule or statute, the provisions of the rule or statute shall prevail.

The flow chart in Appendix A is a graphical representation of the typical construction permitting process. The steps that follow provide additional guidance for specific points in the permitting process.

#### *TERMINOLOGY*

##### **WQD Variance Committee**

The WQD Variance Committee is a team of WQD managers and staff who:

- evaluate alternative treatment technologies when a proposed activity is not specified in, or deviates from, the construction standards; or
- resolve issues between the applicant and the DEQ Construction Permitting Section as outlined further in this Guidance.

- a.** Members – Assistant Division Director  
Chief Engineer  
Planning Group Manager  
Wastewater Group Manager  
Public Water Supply Group Manager  
Construction Permit Manager

- b.** Meeting Schedule – Every two weeks, typically.

## **Pilot Study**

A Pilot Study is a preliminary study, either provided by an applicant or requested by DEQ, to demonstrate the feasibility of a proposed process or technology for a water or wastewater treatment facility. The results of the Pilot Study shall be submitted to DEQ with either an Engineering Report or a technical memorandum for final approval.

- a.** Pilot Studies may be required if the proposed technology:
  - 1.** is unproven or has limited application;
  - 2.** involves unusual site-specific conditions, e.g. notable differences in water quality, pH, temperature, etc.;
  - 3.** has not been accepted or approved by reputable research groups or other relevant organizations; or
  - 4.** could reasonably be determined to create an adverse impact to public health and environment if the technology is inappropriate for the particular treatment application.
- b.** Pilot Studies may not be required if:
  - 1.** the technology is established and well-defined considering the following: similar raw water quality, flow rate/volume, and plant size; validation of the technology by industry or trade organizations with specified operational, design, and/or performance standards considerations;
  - 2.** testing has been performed by the manufacturer based on similar raw water quality and design flow rate; or
  - 3.** deviations from the construction standards will have no impact on the performance of the equipment and finished water quality.

**Note:** *Funding agencies may require a Pilot Study as a condition of obtaining a loan.*

## **Variance Request**

A variance from the DEQ construction standards may be requested if the proposed technology or process is not included in, or deviates from, DEQ's construction standards. The variance request, submitted by the applicant to DEQ, shall include data showing the proposed processes or equipment will equal or exceed the performance of processes or equipment known to perform the same function according to the standards contained in DEQ's construction standards.

- a.** Variance requests may be granted if the technology or process is established and well-defined for the source water being treated after considering:
  - 1.** data from existing installations that demonstrate the efficiency of the proposed processes or equipment (including similar raw water quality, flow rate, and plant size);
  - 2.** proposed technology that has been validated by trade organizations or industry with specified operational and design standards;
  - 3.** deviations from the construction standards will have no impact on the performance of the equipment and water quality.
- b.** Variance requests may be denied based on one or more of the following:
  - 1.** technologies or processes with limited or no successful applications at similar water or wastewater treatment facilities, e.g. notable differences in raw water quality, pH, temperature, etc.;
  - 2.** the proposed technology is not sanctioned by reputable research groups or other relevant organizations;
  - 3.** adverse impacts to public health and environment could occur if the technology is inappropriate for the particular treatment application.

## ***TYPICAL CONSTRUCTION PERMITTING PROCESS***

A flow chart of the typical construction permitting process is depicted in Appendix A. Actions to be taken by specific entities are color-coded for quick reference, as follows:

### **Applicant**

### **WQD Construction Permitting**

### **WQD Variance Committee**

## **1. INITIAL PLANNING MEETING – Applicant/WQD Construction Permitting.**

The applicant may request an Initial Planning Meeting with the WQD Construction Permitting Engineer. This meeting may include discussions about the permitting process, early design concepts, unusual aspects of the proposed project, the potential need for a Pilot Study and/or variance, or any other topic necessary to help ensure a smooth permitting process.

As determined in this initial meeting, the applicant may be required to submit one or more of the following, as part of the permitting process: Pilot Study, variance request, and/or an Engineering Report.

- a.** If a Pilot Study is **NOT** required, proceed to Step 3, VARIANCE.
- b.** If the applicant disagrees with DEQ's determination that a Pilot Study is required, proceed to Step 2.a., Appeal Pilot Study Determination.
- c.** If the applicant agrees with DEQ's determination that a Pilot Study is required, proceed to Step 2.b., Develop Pilot Study Protocol.

## **2. PILOT STUDY**

### **a.** Appeal Pilot Study Determination – Applicant/WQD Variance Committee

Applicant may request, through the WQD Construction Permitting Engineer, an in-person meeting with the Variance Committee to discuss DEQ's reasons for requiring a Pilot Study and provide additional supporting documentation that Pilot Study is not necessary. After the meeting has concluded, the Variance Committee may request additional documentation before making a final decision to grant or deny the appeal. Applicant shall provide the requested information.

If the appeal is granted, i.e. no Pilot Study required, proceed to Step 3, VARIANCE; otherwise, continue.

### **b.** Develop Pilot Study protocol and submit to DEQ – Applicant

### **c.** WQD review of Pilot Study protocol – WQD Construction Permitting/Applicant

The WQD Construction Permitting Section Manager reviews the Pilot Study protocol and, if necessary, may request additional information from the applicant. Once all deficiencies have been addressed, the WQD Construction Permitting Section Manager shall approve the protocol and applicant may begin the Pilot Study.

### **d.** Perform Pilot Study – Applicant

### **e.** Submit Pilot Study results to DEQ – Applicant

If an Engineering Report is required, applicant shall submit the results of the Pilot Study with the ENGINEERING REPORT, Step 4.

If an Engineering Report is not required, applicant shall submit the results of the Pilot Study as a technical memorandum with the construction permit application packet, Step 5.a.

## 3. VARIANCE

If the Initial Planning Meeting determines a Variance is not required, proceed to Step 4, ENGINEERING REPORT.

### a. Submit Variance Request – Applicant

If the Initial Planning Meeting determines a Variance is required, applicant shall submit a Variance Request to the WQD Construction Permitting Engineer.

### b. Evaluation of Variance Request – WQD Variance Committee

The Variance Committee evaluates the Variance Request. If more information is needed, the applicant shall be notified by the WQD Construction Permitting Engineer or other designated WQD technical staff or manager. Applicant shall then provide the requested information to the Variance Committee through the designated WQD Construction Permitting Engineer, technical staff, or manager.

Once the Variance Committee has sufficient information, it will either grant or deny the Variance Request. If Variance is granted, proceed to Step 4, ENGINEERING REPORT; otherwise, continue.

### c. Appeal of Variance Denial Determination – Applicant/WQD Variance Committee

The applicant may request, through the DEQ Construction Permitting Engineer (or other designated WQD staff or manager), an in-person meeting with the Variance Committee to discuss DEQ's reasons for denying the Variance Request and provide additional supporting documentation that the Variance Request meets DEQ's requirements for granting a variance. After the meeting has concluded, the Variance Committee may request additional documentation before making a final decision to grant or deny appeal.

If the appeal is granted, no Variance required, proceed to Step 4, ENGINEERING REPORT.

If the appeal is denied, the applicant shall then consider other technologies or processes that meet DEQ Construction Standards for the proposed project.

## PERMITTING PROCESS STOPS.

## 4. ENGINEERING REPORT

If the Initial Planning Meeting determines no Engineering Report is required, proceed to Step 5, CONSTRUCTION PERMIT APPLICATION PACKET.

### a. Submit Engineering Report – Applicant

Applicant submits Engineering Report to DEQ Construction Permitting Engineer. Report may include the Pilot Study report, Variance Request and approval, and other data or information to demonstrate that the proposed design meets DEQ Construction Standards.

### b. DEQ Review – WQD Construction Permitting

DEQ Construction Permitting Engineer will review the Engineering Report and may request additional information from the applicant. Once all deficiencies have been addressed, Construction Permitting Engineer approves the Engineering Report and applicant may proceed to submit the Permit Application.

## 5. CONSTRUCTION PERMIT APPLICATION PACKET

### a. Submit Construction Permit Application Packet– **Applicant**

Applicant submits a complete Permit Application Packet to the DEQ Construction Permitting Engineer. Complete application packet includes:

- Permit Application Form, signed and notarized;
- Complete plans and specifications for the proposed project, stamped by professional engineer; and
- Engineering Report Form, signed and stamped by professional engineer.

**Note: If an Engineering Report and/or Pilot Study were required for this project, DEQ will have a stamped and approved copy of each on file.**

### b. DEQ Review – **WQD Construction Permitting**

DEQ Construction Permitting Engineer will review the Permit Application and may identify deficiencies or request additional information from the Applicant.

Once DEQ Review is complete, proceed to Step 6, APPROVE/DENY PERMIT.

## 6. APPROVE/DENY PERMIT – **WQD Construction Permitting**

DEQ Construction Permitting Engineer will notify applicant when the permit has either been approved or denied.