

ENVIRONMENTAL HEALTH MANUAL

NEW YORK STATE DEPARTMENT OF HEALTH OFFICE OF PUBLIC HEALTH CENTER FOR ENVIRONMENTAL HEALTH *[Replaces PWS-131 (10/25/01)]	ITEM NO: PWS-131* DATE: 10/22/20*
	SUBJECT: Public Water Supplies- Approval of Plans and Completed Works Page 1 of 9

PURPOSE

The purpose of this Procedure is to provide an overview of the procedure used by the New York State Department of Health (NYSDOH) for the approval of plans and specifications and the issuance of completed works approvals for water supply projects.

POLICY

Plans and specifications for public water supplies must be approved by the NYSDOH or a local health department (LHD) before construction, modification or installation of new equipment or facilities. All approvals must be in accordance with 10 NYCRR, Section 5-1.22.

BACKGROUND

The primary offices within the NYSDOH which are responsible for approving these plans and specifications are the Bureau of Water Supply Protection (BWSP) and Department District Offices.

Completed construction of, modification to or installation of new equipment or facilities must also be approved by the NYSDOH or LHD before being placed into service by a public water supplier.

IMPLEMENTATION

- A. Approval of Plans – Local Health Department (LHD) (State District Office or County Health Department (See Table 1 & Appendix A))
 1. Applicant's Engineer - Submits Application of Approval of Plans for Public Water Supply Improvement (DOH 348) along with three stamped and signed sets of the engineering report, plans and specifications to the local health department with jurisdiction.
 2. LHD - Reviews application, plans and specifications; evaluates the proposed site; determines if professional engineering service requirements of the State Education Law apply.
 3. LHD - Confers with applicant or consulting engineer as necessary; obtains modified plans, specifications, addendum, etc.

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4. LHD - Issues approval (DOH 1017) to applicant; sends copies, as appropriate, to applicant's engineer, BWSP, New York State Department of Environmental Conservation (NYSDEC), Public Service Commission (PSC) if the system is regulated as a Waterworks Corporation by the PSC, and other State or interstate agencies, if required. Note: If the project includes the creation of a new Community or Nontransient Noncommunity Water System, Environmental Health Manual (EHM) Item PWS-210, Procedure for Granting Approvals to Operate New Community Water Systems and New Nontransient Noncommunity Water Systems, provisions should be initiated prior to issuing any approvals.

B. Approval of Plans – Bureau of Water Supply Protection (See Table 1 & Appendix A)

1. Applicant's Engineer - Concurrently submits Application of Approval of Plans for Public Water Supply Improvement (DOH 348), along with three stamped and signed sets of the engineering report, plans and specifications to BWSP, and one set of the same to the LHD with jurisdiction.
2. LHD - At the LHDs discretion, may also evaluate the application, report, plans and specifications; and evaluates the proposed site.
3. LHD - Sends comments to the BWSP within 30 days.
4. BWSP - Evaluates application, report, plans and specifications with respect to technical requirements and needs; receives and evaluates comments from the LHD.
5. BWSP - Confers with applicant's engineer, applicant and LHD as necessary; obtains modified plans, revised specifications, addendums, etc.
6. BWSP - Issues approval (DOH 1017) to applicant; sends copies to applicant's engineer, LHD, NYSDEC, PSC if the system is regulated as a Waterworks Corporation by the PSC, and other State or interstate agencies, if required. Note: If the project includes the creation of a new Community or Nontransient Noncommunity Water System, EHM Item PWS-210, Procedure for Granting Approvals to Operate New Community Water Systems and New Nontransient Noncommunity Water Systems, provisions should be initiated prior to issuing any approvals.

C. Approval of Completed Works – Local Health Department (See Table 1 & Appendix A)

1. Applicant or Applicant's Engineer - Notifies LHD when construction or installation of new equipment will start; notifies LHD 60 days in advance of completion date.
2. LHD - At the LHDs discretion, may visit project during construction; keeps informed of construction progress.

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3. Applicant's Engineer - Submits letter and completed DOH-5025 to LHD indicating that construction is complete and in compliance with approved plans and specifications; sends copies to BWSP (letter should also identify the owner and operator of facility).
 4. Applicant's Engineer - Affirms compliance with 10 NYCRR SubPart 5-1 of the State Sanitary Code; assures equipment is operating properly; determines if new facilities are properly disinfected before being put into service.
 5. LHD - Issues Approval of Completed Works (DOH 1032) to applicant; sends copies, as appropriate, to applicant's engineer, BWSP, NYSDEC, PSC if the system is regulated as a Waterworks Corporation by the PSC, and other State or interstate agencies, if required.
- D. Approval of Completed Works – Bureau of Water Supply Protection (See Table 1 & Appendix A)
1. Applicant or Applicant's Engineer - Concurrently notifies BWSP and LHD when construction or installation of new equipment will start; notifies BWSP and LHD 60 days in advance of completion date.
 2. LHD - May visit project during construction; keeps informed of construction progress.
 3. Applicant's Engineer - Submits letter and completed DOH-5025 to BWSP indicating compliance with approved plans and specifications; sends copies, as appropriate, to applicant, LHD, NYSDEC, PSC if the system is regulated as a Waterworks Corporation by the PSC and other State or interstate agencies, if required.
 4. Applicant's Engineer - Affirms compliance with 10 NYCRR SubPart 5-1 of the State Sanitary Code; assures equipment is operable; determines if new facilities are properly disinfected before being put into service.
 5. Applicant's Engineer - Notifies BWSP of operator's name.
 6. BWSP - Issues Approval of Completed Works (DOH 1032) to applicant; sends copies, as appropriate, to applicant's engineer, LHD, NYSDEC, PSC if the system is regulated as a Waterworks Corporation by the PSC, and other State or interstate agencies, if required.

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SUPPLEMENTAL INFORMATION

1. Table 1 – Responsibilities of BWSP and LHDs for approvals of plans and completed works.

This table does not establish an exclusive division of responsibilities. Projects assigned to the LHD may, by LHD request, be handled by the BPWSP. The BWSP can delegate approval authority for specific project types to specific LHDs. The LHD may accompany the BWSP during inspections.

2. An applicant engineer's submittal for plan approval consists of:
 - a. Form DOH 348 or other appropriate application form.
 - b. An engineering report, compliant with Recommended Standards for Water Works Section 1.1.
 - c. Engineering plans and specifications.
3. An engineer's submittal for completed works approval consists of:
 - a. A letter including a certification statement by a licensed professional engineer.
4. Record system.

The LHD is to send copies of plan approvals (DOH 1017) and completed works approvals (DOH 1032) to the BWSP. A record system of all approvals, acceptable to the Department, must be kept by each department that issues plan approvals.

FORMS

- A. DOH 348 - Application for Approval of Plans for Public Water Supply Improvement
- B. DOH 1017 - Approval of Plans for Public Water Supply Improvement
- C. DOH 1032 - Approval of Completed Works
- D. DOH 355 - Fluoridation Data Sheet – Application for approval to fluoridate a public or institutional water supply (submitted with DOH 348)
- E. DOH 347 - Application for Approval of Backflow Prevention Devices
- F. DOH-5025 - Engineer's Certification of Public Water Improvement Project Completion
- G. NYS Department of Environmental Conservation Water Well Completion Report

REFERENCES

1. 10 NYCRR SubPart 5-1
2. Recommended Standards for Water Works, Current Edition

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Table 1 – Responsibilities for Approval of Plans and Completed Works

Project Type Related to Approval & Inspection Function	Responsible Unit					
	Plans		Completed Works			
	Approved		Inspection		Approved	
Item	BWSP	LHD	BWSP	LHD	BWSP	LHD
All portions or aspects of projects related to Water Withdrawal Applications made to the New York State Department of Environmental Conservation	X			X	X	
Projects receiving Federal or State Aid	X			X	X	
Projects related to State Health Commissioner's Orders	X			X	X	
Projects related to the Drinking Water State Revolving Fund	X		X		X	
Storage only		X		X		X
Distribution and transmission		X		X		X
Surface sources, springs or wells with or without chlorination (not WWA/DEC jurisdiction)		X		X		X
New well sources (See Appendix A) ¹	X	X		X	X	X
Chlorination only		X		X		X
Chemical addition (or in conjunction with chlorination only)	X			X	X	
Fluoridation only ²	X	X		X	X	X
Pumping Station only	X			X	X	
Cross connection and interconnections		X		X		X
Other disinfection (not chlorination)	X			X	X	
UV Disinfection - NSF Class 55A		X		X		X
Filtration - Surface Water Treatment Rule	X			X	X	
Iron and manganese removal	X			X	X	
Filtration - Granular Activated Carbon ^{3,4}	X	X	X	X	X	X
Advanced Oxidation Processes	X		X		X	
Softening	X			X	X	
Microstrainers	X			X	X	
Any other not listed (i.e., new processes or equipment)	X			X	X	

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Notes: BWSP - Bureau of Water Supply Protection

LHD - Regional, District, County or City Health Department

WWA/DEC - Water Withdrawal Application, Department of Environmental Conservation

1. LHDs can approve new well sources for Non-community systems.
2. Some LHDs have been delegated the authority to approve fluoridation projects. Check with the LHD for details.
3. The BWSP can delegate approval authority for any of the above projects to specific LHDs.
4. LHDs can approve granular activated carbon treatment systems for serving populations less than 1,000.

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Appendix A – Guidelines for Approval of New Well Sources

These guidelines are intended to list the pump test data and water quality analyses to be included when submitting plans and specifications for new well sources. Where referenced below, the term **full Part 5 analysis** shall mean water quality sampling and analysis for inorganic chemical, organic chemical, radiological parameters and microbiological contaminants as listed in 10 NYCRR Subpart 5-1. Specifically, the analytes in Tables 8B, 8C, 8D, 9C, 9D, 12 and MTBE, propylene glycol, vinyl chloride and turbidity shall be included in any such analysis.

A. Community Water Systems

Pump/Yield Testing

New wells sources serving Public Water Supplies must be yield tested in accordance with 10 NYCRR Subpart 5-1, Appendix 5-D, Section 5-D.4.

Water withdrawal systems with the capacity to withdraw 100,00 gallons per day or more must obtain a water withdrawal permit from the New York State Department of Environmental Conservation (NYS DEC). Information about DEC water withdrawal permits is available at: <http://www.dec.ny.gov/lands/55509.html>.

The DEC web site noted above includes downloadable pdf files of the DEC Division of Water *Recommended Pumping Test Procedures for Water Withdrawal Applications*. The DEC *Pumping Test Procedures* should be used in conjunction with constant flow rate testing done pursuant to Appendix 5-D Section 5-D.4(a). The *Procedures* contain helpful guidance about data collection and analysis that may also be useful with other yield testing applications.

Applicants for water supply projects should also be aware of any other local water supply requirements (e.g. Susquehanna River Basin Commission) that may be jurisdictional.

The system/well driller shall complete and submit a NYSDEC Water Well Completion Report form to the NYSDEC as required. The applicant or design engineer shall provide a copy of the Report along with other submittals to the NYSDOH and/or local health department.

Select water quality parameters may need to be monitored during the yield test as part of “Ground Water Under the Direct Influence of Surface Water” (GWUDI) evaluations. See Appendix 5-D Table 2 and Environmental Health Manual Item WSP 42: Identification of Ground Water Sources Under the Direct Influence of Surface Water.”

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Water Quality Analysis

- A full Part 5 analysis, including microbiological contaminants, radiological parameters, inorganic chemicals and organic chemicals (including MTBE, propylene glycol and vinyl chloride). The Specific Organic Chemical (see Subpart 5-1, Table 3) analyses may be waived, except for PFOA, PFOS and 1,4-Dioxane, for non-municipal system wells that are installed in the same aquifer formation as existing wells if sufficient water quality and site use data are already available. Microscopic particulate analysis (MPA) should also be done for wells subject to GWUDI testing (see Appendix 5-D Table 2).
- The following four contaminants may be excluded from the required water quality analysis, provided that the chemicals have not been used, transported or stored in the area: diquat, endothall, glyphosate and dioxin. A contaminant-specific and location-specific evaluation must be completed and documented for each new source prior to waiving analysis of these chemicals.

Number of Sources/Other

- The system should be able to meet the maximum daily demand with the largest production well out of service.
- A wellhead protection plan should be submitted within one year from the date of well completion.

B. Noncommunity Water Systems

Pump/Yield Testing

New wells sources serving Public Water Supplies must be yield tested in accordance with 10 NYCRR Subpart 5-1, Appendix 5-D, Section 5-D.4. For transient noncommunity water systems, Table 2 accommodates use of the Appendix 5-B Section 5-B.4 stabilized drawdown test if allowed by the local health department.

The system/well driller shall complete and submit a NYSDEC Water Well Completion Report form to the NYSDEC. The applicant or design engineer shall provide a copy of the Well Completion Report along with other submittals to the NYSDOH and/or local health department.

Select water quality parameters may need to be monitored during the yield test as part of “Ground Water Under the Direct Influence of Surface Water” (GWUDI) evaluations. See Appendix 5-D Table 2 and Environmental Health Manual Item WSP 42: Identification of Ground Water Sources Under the Direct Influence of Surface Water.”

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Water Quality Analysis

- Water quality analyses shall generally include microbiological contaminants, inorganic chemicals and organic contaminants (including MTBE, propylene glycol and vinyl chloride). The LHD, at their discretion, may waive Specific Organic Chemical (see SubPart 5-1, Table 3) sampling requirements for transient non-community water systems based upon a vulnerability assessment which includes sanitary surveys, system history, in-depth local knowledge, etc. EHM Item PWS-72, Determining Vulnerability to Contamination by Volatile Organic Chemicals, contains principles that may be useful in assessing vulnerability to SOCs. SOC analyses may also be waived, except for PFOA, PFOS and 1,4-Dioxane, for wells that are installed in the same aquifer formation as existing wells if sufficient water quality and site use and yield data are already available. The minimum sampling consists of inorganic chemicals, POCs including MTBE and vinyl chloride, and microbiological contaminants. Microscopic particulate analysis (MPA) should be done for wells subject to GWUDI testing (see Appendix 5-D Table 2).
- In areas known or suspected to have radiological parameters present, the LHD may choose to advise the prospective owner/operator to test for radiological parameters should the proposed water supply also serve some year round residents. The LHD would advise the owner/operator of the suitability of the water for year round residents. The LHD should only issue advice as it does not normally have regulatory authority (see Subpart 5-1, Table 7, Radiological Maximum Contaminant Level Determination) unless the water supply is for a defined community water system or the County Sanitary Code specifically regulates such a situation.
- The following four contaminants may be excluded from the recommended water quality analysis, provided that the chemicals have not been used, transported or stored in the area: diquat, endothall, glyphosate and dioxin.

Other

- For non-transient noncommunity water systems where significant hardship would occur with the loss of a water source (for example, a large school or place of employment), developing and maintaining more than one well is recommended to help foster redundancy and continuity of operation.