

MassDEP NEW TECHNOLOGY (NT) PROGRAM

August 31, 2020

Purpose of NT Approval

1. Ensure that the technology is **safe**, that public health is protected, that the quality of the drinking water is not compromised and that there is compliance with the Safe Drinking Water Act.

Purpose of NT Approval (con't)

2. To encourage the use of new and innovative technology in order to bring new solutions to old problems or to meet the new demands of emerging contaminants with **innovative solutions**.

Regulatory Requirements

In accordance with 310 CMR 22.04(8), it is prohibited for a supplier of water to add, install, and use a chemical, additive, treatment device or equipment without approval from MassDEP.

Types of NT Approval

There are Three Types of NT Approval:

1. Type A- Statewide approval issued to a manufacturer or company indicating that the technology is not limited to a specific location, site-specific
2. Type B- Specific Site approval limiting the technology to a single location
3. Type C- combination of Type A and B.

There is a sub-category of B, where a special permit is allowed for very small systems with populations < 500

Statewide New Technology Process (Type A)

Statewide NT Approval Process

- The statewide approval process is when a technology is permitted to be used in any MA community after receiving MassDEP approval
- Statewide approval results after a technology has been piloted at a public water system or otherwise receives third party approval (discussed later)
- A New Technology (process, media, additive, chemical, etc.) approved for one purpose cannot be re-purposed; a new NT permit is required.

Statewide NT Approval Process(con't)

- Typically, the manufacturer or their designee requests statewide or site-specific approval via email or by mail
- Example: process control technology RO, UV, ozonation, filter media of various types, process control, chemicals, coatings for pipes or tanks, pipe rehabilitation, etc.
- A New Technology proponent needs to file a permit with Boston (BRP WS 11)

Statewide NT Approval Process(con't)

- The application is submitted to Boston, either as a technology to be piloted or one requesting third party approval
- Boston determines feasibility of technology for acceptance against national, New England and New York criteria
- Pilot may involve several different water types to mimic Massachusetts' conditions or on-site piloting in MA at an appropriate PWS

Statewide NT Approval Process(con't)

- If technology has received prior approval in a New England state or New York, third party approval is granted
- Third Party Approval is when the technology has been vetted by a nationally renowned organization such as ANSI, NSF or AWWA.
- If no third party - A pilot is conducted by the region and BRP WS 21 and BRP WS 22 permits are required

Statewide NT Approval Process(con't)

- The piloted results are sent to Boston by the proponent for NT review and evaluation
- The information is filed/entered into the payment system (PIMS) and checked for administrative completeness
- The technology is reviewed for approval

Statewide NT Approval Process

Approval letters are issued by Boston, which includes the following elements:

- Description of the product
- Conditions of approval-citing both manufacturer and product user responsibilities
- State/local or other requirements/citations
- Expected performance standards

Statewide NT Approval Process(con't)

- The letter is mailed/emailed to the applicant (manufacturer), the regional chiefs and EPA
- A copy is filed at Y/DWPArchive/Boston
- The technology is listed on MassDEP's Approved New Technology List:
<https://www.mass.gov/doc/list-of-massdep-approved-new-drinking-water-technologies/download>

Statewide NT Approval Process

- The proponent may now install the technology at the requested facility or any other PWS in the state
- The essentially is how statewide approval works
- For all NT related application forms, please visit:

<https://www.mass.gov/lists/new-technology-approval-forms>

Site-Specific New Technology Process (Type B)

(Conducted in a MassDEP Region)

Site-Specific Approval

- A Site-Specific Technology is one in which the manufacturer is only interested in installing a particular technology at a specific location
- The technology is approved for that location only and cannot be used at any other location

Site-Specific Approval

- Site Specific Approval is the approval of a technology intended for a specific location
- A technology can only receive site-specific approval **once** before statewide approval is required
- If the technology is proprietary or a new, untried, unparalleled concept, the region will defer review to Boston.

Site-Specific Approval

- The applicant must file BRP WS 21 and BRP WS 22 with the regional office
- Regions must report site-specific approvals to Boston at: <Y:\DWPshare\New Technology -Site Specific Approvals>

Site-Specific & Statewide Process (Type C)

Site-Specific & Statewide Approval

When an applicant is seeing both statewide and site specific approvals

These applications can be submitted concurrently with the following conditions:

- Region agrees that for public health reasons it is critical to expeditiously implement the site-specific approval
- Boston and region must agree on the pilot criteria

Site-Specific & Statewide Approval

Two Phase Application Process:

Preferred order:

- Submit BRP WS 11 or BRP WS 12 to Boston, then
- Submit BRP WS 21 and BRP WS 22 to Region
 - DWP Chief limits review to site-specific conditions

Site-Specific & Statewide Approval

- Applicant must pay the fee for both permits.
- The statewide pilot will be overseen by Boston
- The site-specific will be overseen by the region
- Boston and regions will work together to ensure a seamless process for applicant.

Site-Specific New Technology Process – Communities with Population <500

**Special process to support small
system capacity**

Site-Specific New Technology Approval – Communities with Population <500

- Regional site-specific approval is allowed.
- The PWS must be the applicant, not the manufacturer.
- These permits are fee exempt and proposed by the municipality

Site-Specific New Technology Approval – Communities with Population <500

- The site-specific applications will come from the following list: BRP WS 21, 22, 23, 24, 25, 29, 32, 33, and 34 depending on the flow of the PWS
- In order to receive approval, the proposed product/technology must be approved by a third-party organization such as ETV, NSF, UL, or AWWA

Third-Party New Technology Process

(No piloting requirements due to
prior approvals in other states)

Third-Party New Technology Approval

- The major technology has been approved and used successfully in the United States for 5 years or more
- The major new technology must have been approved and used successfully in three states for at least two years. One of the three states must be (1) *New England* or *New York*, and (2) any two other primacy states

Third-Party New Technology Approval(con't)

- All third-party approvals for additives (chemicals) and coatings are conducted by Boston and are granted on a statewide basis
- A BRP WS 27 permit should be used for third-party approval of additives and coatings only
- Piloting is not required for BRP WS 27 applications

Third-Party Approval Organizations

- Third Party Approvals organizations are:
- **American National Standards Institute (ANSI)** provides information on national, regional, international standards for chemical and technology
- **National Science Foundation (NSF)** provides research on a wide range of technologies.
- **American Water Works Association(AWWA)**

Third-Party Approval Organizations(con't)

1. **Underwriter Laboratory (UL)** standards
2. **Environmental Protection Agency's (EPA's)** or **environmental Technology Verification Program (ETV)**, verifies the performance of the technology
3. **American Water Works Association (AWWA)** and is capable of producing finished water that meets all federal and state Maximum Contaminant Levels and drinking water standards for the intended and approved technology use.”

Regulatory Requirements For New Technology Approval

310 CMR 22.04(8)

New Technology Policies

New Technology Policies

- Drinking Water Program Policy 89-01
<https://www.mass.gov/files/documents/2016/08/xa/8901.pdf>
- Drinking Water Program Policy 90-04
<https://www.mass.gov/files/documents/2016/08/on/9004.pdf>
- The Department may revoke its approval of a product or technology if it determines that the product or technology is defective or performs inadequately in the field

Resources

NEW TECHNOLOGY PERMIT APPLICATIONS:

- <https://www.mass.gov/how-to/ws-11-12-minor-major-technology-approval>
- <https://www.mass.gov/how-to/ws-21-approval-to-conduct-pilot-study>
- <https://www.mass.gov/how-to/ws-22-approval-of-pilot-study-report>
- <https://www.mass.gov/how-to/ws-27-new-technology-3rd-party-approval>

New Technology Flow Charts & Site Specific Log Tables

New Technology Site Specific vs. Statewide Approval

What does the proponent want? A, B or C

A
Site specific
New technology
approval

Submit WS 21 and 22 to region

Region determines feasibility of technology against national and New England criteria **AND** require pilot for site-specific conditions.

Region must report site specific approvals to Boston & log the technology to Y:\Drive.

A site-specific technology cannot be used at more than one site without Statewide approval.

B
Statewide
New technology
Approval and listing on
statewide list

Submit WS 11 or 12 to Boston.

Boston determines feasibility of technology against national and New England criteria.
Pilot will be conducted on MA water in MA, unless prior approval obtained in two New England states or NY in addition to one other primacy state and technology in existence for a minimum of two years. Then, third party approval granted.

If the technology is proprietary or a new, untried, unparallel concept, then the region will defer the review of such technology to Boston.

C
Both
Site specific and
statewide listing

2 phased application

Preferred order:

- A) Submit WS 11 or 12 to Boston followed by
- B) WS 21 and 22 to Regions – with site specific conditions.

These applications can be submitted concurrently with the following conditions:

Regions agree that for public health reasons it is critical to expeditiously implement the site-specific approval.

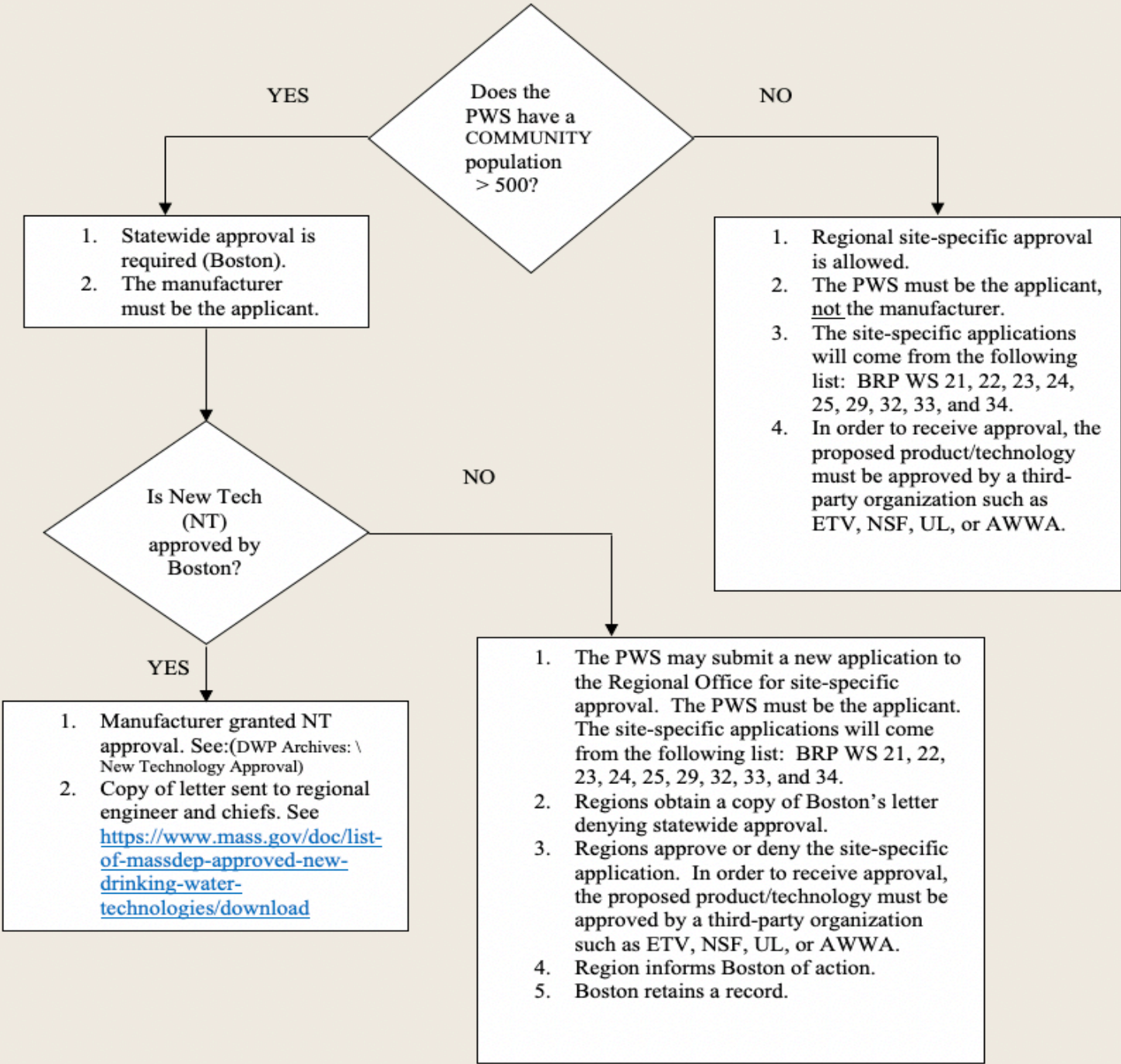
Boston and region must agree on the pilot criteria.

Applicant must pay the fee for both permits.

Plot will be overseen by the region with Boston participation.

Note: Very small systems (<500) has special permit requirements.

New Technology Site Specific vs. Statewide Approval



Note: Very small systems (<500) has special permit requirements.

New Technology Regional Contacts

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or

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New Technology Boston Contacts

Boston:

For questions about the New Technology,
contact the Drinking Water Program at:

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