



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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Guideline
Bureau of Resource Protection
Drinking Water Program

Information to be Submitted to MassDEP for Proposed Solar and Wind Energy Projects on
Lands Owned or Controlled By Public Water Systems for Drinking Water Purposes

Effective Date: September 1, 2011

Updated: March 26, 2012; April 18, 2018

Guideline # BRP 2011-1

Applicability: Public Water Systems

Approved by: Douglas Fine, Assistant Commissioner, Bureau of Water Resources

Signed _____

Supersedes Guideline: none

Purpose: To provide guidance to public water suppliers on information to be submitted to MassDEP for wind and solar energy projects proposed on lands owned or controlled by public water systems for drinking water purposes.

Applicability: This Guideline applies to public water suppliers and their representatives requesting written approval from MassDEP to install solar and wind energy projects on lands held by public water systems for drinking water purposes.

Note: The public water supplier may need to seek additional approvals from other entities and/or MassDEP, including, but not limited to, municipal approval, legislative approval pursuant to Article 97, and MEPA approval pursuant to 301 CMR 11.00.

This information is available in alternate format. Contact Michelle Waters-Ekanem, Director of Diversity/Civil Rights at 617-292-5751.

TTY# MassRelay Service 1-800-439-2370

MassDEP Website: www.mass.gov/dep

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Authority/Background:

M.G.L. Chapter 111, Section 160 titled "Examinations of water supply; Rules; Penalty for violation," states that the department may "make rules and regulations and issue such orders as its opinion may be necessary to prevent the pollution ... and to ensure the delivery of a fit and pure water supply to all consumers."

310 CMR 22.21(1) and 22.21(3)(b) require activities in the Zone I to be limited to those directly related to the provision of public drinking water or that will have no significant adverse impact on water quality.

310 CMR 22.24: Sale, Transfer of Property Interest, or Change in Use of Water Supply Land
(1) No supplier of water may sell, lease, assign, or otherwise dispose of, or change the use of, any lands used for water supply purposes without the prior written approval of the Department. The Department will not approve any such disposition or change in use unless the supplier of water demonstrates to the Department's satisfaction that such action will have no significant adverse impact upon the supplier of water's present and future ability to provide continuous adequate service to consumers under routine and emergency operating conditions, including emergencies concerning the contamination of sources of supply, failure of the distribution system and shortage of supply.

In addition, M.G.L. Chapter 40, Section 15B, states "[a] town, city or district authorized to furnish water for domestic purposes, may, with the advice and approval of the state department of environmental protection ... in its discretion, by lease, license or other agreement, permit the construction and maintenance on any land under its control of towers, poles, wires, and other structures for the purpose of transmitting electric power over lands and water held for water supply purposes; provided, that such lease, license or agreement will not, in the opinion of the said department, affect or interfere with the water supply; and provided, further, that said city, town or district may, with the approval of said department, revoke said lease, license or agreement for cause to be determined by it."

Review and Approval

MassDEP supports wind and solar energy projects but also recognizes that lands that are under the control of public water systems have been identified as the most critical to protect public drinking water reservoirs and wells. In addition, these lands may be the future sites for new or replacement public water system sources. Pursuant to 310 CMR 22.24(1), public water suppliers must obtain written approval from MassDEP for projects described in the Applicability section above.

Public water suppliers shall submit a written certification to MassDEP that proposals to construct and maintain wind and solar energy projects will have no significant adverse impact on the public water supplier's present and future ability to provide continuous adequate service to consumers under routine and emergency operating conditions, including emergencies concerning the contamination of sources of supply, failure of the distribution system and shortage of supply. The certification should include maps, plans or other documentation to support that statement and should address, at a minimum, the information listed in Part A below. Public water suppliers and their contractors, operators, and/or lessees will be required to adhere to the applicable conditions in Part B below as a condition of their approval. For Zone I projects, the public water supplier should also certify that the wind and/or solar energy project will have no significant adverse impact on water quality and that the energy generated by the facility will be used to

benefit, either by direct consumption or by other means, the operation of the public water system. In addition, there shall be a minimum of a 200 ft. no disturbance area from the well within the Zone I for the installation of, or land clearing related to, solar installations. Site characteristics and conditions may require a larger no disturbance area at the discretion of MassDEP staff. Solar batteries and solar battery storage housing (trailers, buildings, etc.) are prohibited within the Zone I.

If a public water supplier submits a written certification in accordance with this Guideline, MassDEP approval will be presumed unless the agency informs the public water supplier otherwise within 30 days of the Department's receipt of the submission. MassDEP may request additional information or deny the request within 30 days.

A. General Site Information and Site Design

- The location of the public water system source; water supply protection areas; and depth to ground water.
- Project footprint; new easements or roads; existing water system structures.
- A description of the wind or solar infrastructure proposed for the site.
- The estimated schedule and duration for the construction of the project.
- The type of soils, vegetation, and slopes in the project area; the location and amount to be disturbed; and the method of soil/slope stabilization during and after the project.
- There shall be a minimum of a 200 ft. no disturbance area from the well within the Zone I for the installation of, or land clearing related to, solar installations. Site characteristics and conditions may require a larger no disturbance area at the discretion of the Department.
- Solar batteries and solar battery storage housing (trailers, buildings, etc.) are prohibited within the Zone I.
- The location and amount of pervious surface that will be changed to impervious surface and a description of how stormwater will be managed on the site.
- A list of expected coolants, lubricants, cleaning products and other potential contaminants associated with the construction and maintenance of the infrastructure.
- Descriptions of any wash water disposal practices and/or equipment used at the site.
- For projects located within the Zone I, an explanation of how the energy generated will benefit the operation of the public water system.
- Description of emergency response procedures (e.g. fire safety measures) in place.
- Any other information requested by MassDEP to protect the public water supply.

B. Conditions for Siting Solar Batteries and Battery Storage Housing (trailers, buildings, etc.) Outside the Zone I at Public Wells.

- There shall be no solar battery storage units or their housing (trailers, buildings, etc.) located within the Zone I.
- A smoke detection system must be installed and operating in the battery storage housing.
- Each battery chamber must have its own heat sensor and detection alarm system.
- The battery storage housing must be located above the 100 year floodplain.
- High pressure fire extinguishers containing Novec 1230 or equivalent must be located on site.

- The battery system must be stored in a self-containment area so that in the event of a fire, fire extinguishing chemicals will be completely contained.
- Battery storage units must number only those needed to support the solar installation at the site.
- Spent or expired battery units must be immediately removed from the site. There must be no stockpiling of battery units.
- Applicants may be required to increase water quality monitoring.
- MassDEP may consider revoking an applicant's participation in the Water Quality Monitoring Waiver Program.
- Applicants shall be subject to local and state regulations for proposed impervious surfaces.
- Stormwater from proposed impervious sources must be directed away from drinking water sources.
- The battery storage housing must not interfere with the operation of the public water system or access to the water distribution system.

C. Construction and Post-Construction Conditions

- All exposed soils and slopes shall be stabilized with erosion controls during and after construction until vegetation is established.
- There shall be a minimum of a 200 ft. no disturbance area from the well within the Zone I for the installation of, or land clearing related to, solar installations. Site characteristics and conditions may require a larger no disturbance area at the discretion of the Department.
- Solar batteries and solar battery storage housing (trailers, buildings, etc.) are prohibited within the Zone I.
- Vegetation related to the facility shall be managed through mowing or other mechanical means or with native plantings if possible. If pesticide use is necessary for employee safety, such as to control poison ivy, the application shall comply with local, state, and federal requirements. There shall be no application of pesticides or fertilizers in the Zone I.
- There shall be no oil, hazardous materials, cleansers or other potential contaminants stored on-site in the Zone I. If these materials are stored on-site in Zones II and III and in Zones A, B, and C, they shall properly labeled, covered and contained.
- Disposal of wash water at the facility shall be avoided or minimized to prevent contamination of ground or surface waters and will comply with any applicable regulatory requirement (including underground injection control registration).
- Emergency response procedures shall be developed by the public water system in conjunction with any contractors, operators, and/or lessees.
- The public water supplier shall notify MassDEP within 30 days of project completion.
- Any other conditions required by MassDEP to protect the public water supply.

MassDEP staff may conduct an initial site visit and/or a final inspection of the installation. The installation and operations are subject to review during sanitary surveys or other MassDEP inspections.

The public water supplier is responsible for ensuring that project construction and operation are consistent with the proposal and approval including all conditions. The public water system and this project remain subject to Massachusetts General Laws, the Massachusetts Drinking Water Regulations, all other relevant Massachusetts regulations, and MassDEP's authority herein.

Model CERTIFICATION

The PWS _____ provides this certification to MassDEP that its proposal to construct and maintain wind and solar energy projects will have no significant adverse impact on its present and future ability to provide continuous adequate service to consumers under routine and emergency operating conditions, including emergencies concerning the contamination of sources of supply, failure of the distribution system and shortage of supply. If this proposal is for Zone I, PWS _____ also certifies that the wind and/or solar energy project will have no significant adverse impact on water quality and that the energy generated by the facility will be used to benefit, either by direct consumption or by other means, the operation of the public water system.

Note: The public water supplier may need to seek additional approvals from other entities and/or MassDEP, including, but not limited to, municipal approval, legislative approval pursuant to Article 97, and MEPA approval pursuant to 301 CMR 11.00.

In support of this proposal the PWS is attaching the following:

- The location of the public water system source; water supply protection areas; and depth to ground water.
- Project footprint; new easements or roads; existing water system structures.
- A description of the wind or solar infrastructure proposed for the site.
- The estimated schedule and duration for the construction of the project.
- The type of soils, vegetation, and slopes in the project area; the location and amount to be disturbed; and the method of soil/slope stabilization during and after the project.
- An acknowledgment that there shall be a minimum of a 200 ft. no disturbance area from the well within the Zone I for the installation of, or land clearing related to, solar installations. Site characteristics and conditions may require a larger no disturbance area at the discretion of the Department.
- An acknowledgement that solar batteries and solar battery storage housing (trailers, buildings, etc.) are prohibited within the Zone I.
- The location and amount of pervious surface that will be changed to impervious surface and a description of how stormwater will be managed on the site.
- A list of expected coolants, lubricants, cleaning products and other potential contaminants associated with the construction and maintenance of the infrastructure.
- Descriptions of any wash water disposal practices and/or equipment used at the site.
- Description of emergency response procedures (e.g. fire safety measures) in place.
- For projects located within the Zone I, an explanation of how the energy generated will benefit the operation of the public water system.

PWS _____ also certifies that the proposal will meet the following conditions:

- All exposed soils and slopes shall be stabilized with erosion controls during and after construction until vegetation is established.
- There shall be a minimum of a 200 ft. no disturbance area from the well within the Zone I for the installation of, or land clearing related to, solar installations. Site characteristics and conditions may require a larger no disturbance area at the discretion of the Department.

- Solar batteries and solar battery storage housing (trailers, buildings, etc.) are prohibited within the Zone I.
- Vegetation related to the facility shall be managed through mowing or other mechanical means or with native plantings if possible. If pesticide use is necessary for employee safety, such as to control poison ivy, the application shall comply with local, state, and federal requirements. There shall be no application of pesticides or fertilizers in the Zone I.
- There shall be no oil, hazardous materials, cleansers or other potential contaminants stored on-site in the Zone I. If these materials are stored on-site in Zones II and III and in Zones A, B, and C, they shall properly labeled, covered and contained.
- Disposal of wash water at the facility shall be avoided or minimized to prevent contamination of ground or surface waters and will comply with any applicable regulatory requirement (including underground injection control registration).
- Emergency response procedures shall be developed by the public water system in conjunction with any contractors, operators, and/or lessees.
- The public water supplier shall notify MassDEP within 30 days of project completion.

For the Siting of Solar Batteries and Battery Storage Buildings outside the Zone I at Public Wells

- There shall be no solar battery storage units or their housing (trailers, buildings, etc.) located within the Zone I.
- A smoke detection system must be installed and operating in the battery storage housing.
- Each battery chamber must have its own heat sensor and detection alarm system.
- The battery storage housing must be located above the 100 year floodplain.
- High pressure fire extinguishers containing Novec 1230 or equivalent must be located on site.
- The battery system must be stored in a self-containment area so that in the event of a fire, fire extinguishing chemicals will be completely contained.
- Battery storage units must number only those needed to support the solar installation at the site.
- Spent or expired battery units must be immediately removed from the site. There must be no stockpiling of battery units.
- Applicants may be required to increase water quality monitoring.
- MassDEP may consider revoking an applicant's participation in the Water Quality Monitoring Waiver Program.
- Applicants shall be subject to local and state regulations for proposed impervious surfaces.
- Stormwater from proposed impervious sources must be directed away from drinking water sources.
- The battery storage housing must not interfere with the operation of the public water system or access to the water distribution system.

_____ [signature] Date: _____

Title: _____ for the _____ Public Water System