SITING OF RENEWABLE-ENERGY PROJECTS ON SOURCE-WATER LANDS
PRIMARY FOCUS: SOLAR FACILITIES

Report on findings of the Watershed Lands Workgroup
Final reformat 1/18/2021

Goal

To ensure protection of high-quality water by protection of natural land on the watershed and make recommendations for better protection if needed.

Background

General workgroup discussion of siting renewable-energy projects dates back to December 2012. First discussions related to projects on Class I and II lands. These are properties owned by water companies that lie within public water supply watersheds or Aquifer Protection Areas (source water lands). They are highly protected by statute, with any sale, lease, or change in use requiring a permit from DPH. Eventually, the focus of these discussions turned to siting of solar facilities.

In July 2019, WPCAG wrote to DPH with questions as to the criteria used by DPH for siting solar facilities on Class I and II lands. In a letter from DPH (October 2019) and a meeting with DPH staff (November 2019) and various subsequent discussions, DPH provided a review of enabling statutory language and referenced several approved projects. DPH's general statement was that it does not permit activities that would harm the purity or adequacy of the public water supply. DPH does not have a separate list of criteria for green energy projects.

Subsequently, the group's attention turned to the siting of solar facilities on source-water lands NOT owned by a water company. These are sometimes called Class I and Class II-like lands.

In 2020, the workgroup concentrated on larger, commercial solar installations on Class I and Class II-like lands. We received relevant information from water companies, clean-energy business representatives, environmental groups, DPH, DEEP, and the Connecticut Siting Council (CSC). The Council on Environmental Quality (CEQ) presented a PowerPoint report on the recent law and actual siting of solar projects on source-water watersheds, core forests, and prime agricultural soils. The present application at the CSC for a solar array on private forested land on the Regional Water Authority's Lake Whitney Reservoir watershed in Hamden has led to more public awareness of the issue.

Recommendations and items for further discussion

The following recommendations and items for further discussion are divided into two areas: those within the purview of the Watershed Lands Workgroup and Other (which includes issues

outside the mission of the workgroup but may be of concern to the WPCAG or WPC). As stated on the Water Planning Council website, 12/20/15, "The WPCAG Watershed Lands Workgroup was established by the WPC in 2012 to review and determine the adequacy of current statutory/regulatory provisions to protect public water supplies and maintain Class I and II lands, as well as comparable lands that are not owned by water companies."

Watershed Lands Workgroup purview

The involvement of DPH in the review and approval of development applications on Class I & II-like land. (80% of drinking water watershed land in Connecticut is not owned by water companies.)

The roles of various agencies in the review and approval of green energy projects and other projects on privately owned land in public drinking water watershed and aquifer areas.

The transparency of the process involved in approval of projects on Class I & II-like land and the need for more information, outreach, and public participation. This process could involve DEEP, DPH, local authorities, and the CSC.

Next Steps	Attributed to
Review current laws	DPH
Develop a work team to draft policy	DPH
Look to develop of technical group to address the concerns related to impacting watershed land and protection of water supply. This group could be made up of technical experts, Siting Council, CT DEEP, CTDPH, water companies and municipalities to work through the concerns and develop criteria that allows for the implementation of renewable energy solutions and works to protect water supplies	Dan Lawrence

Recommendations	Attributed to
Update current laws, building on work from the past three decades	DPH
Consider areas that protect our drinking water quality as unique and irreplaceable	DPH
Develop a document/plan that contains policies for all of the state's water resources	DPH
More consistent messaging to local land use boards on the importance of protecting drinking water watershed land	Joe Welsh
Establish state policies that recognize the critical importance of forest preservation to the protection of public water supplies. Forestlands are considered to be the most beneficial watershed land cover protecting drinking water sources, as noted by the American Water Works	John Hudak

Association, the US Endowment for Forestry and Communities, and US Forest Service National Forest to Faucets partnership.	
Consider adding DPH review along with DEEP and DoAg to PA17-218 for CSC renewable energy project petitions within public water supply watersheds and Aquifer Protection Areas, applying the Class I and II permitting standard of no significant impact to the purity and adequacy of the public water supply.	John Hudak
Promote renewable energy development to offset power demands of water and wastewater facilities.	John Hudak
Solar applications to the CSC should also be sent to the pertinent water company. This can be done by including the requirement in the CSC guidelines.	Brad Parsons
Involve the public earlier and more effectively in the approval process	Margaret Miner
The Water Planning Council should consider reviewing and commenting on the 2020 Draft Integrated Resources Plan with source water protection in mind. (Comments are due February 15th.)	Alicea Charamut
At BOTH the project selection and siting council application stages, the applicant should be required to indicate if the project is located on drinking water watershed source protection or aquifer protection land. This would not be burden on the applicant with the development of the Public Water Supply map on DPH's website.	Alicea Charamut

Information Needs	Attributed to
Provide history of source water protection PA-85-279 et al per the 1980/81 drought	DPH

Considerations	Attributed to
It is important as we try to protect watershed lands that any changes do not limit the ability of a water company to install renewables on any water company land. The expectation is that any work would be completed in a way to continue to protect water supply.	Dan Lawrence
Recognize that CSC and DEEP have overarching authority over the development of solar projects and that both pay particular attention to stormwater runoff	Fred Klein
Current laws should be reviewed to determine if changes are needed. For example, DEEP has added Appendix I to the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities in order to reduce adverse impacts of large-scale solar arrays.	Fred Klein

Other

- How best to protect drinking water source waters and also increase Connecticut's supply of renewable energy.
- The interaction of various agencies in the review and approval process of projects proposed on privately owned land in public drinking water recharge areas. What is the cumulative effect?
- How best to incentivize development of clean energy projects on existing degraded or non-natural locations, so long as they are suitable, and reward developers that use these sites.

Next Steps	Attributed to
Review current laws	DPH

Recommendations	Attributed to
Update current laws, building on work from the past three decades	DPH
Develop a document/plan that contains policies for all of the state's water resources	DPH
Review barriers to siting solar projects on disturbed sites, rooftops, brownfields, etc. and incentivize solar projects in those areas while providing disincentives for use of natural lands that are not compatible with solar array development, such as forests and wetlands	John Hudak
Promote renewable energy development to offset power demands of water and wastewater facilities.	John Hudak
Design incentives for brown field developments	Fred Klein
Give municipalities the ability to have a preference/priority for solar siting in their community like they have with telecommunications projects. This would be a legislative change.	Charles Viddich
Involve the public earlier and more effectively in the approval process	Margaret Miner
Review and rationalize the permitting process and flow chart from concept to lights on.	Margaret Miner
The Water Planning Council should consider reviewing and commenting on the 2020 Draft Integrated Resources Plan with water resource protection in mind.	Alicea Charamut

Considerations	Attributed to
DEEP has added Appendix I to the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities in order to reduce adverse impacts of large-scale solar arrays.	Fed Klein

APPENDIX A: PRESENTATIONS AND SUPPORTING INFORMATION

Department of Public Health (DPH) – link to Select Connecticut Statutes and Regulations for the Protection of Public Drinking Water Sources

Council on Environmental Quality (CEQ) – Solar Energy Facilities in Watersheds, Peter Hearn

Connecticut Siting Council – Siting Council Review of Energy Projects, Melanie Bachman

The Complexity of Siting Solar Projects in Connecticut, Noel Lafayette, Solar CT

Rivers Alliance of CT - Request for a moratorium on solar installations

Rivers Alliance of CT - Beyond Carbon: Ecosystem Services of Natural Resources and Climate Change, Alicea Charamut

Additional information provided by Fred Klein on solar installations, the CSC siting process, and DEEP's stormwater management project

DEEP's new Appendix 1, Stormwater Management, Solar Array Construction Project

Links to the recordings of the Workgroup's meetings of October 16, 2020, November 18, 2020, December 11, 2020, and January 8, 2021

APPENDIX B: Original Watershed Lands Group Final Draft Report

Final Draft 1-12-21

REPORT FROM THE WPCAG WORK GROUP ON (SOURCE-WATER) WATERSHED LANDS
DISCUSSIONS ON THE SITING OF RENEWABLE-ENERGY PROJECTS ON SOURCE-WATER LANDS
PRIMARY FOCUS: SOLAR FACILITIES

Goal: To ensure protection of high-quality water by protection of natural land on the watershed and make recommendations for better protection if needed.

Background:

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In July 2019, WPCAG wrote to DPH with questions as to the criteria used by DPH for siting solar facilities on Class I and II lands. In a letter from DPH (October 2019) and a meeting with DPH staff (November 2019) and various subsequent discussions, DPH reviewed for us the enabling statutory language and referenced several approved projects. DPH's general statement was that it does not permit activities that would harm the purity or adequacy of the public water supply. DPH does not have a separate list of criteria for green energy projects.

Subsequently, the group's attention turned to the siting of solar facilities on source-water lands NOT owned by a water company. These are sometimes called Class I and Class II-like lands.

In 2020, the workgroup concentrated on larger, commercial solar installations on Class I and Class II-like lands. We received relevant information from water companies, clean-energy business representatives, environmental groups, DPH, DEEP, the Connecticut Siting Council (CSC), and Rivers Alliance of Connecticut. The Council on Environmental Quality (CEQ) presented a

PowerPoint report on the recent law and actual sitings of solar projects on source-water watersheds, core forests, and prime agricultural soils. The present application at the CSC for a solar array on private forested land on the Regional Water Authority's Lake Whitney Reservoir watershed in Hamden has led to more public awareness of the issue.

Please refer to the following attachments/links for specific information presented:

***Department of Public Health (DPH) – link to Select Connecticut Statutes and Regulations for the Protection of Public Drinking Water Sources**

***Council on Environmental Quality (CEQ) – Solar Energy Facilities in Watersheds, Peter Hearn**

***Connecticut Siting Council – Siting Council Review of Energy Projects, Melanie Bachman**

***The Complexity of Siting Solar Projects in Connecticut, Noel Lafayette, Solar CT**

***Rivers Alliance of CT - Request for a moratorium on solar installations**

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***Additional information provided by Fred Klein on solar installations, the CSC siting process, and DEEP's stormwater management project**

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Issues Requiring Further Discussion:

Please note that the following are divided into two areas: those within the purview of the Watershed Lands Workgroup and Other (which includes issues outside the mission of the workgroup but may be of concern to the WPCAG or WPC). As stated on the Water Planning Council website, 12/20/15, "The WPCAG Watershed Lands Workgroup was established by the WPC in 2012 to review and determine the adequacy of current statutory/regulatory provisions to protect public water supplies and maintain Class I and II lands, as well as comparable lands that are not owned by water companies."

Watershed Lands Workgroup Purview:

***The involvement of DPH in the review and approval of development applications on Class I & II-like land. (80% of drinking water watershed land in Connecticut is not owned by water companies.)**

***The roles of various agencies in the review and approval of green energy projects and other projects on privately owned land in public drinking water watershed and aquifer areas.**

***The transparency of the process involved in approval of projects on Class I & II-like land and the need for more information, outreach, and public participation. This process could involve DEEP, DPH, local authorities, and the CSC.**

Other:

***Overarching question: how best to protect drinking water source waters and also increase Connecticut's supply of renewable energy.**

***The interaction of various agencies in the review and approval process of projects proposed on privately owned land in public drinking water recharge areas. What is the cumulative effect?**

***How best to incentivize development of clean energy projects on existing degraded or non-natural locations, so long as they are suitable, and reward developers that use these sites.**

Recommendations received to date:

***From DPH:**

1. Provide a history of source water protection PA-85-279 et al per the 1980/81 drought.

2. Review and update current laws, building on work from the past three decades.

3. Consider land areas that protect our drinking water quality as unique and irreplaceable.

4. Develop a work team to draft policy, etc.

5. Review and approval of development proposals on a watershed basis.

6. Develop a document/plan that contains policies for all of the state's water resources.

***From Joe Welsh**

More consistent messaging to local land use boards on the importance of protecting drinking water watershed land.

***From Dan Lawrence:**

1. It is important as we try to protect watershed lands that any changes do not limit the ability of a water company to install renewables on any water company land. The expectation is that any work would be competed in a way to continue to protect water supply.

2. Look to develop a technical group to address the concerns related to impacting watershed land and protection of water supply. This group could be made up of technical experts, Siting Council, CTDEEP, CDPH, water companies, and municipalities to work through the concerns and develop criteria that allows for the implementation of renewable energy solutions and works to protect water supplies.

***From John Hudak:**

1. Establish state policies that recognize the critical importance of forest preservation to the protection of public water supplies. Forestlands are considered to be the most beneficial watershed land cover protecting drinking water sources, as noted by the American Water Works Association, the US Endowment for Forestry and Communities, and US Forest Service National Forest to Faucets partnership.

2. (Paraphrased) – Review barriers to siting solar projects on disturbed sites, rooftops, brownfields, etc. and incentivize solar projects in these areas., while providing disincentives for use of natural lands that are not compatible with solar array development, such as forests and wetlands.

3. Consider adding DPH review along with DEEP and DoAg to PA17-218 for CSC renewable energy project petitions within public water supply watersheds and Aquifer Protection Areas, applying the Class I and II permitting standard of no significant impact to the purity and adequacy of the public water supply.

4. Promote renewable energy development to offset power demands of water and wastewater facilities.

***From Denise Savageau:**

Consider adding a question(s) to the CSC application asking whether a project is in a drinking water watershed or aquifer protection area. An example is the Town of Greenwich IWC application.

***From Fred Klein:**

Design incentives for brown field developments and couple them with disincentives for clear cutting about X acres of land, similar to Massachusetts.

***From Brad Parsons:**

Solar applications to the CSC should also be sent to the pertinent water company. This can be done by including the requirement in the CSC guidelines.

***From Charles Videch:**

Give municipalities the ability to have a preference/priority for solar sitings in their community like they have with telecommunications projects. This would be a legislative change.

***From Alicea Charamut:**

Request the Water Planning Council support the DPH GIS mapping proposal and use GIS data for the "front-end decision-making process in the siting of solar projects," in the completion of an application, and in the review of applications.

***From Margaret Miner:**

1. **Involve the public earlier and more effectively in the approval process**
2. **Review and rationalize the permitting process and flow chart from concept to lights on.**