



# Solar Projects

Maine Department of Environmental Protection  
Land Bureau  
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# Solar projects, as intended, with meadow like conditions.



# Issues observed during inspections

- \*Not following permit terms and conditions

- \*Opening to much acreage, underestimating stabilization methods, cost, and timelines

- \*Lack of environmental crews, and resources to correct issues

- \*Not properly installing erosion and sediment controls

- \*Lack of urgency to correct violations (multiple instances of Department waiting over a 6 months for company to start corrective actions)

- \*Storm water design is modeled for meadow conditions, structures get overwhelmed when rain events occur when site is wide open and unvegetated, especially during winter construction timeframe



# Exposed soils with no stabilization

Solar project:  
30 acres open

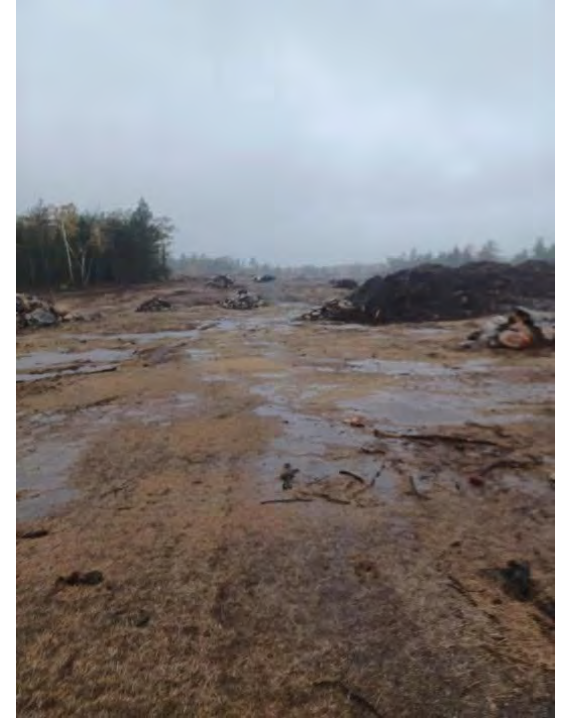


Solar project:  
30 acres open

Solar project:  
18 acres open



# Spoils piles with no stabilization practices



# Construction entrances not stabilized



Entrance road not properly rocked or ditched, causing failure and discharge to adjacent wetland



No stabilized rock entrance, defined road or parking area. Poor entrance causing discharge to wetland and unnamed stream





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# Improper installation of BMP's



Silt sock floating with poor ground contact causing discharge to wetland



Straw Wattle, overwhelmed and not anchored







Silt Fence not  
keyed in,  
providing no  
protection





Silt fence not keyed, placed in drainage swale discharging to wetland of special significance and unnamed stream



Silt Fence not sited at edge of disturbance, and not keyed in, discharging to unnamed stream



# Poor maintenance practices



Water is no longer in constructed ditch



Sediment basin at capacity and no longer functioning



Silt fence over-topped



Silt sock not installed on contour and directing flow to unnamed stream



Silt fence not continuous, and not keyed in



Failing sediment basin discharging to unnamed stream



Silt Fence overwhelmed and not maintained, discharging to unnamed stream



# Observed Impacts to Protected Natural Resources



Alder Brook



Forested Wetland



Unnamed Stream





Left image: unnamed stream, inundated with sand for approximately  $\frac{1}{4}$  mile. Total loss of functions and values. No corrective action from licensee in over a year

Right image: unnamed stream. It took licensee 118 days to start corrective actions.





Unnamed stream



Unpermitted wetland alteration and discharge





Discharge and fill to stream and wetland



Discharge to wetland



**Discharge to wetland with mapped habitat, silt fence not keyed in.  
Multiple requests for corrective action since September have gone unanswered.**



# Discharge Event at Kennebec River

- Exposed 30-acre solar site
- 1 inch of rain over 30 acres = 814,620 gallons stormwater
- Sediment was directed to Kennebec River via ditch from unstable solar site



Assuming just  $\frac{1}{4}$  inch of soil loss:

$\frac{1}{4}$  inch x 30 acres = 1,000 cubic yards of sediment discharge



The impacts have been observed to be far reaching, water from a fully open 50-acre site caused sediment to enter a stream, and discharge to Lovewell Pond – approximately one mile away.



# Lovewell Pond is seen in the distance.

Solar Site has been discharging to Lovewell Pond for the past year with no corrective action

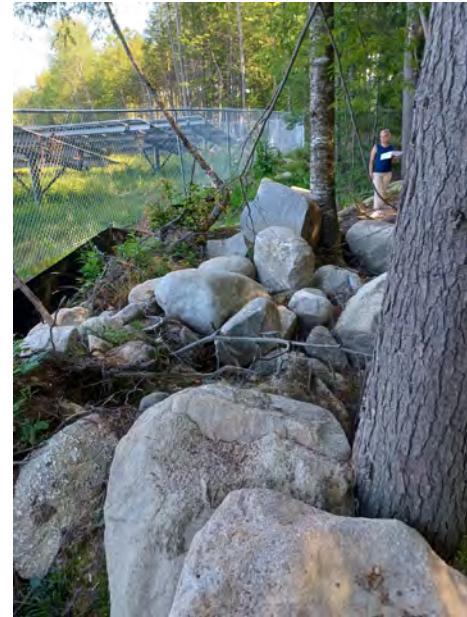


**Reasons for lack of meadow: compaction, loss of organic soils, lack of hay / straw mulch, lack of nitrogen due to ECM and wood chip decomposition**





Contrary to approved plans, fill abandoned within 25 feet of stream; fill now cannot be removed due to proximity of solar panels and fence



# Equipment traffic during mud season causing soils that are difficult to stabilize



Solar Project causing wetland discharge (left);  
Solar project causing stream discharge (right)









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