

**ENF**

**Environmental  
Notification Form**

For Office Use Only  
Executive Office of Environmental Affairs

EOEA No.: 13238  
MEPA Analyst: Nick ZAVOLAS  
Phone: 617-626-1030

The information requested on this form must be completed to begin MEPA Review in accordance with the provisions of the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: Connecticut River Water Withdrawal at Four Star Farms		
Street: Pine Meadow Road		
Municipality: Northfield	Watershed: Connecticut River	
Universal Tranverse Mercator Coordinates:	Latitude: 42 37' 46" North Longitude: 72 29' 06" West	
Estimated commencement date: complete	Estimated completion date: 1987	
Approximate cost: \$25,000.00	Status of project design: 100%	%complete
Proponent: Four Star Farms, Inc.		
Street: 496 Pine Meadow Road		
Municipality: Northfield	State: MA	Zip Code: 01360
Name of Contact Person From Whom Copies of this ENF May Be Obtained: Bruce Griffin		
Firm/Agency: New England Environmental	Street: 9 Research Drive	
Municipality: Amherst	State: MA	Zip Code: 01002
Phone: (413) 256-0202	Fax: (413) 256-1092	E-mail: bgriffin@neeinc.com

- Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?  
 Yes  No
- Has this project been filed with MEPA before?  
 Yes (EOEA No. \_\_\_\_\_)  No
- Has any project on this site been filed with MEPA before?  
 Yes (EOEA No. \_\_\_\_\_)  No
- Is this an Expanded ENF (see 301 CMR 11.05(7)) requesting:
- |   |                              |  |
|---|------------------------------|--|
| a Single EIR? (see 301 CMR 11.06(8))            | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| a Special Review Procedure? (see 301 CMR 11.09) | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| a Waiver of mandatory EIR? (see 301 CMR 11.11)  | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| a Phase I Waiver? (see 301 CMR 11.11)           | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

Identify any financial assistance or land transfer from an agency of the Commonwealth, including the agency name and the amount of funding or land area (in acres):

Are you requesting coordinated review with any other federal, state, regional, or local agency?  
 Yes (Specify: DEP [water mgt.] and USACOE)  No

List Local or Federal Permits and Approvals: Request for Determination of Applicability  
(filed February 24, 2004)  
USACOE Permits  
(Ch. 404 and Ch. 10, filed concurrently with ENF)

Which ENF or EIR review threshold(s) does the project meet or exceed (see 301 CMR 11.03):

- |   |                                       |  |
|---|---------------------------------------|--|
| <input type="checkbox"/> Land             | <input type="checkbox"/> Rare Species | <input type="checkbox"/> Wetlands, Waterways, & Tidelands      |
| <input checked="" type="checkbox"/> Water | <input type="checkbox"/> Wastewater   | <input type="checkbox"/> Transportation                        |
| <input type="checkbox"/> Energy           | <input type="checkbox"/> Air          | <input type="checkbox"/> Solid & Hazardous Waste               |
| <input type="checkbox"/> ACEC             | <input type="checkbox"/> Regulations  | <input type="checkbox"/> Historical & Archaeological Resources |

Summary of Project Size & Environmental Impacts	Existing	Change	Total	State Permits & Approvals
<b>LAND</b>				<input type="checkbox"/> Order of Conditions <input type="checkbox"/> Superseding Order of Conditions <input type="checkbox"/> Chapter 91 License <input type="checkbox"/> 401 Water Quality Certification <input type="checkbox"/> MHD or MDC Access Permit <input checked="" type="checkbox"/> Water Management Act Permit <input type="checkbox"/> New Source Approval <input type="checkbox"/> DEP or MWRA Sewer Connection/Extension Permit <input type="checkbox"/> Other Permits <i>(including Legislative Approvals) – Specify:</i>
Total site acreage	9.18 acres			
New acres of land altered		0.05 acre		
Acres of impervious area	0	0.03 acre	0.03 acre	
Square feet of new bordering vegetated wetlands alteration		0		
Square feet of new other wetland alteration		0		
Acres of new non-water dependent use of tidelands or waterways		0		
<b>STRUCTURES</b>				
Gross square footage	n/a			
Number of housing units	n/a			
Maximum height (in feet)	n/a			
<b>TRANSPORTATION</b>				
Vehicle trips per day	n/a			
Parking spaces	n/a			
<b>WATER/WASTEWATER</b>				
Gallons/day (GPD) of water use	unknown	0.167M	0.167M	
GPD water withdrawal	0	0.167M	0.167M	
GPD wastewater generation/treatment	0	0	0	
Length of water/sewer mains (in miles)	0	0	0	

**CONSERVATION LAND:** Will the project involve the conversion of public parkland or other Article 97 public natural resources to any purpose not in accordance with Article 97?

Yes (Specify \_\_\_\_\_)  No

Will it involve the release of any conservation restriction, preservation restriction, agricultural preservation restriction, or watershed preservation restriction?

Yes (Specify \_\_\_\_\_)  No

**RARE SPECIES:** Does the project site include Estimated Habitat of Rare Species, Vernal Pools, Priority Sites of Rare Species, or Exemplary Natural Communities?

Yes (Specify: PH43, WH228)  No

**HISTORICAL /ARCHAEOLOGICAL RESOURCES:** Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?  
 Yes (Specify \_\_\_\_\_ )  No

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources?

Yes (Specify \_\_\_\_\_ )  No

**AREAS OF CRITICAL ENVIRONMENTAL CONCERN:** Is the project in or adjacent to an Area of Critical Environmental Concern?

Yes (Specify \_\_\_\_\_ )  No

**PROJECT DESCRIPTION:** The project description should include (a) a description of the project site, (b) a description of both on-site and off-site alternatives and the impacts associated with each alternative, and (c) potential on-site and off-site mitigation measures for each alternative (You may attach one additional page, if necessary.)

(a) The site of the withdrawal is a 9.18-acre parcel of land adjacent to the Connecticut River, west of Pine Meadow Road in Northfield. It is owned by Northeast Generation Company, with farming rights owned by Four Star Farms. It is predominantly a flat, actively farmed field presently used to grow sod. Between the field and the river is a narrow strip of trees and shrubs, with an eroding embankment next to the river. The embankment is steep and several feet high. Surrounding this parcel are more flat fields belonging to Four Star Farms and other farms.

At one point along the embankment, an old farm road or ramp provides gently sloping access to the river. This ramp is surrounded by trees, and has the effect of extending the forested embankment eastward into the adjacent field. It predates the current ownership of Four Star Farms. The surface of the ramp has been stabilized with pre-cast concrete slabs, laid on the surface. At the bottom of the ramp, next to the water, is a level pad. The surface of the pad is set slightly higher than Mean Annual High Water. The side slopes of the pad, facing the river, are covered with rip-rap. During the growing season (May through September), a diesel pump is located on the pad and connected by pipes to the water in the river and the irrigation system in the fields above. This system has been in use since 1987.

(b) Off-site alternatives to the present system are limited to adjacent and nearby lots, owned by Northeast Generation Company, which could supply water from the Connecticut River to the irrigated fields of Four Star Farms. The current withdrawal location was chosen in 1987 because it provided access to the river with minimal disturbance of the existing topography. At the time, it was an eroded ramp or farm road leading from the adjacent field down to the river. The surface was regraded and stabilized with the concrete slabs. A level area near the river was created for the pump.

Off-site and on-site alternative locations for access to the water of the river would necessitate excavation of the steep embankment in a less disturbed location. This would involve cutting of trees and shrubs and excavation on and above the embankment, which would cause greater alteration of protected resource areas (Bank, Bordering Land Subject to Flooding, and Riverfront Area) than the existing system altered in 1987. It would also involve excavation into a productive farm field, and loss of that agricultural resource. Finally, an alternative river access point would involve possible excavation of an archaeological site. Other archaeological sites have been found in this stretch of the Connecticut River. The installation of the existing system in 1987 did not require excavation.

Alternatives to the withdrawal of Connecticut River water would necessitate accessing groundwater or another source of surface water. Both have been investigated, and proven not to be feasible. A well was drilled in 1999 which produced 30 gallons of water per minute in permeable material between 8 feet and 28 feet in depth. No additional flow was produced in clay down to 495 feet, at which point drilling

**PROJECT DESCRIPTION:** (b) discussion of alternatives, continued.

was abandoned. Other wells drilled in this section of town exhibit the same glacial lakebed surficial geology, with little or no water available in a thick clay layer.

The option of creating a farm pond with a surface water source was investigated with NRCS advisers in 2003. The only nearby source of surface water (aside from the Connecticut River) is Pine Meadow Brook, a tributary to the river which flows along one of the Four Star Farms sod fields. However, this brook is reported not to be reliably perennial, and the flow was deemed insufficient for the volume of water needed by the farm during dry spells. If a farm pond were to be created, it would involve diversion of flow from the brook; alteration of Bank, Bordering Land Subject to Flooding, and Riverfront Area; and conversion of productive agricultural crop land into the pond.

The no-build option (after the fact) would mean abandoning the existing withdrawal access and also abandoning use of Four Star Farms to grow sod. Commercial sod farming is not possible in most years without irrigation.

(c) Mitigation for the existing river access has included a major Connecticut River bank stabilization project in 1999. Like the withdrawal site, this project was located on Northeast Generation Company land farmed by Four Star Farms. 460 linear feet of unstable, eroding Bank were regraded and stabilized (as compared to approximately 48 linear feet of Bank altered to build the pump pad), using bioengineering techniques to the greatest practicable extent. Willow stakes and other native plants were established on the restored Bank, which is now heavily vegetated and has successfully resisted erosive forces since installation.

Mitigation for alternative access to the river for withdrawal on-site or off-site might involve similar Bank stabilization, as there continues to be erosion of the Bank at other locations along this stretch of the River. However, as the existing access has already been built, and a substantial Bank stabilization completed, it would seem that discussion of mitigation for building another, similar access is superfluous.

Mitigation for groundwater withdrawal or surface-water impoundment is not at issue, because neither of these options is feasible.

The no-build alternative would not require mitigation.