

WHY VERMONT YANKEE SHOULDN'T BE DUMPING THERMAL POLLUTION INTO THE CONNECTICUT RIVER

CRWC has conducted an expert review of Entergy's case for continuing its thermal pollution using two established and highly credible firms, HydroAnalysis Inc and Midwest Biodiversity Institute.

Both experts agreed the Vermont Agency of Natural Resources in making decisions about the health of the Connecticut River should not rely on the case presented by Entergy.

Background on regulating thermal pollution

- Any discharges of pollution to surface waters need a permit under the Clean Water Act, including heat from power plants like Vermont Yankee.
- As recently affirmed by the Vermont Supreme Court, these thermal discharges must meet the VT Water Quality Standards that ensure that fish can survive and thrive.
- The Vermont water quality standards in the area of the Vermont Yankee facility govern and they protect cold-water fish species Connecticut River.
- Vermont water quality standards allow dischargers to increase the ambient river temperature by up to 1° F. Increases beyond this require ANR to issue a variance.
- To obtain a variance, a discharger must demonstrate that its proposed level of thermal pollution will protect aquatic species in the area of the river affected by the discharge.
- The EPA has specific guidance on what an applicant needs to demonstrate to ANR before they issue a variance.

Background on Vermont Yankee's discharge

- VY was built with cooling towers in 1972 so it could be run without any discharges of hot water to the river because of concerns by the State of Vermont.
- In 1974, VY was allowed to study thermal discharges to the river in order make a case for not using its cooling towers in the winter.
- In 1978, 1990, and 2004 VY submitted cases to justify increasingly more thermal pollution over longer periods of the year so that it can now increase the temperature of the river up to 5° F in the summer and 13° F in the winter.
- VY's current permit to discharge thermal pollution has been expired since 2006.

What the CRWC experts found

- Despite VY's own 1978 data showing its thermal pollution travelled 55 miles to Holyoke, MA; Entergy in 1978, 1990, and 2004 looked at only 0.5 miles of river below the plant.

- Despite having over 240 days of temperature data for use in its 2004 model, Entergy picked just 16% of the data to produce model outputs.
- Despite paying for a sophisticated model designed to handle the many dynamic conditions – river flow, temperature, plant operation – that vary widely and independently, Entergy selected only 10 fixed scenarios for its model.
- Entergy made false assumptions about the river's thermal characteristics based even when its own reports contradicted those assumptions.
- The water quality model failed to meet five requirements in EPA's guidance for an acceptable application to pollute.
- In evaluating the impact of thermal pollution on fish, there were too few species considered and the list leaned too heavily toward warm-water species.
- Entergy used out-dated and limited analyses to determine how hot water affects fish.
- Entergy does not use actual river temperatures when determining the effects of their thermal discharge instead relying on formula-computed temperature that gives a misleading picture of river temperature.
- Entergy is using a formula first established in 1978 to compute the temperature of the Connecticut River that assumes steady-state river flows and plant operations. The river is highly variable in flows as are plant operations, making the formula inappropriate and invalid.
- ANR cannot verify compliance as it does not collect from Entergy readily available heat rejection data that is necessary to determine the accuracy of the formula and Entergy's reports.
- Actual river temperature data collected by Entergy itself and the U.S. Fish & Wildlife Service show temperature increases at the fish ladder and down river of the plant exceed the stated allowable temperature increases in the discharge permit for many days each year.