



[CLASSIFIEDS](#) [AUTOMOBILES](#) [EMPLOYMENT](#) [REAL ESTATE](#) [APARTMENTS](#) [NJ LOTTERY](#)
[SUBSCRIBE](#) [PRESSPIX](#) [REWARDS](#) [PRESS TO WIN](#) [JERSEY SHORE GUIDE](#)

ASBURY PARK PRESS
 THE JERSEY SHORE'S
 LARGEST NEWS
 SOURCE



Search

[BACK ISSUES >>](#)

[CUST. SERVICE >>](#)

[WEB EXTRAS >>](#)

[HOME](#)

[MONMOUTH](#)

[OCEAN](#)

[STATE](#)

[SPORTS](#)

[NATION/WORLD](#)

[POLITICS](#)

[OPINION](#)

[BUSINESS](#)

[ENTERTAINMENT](#)

[JERSEY LIFE](#)

[TECHNOLOGY](#)

[SHORE](#)

[COMMUNITY](#)

[TROUBLE SHOOTER](#)

[DAY IN THE LIFE](#)

[PHOTOGRAPHY](#)

[OBITUARIES](#)

[CONTACT US](#)



Scientists to use dye to track plume off N.J.

Published in the Asbury Park Press 5/01/04

By TODD B. BATES
ENVIRONMENTAL WRITER

This week, former miler Robert J. Chant felt like he was waiting for the gun to go off at a track meet.

Chant's latest race begins shortly -- very likely tomorrow -- when nontoxic red dye is released into the ocean off Sandy Hook in an unprecedented experiment aimed at tracking the vast plume of the Hudson River, according to scientists.

"We've got . . . 20 million people here impacting this system very significantly," said Chant, assistant professor of physical oceanography at Rutgers University's Institute of Marine and Coastal Sciences. "The question is, how far away does this impact travel?"

Cynthia A. Zipf, executive director of Clean Ocean Action, a Sandy Hook-based anti-pollution coalition, questioned the need for the study, saying, "if it's an assessment to see whether or not we can dump more stuff (contaminants of any kind) into the ocean, I think that's wrong-headed."

Chant, principal investigator for a five-year, \$4.2 million study funded by the National Science Foundation, said the study involves basic research and a number of institutions are involved.

"If there's people who want to put more sewage in the ocean, if people want to fight it, they got to have facts," said Chant, 42, a Highland Park resident. "They just can't rely on soft science instead of hard science."

The Hudson River plume flows into the ocean at a rate of 500 billion gallons a day, and preliminary studies indicate that it tends to sweep southward along the New Jersey coast, according to Rutgers.

The plume, miles wide and visible in satellite images, includes toxic metals, nutrients that serve as algae fertilizers, sediment, fecal bacteria and trash from the vast New York-New Jersey Harbor area, according



CONTESTS

- [Win a Grand](#)
- [Auto Sweepstakes](#)

PROMOTIONS

- [Earn \\$600/mo.](#)
- [Kids Stuff Club](#)
- [Whatever Club](#)

MARKETPLACE

- [Online Coupons](#)
- [Vacation Homes](#)
- [Fishing](#)
- [Restaurants](#)
- [Shopping Mall](#)
- [Special Sections](#)
- [INJersey.com](#)
- [Virtually Everything](#)

ADVERTISING

- [Product Rates](#)

LISTINGS

- [Jersey Autos](#)
- [Submit Club/Bar Schedules](#)
- [Weddings](#)
- [Engagements](#)
- [Anniversaries](#)
- [Personals](#)
- [Births](#)
- [In Remembrance and Thank You's](#)
- [Hot Properties](#)
- [INJersey Directory](#)

to experts. The plume includes the flow from the Raritan, Passaic and Hackensack rivers and other tributaries.

The study comes as New York City is in the early stages of studying the feasibility of a pipeline carrying treated sewage effluent to the ocean. The city Department of Environmental Protection is "still looking at the possibility . . . as one alternative," said Natalie Millner, an agency spokeswoman.

In December 2002, a city DEP official said the agency hadn't given serious attention recently to the possibility of an ocean pipeline carrying, in theory, the effluent of seven of the city's 14 sewage treatment plants. The proposal had come up a year or so before, he said then.

Yesterday, Chant and other researchers were busy getting ready for research efforts aboard the Cape Hatteras, a 135-foot research vessel docked temporarily at Miller's Launch on Staten Island.

The researchers planned to cruise up the Hudson River today to test their equipment and pinpoint how far salt water reached up the river and then cruise off the coast. After the dye is released tomorrow or perhaps Monday, they will track it for about five days and possibly 100 miles, according to scientists and a Rutgers statement.

No one has ever done this before, said Chant, referring to the range of measurements to be made in tracking the dye and plume.

"It's exciting," said Liannea P. Litz of Arlington, Mass., a 28-year-old graduate student at the University of Massachusetts at Boston who is running total organic carbon and total nitrogen analyzers on the Cape Hatteras.

"It's a lot of work up front," Litz said. "It's neat to get out on the water, do something different and get out of the lab."

The five-year study, called the Lagrangian Transport and Transformation Experiment (LaTTE), involves using un-manned submarines called gliders, satellites, coastal radar and other technologies, according to a Rutgers statement.

The Hudson plume has been detected as far south as Cape May, Chant said. But the plume potentially was hugging the Long Island coast yesterday.

Researchers will study how nitrogen, lead, cadmium, mercury and other substances are transported by the plume at different depths and under different conditions. They also will study microscopic phytoplankton and zooplankton and how metals and nutrients enter the base of the food chain, according to Rutgers.

Zooplankton, tiny animals, eat phytoplankton, which are tiny plants, and small fish eat zoo-plankton.

Scientists will add data to com-puter models for predicting plume behavior and content under a wide range of condi-tions. Such information will be useful, for example, in predict-ing potentially dangerous algae blooms along the coast and making decisions about sewage disposal, according to Rutgers.

Dye will be released once this year, twice next year and twice in 2006, Chant said.

The study is expected to be completed by 2008, according to Rutgers.

"I think (the study is) a great idea," said Dennis J. Suszkows-ki of Freehold, science director at the Hudson River Founda-tion, a nonprofit science and environmental research organi-zation.

"I think any more insights into how waters . . . move in and out of the system and in partic-ular how harbor waters dis-perse into (the ocean) is impor-tant," Suszkowski said.

He called Chant "a superb oceanographer."

"He'll do an analysis that will be first-rate," Suszkowski said.

Chant said two underwater gliders have been deployed in the plume within the last week or so, are collecting data and "can fly for about a month."

Another vessel, the Connecti-cut, will be doing more tradi-tional biological sampling, he said.

Bob Chen, associate professor of marine chemistry at UMass Boston, oversees the ECO-Shuttle that will be towed be-hind the Cape Hatteras to col-lect data on water temperature, salinity, depth, chlorophyll a (a measure of algae), particles, "colored dissolved organic mat-ter" and the dye.

"If everything works, it should be easy" to track the dye, Chen said.

Todd B. Bates: (732) 643-4237 or tbates@app.com

[Go Back](#) | [Subscribe to the Asbury Park Press](#)



Copyright © 1997-2003 IN Jersey.
Use of this site signifies your agreement to the [Terms of Service](#) (updated 01/01/03).
Site design by [IN Jersey](#) / [Contact us](#).