The University of Vermont has won a three-year, $6.7 million National Science Foundation grant that will let scientists apply computer power to better understanding the pollution problems of Lake Champlain.

UVM will announce the grant to the Vermont Experimental Program to Stimulate Competitive Research today.

The funds will be used in three ways.

First, the money will support a research team of scientists and engineers who will feed data about the lake into high-speed computers running self-learning programs that evolve as they work.

The computer analysis, scientists believe, "will reveal hidden patterns that emerge from the complex interaction between water, organisms, pollution and other forces within the watershed," UVM said in a news release.

Understanding those patterns could help policymakers as they devise strategies to reduce pollution.

Second, the grant will pay for the Streams Project, in which high school students and their teachers will work with professors at St. Michael's and Middlebury colleges on a long-term study of streams in the Lake Champlain Basin.

Finally, the grant will fund two new initiatives in the Small Business Innovation Research program. One effort will support new businesses in their use of UVM research labs and other facilities.

The second program will award $10,000 grants to four Vermont companies or entrepreneurs with "long-shot ideas" that could result in technology breakthroughs.