



Legislative Fiscal Bureau

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May, 2021

Joint Committee on Finance

Paper #643

UW-Superior Lake Superior Research Institute Partnership (UW System)

[LFB 2021-23 Budget Summary: Page 610, #15]

CURRENT LAW

UW-Superior's Lake Superior Research Institute (LSRI) was established in 1967 and formally recognized by the Board of Regents in 1969. The LSRI's mission is to conduct environmental research and provide services that directly benefit the people, industries, and natural resources of the Upper Midwest, and the Great Lakes Region; provide non-traditional learning and applied research opportunities for undergraduate students; and foster environmental education and outreach in the Ports of Duluth and Superior and surrounding communities.

DISCUSSION POINTS

1. The Governor's proposal would provide \$402,500 GPR in 2021-22 and \$500,000 GPR in 2022-23 with 5.0 positions beginning in 2021-22 in a new, annual appropriation for a UW-Superior Lake Superior Research Institute (LSRI) partnership program. The Board of Regents would be required to establish a partnership program between UW-Superior's LSRI and northern Wisconsin communities and fund costs for the program from this appropriation. The program would be designed to accomplish all of the following objectives: (a) remove barriers and provide easy access to research and testing services for homeowners and businesses; (b) provide follow-up assistance and recommendations to solve environmental issues; (c) secure external funding to solve environmental issues; (d) to develop highly visible outreach events; and (e) create a direct conduit to fully equipped laboratory space and scientific expertise and to fully integrate the institute as the applied-environmental research arm for the region. The program would be required to utilize permanent staff and student employees to coordinate directly with county health and conservation departments and with state, tribal, and local entities to develop regional priorities and solutions.

2. Currently, the LSRI has 20 academic staff, three limited-term employees, and seven

undergraduate students with expertise across academic fields including: analytical chemistry, aquatic invasive species monitoring and outreach, benthic and zooplankton taxonomy, habitat restoration, microbiology, sediment and aquatic toxicology, quality assurance and data management, watershed management and planning, and wetland assessment and monitoring. The LSRI's annual budget varies based on available funding, but for fiscal year 2020-21, LSRI's operating budget is \$1,558,900, of which University funds comprised \$297,100 (\$261,500 GPR and \$35,600 PR) which funded the LSRI director, assistant director, administrative program specialist, part-time office assistant and supplies. The remaining \$1,261,800 covered other staff salary and fringe benefits and was supported by external funds (grants, contracts, and cooperative agreements).

3. Under the Governor's proposal, 5.0 positions would be provided for the LSRI partnership program. The 5.0 positions created under the proposal would include a Northern Wisconsin Environmental Health Program (NWEHP) Director who would develop the framework to create a conduit to fully equipped laboratory space and scientific expertise to facilitate integrating the Institute as the applied-environmental research arm for northern Wisconsin communities. This position would direct all program activities, seek outside funding, and manage the budget for the NWEHP, provide staff leadership, and coordinate with the LSRI director. Three of the newly created positions would have grant-writing responsibilities including: (a) a NWEHP conservation coordinator who would coordinate with conservation departments and conservation stakeholders to develop regional priorities and solutions; (b) a NWEHP laboratory coordinator who would coordinate with health department and businesses to develop regional priorities and solutions and remove barriers to access to research and testing services; and (c) a NWEHP education coordinator who would coordinate all outreach and education needs associated with the NWEHP. The fifth position would be a NWEHP laboratory technician who would conduct laboratory testing to meet the needs of the NWEHP as well as provide customer service to the community.

4. Depending on available funding, services provided by the LSRI currently include: chemical analysis of environmental samples from water, sediment, plankton, fish, and invertebrates including metal analyses, inorganic chemical analyses, measurements of acid volatile sulfides and simultaneously extracted metals, total and dissolved organic carbon, and grain size for sediment samples; E. coli certification; data management, data processing, and data distribution services; field sampling; geographic information systems - including spatial analyses of population distribution data, GIS integration and geo-spatial data collection and interpretation; quality assurance/quality/control program; taxonomy and collection of biological samples; and toxicity testing. The LSRI runs the only state laboratory certified in northwestern Wisconsin for analyzing nitrate, nitrite, and fluoride in drinking water. LSRI staff indicate the LSRI currently analyzes public and business drinking water samples for compliance monitoring of nitrate and nitrite for Douglas County, which the Institute reports to DNR. In the past, staff indicate the LSRI has also conducted water tests for metals and E. coli or total coliform at homeowners' requests. However, metal analyses cost from \$15 to \$20 per sample per metal while nitrate, nitrite, and fluoride analysis cost \$25 per sample, and Institute staff indicate the demand for homeowner water testing exceeds available supplies and funding. Supplies funding provided under the Governor's proposal would provide increased funds for scientific instrumentation, training, and testing supplies.

5. While LSRI has the testing capacity and expertise to be a continued presence in the

region, LSRI staff indicate that the Institute's current reliance on grant funding limits its ability to consistently share its resources with the community. The funding provided under the Governor's proposal would allow LSRI to hire permanent staff who would work directly with county health and conservation departments, state, tribal, and local entities. Providing consistent funding could allow for more ongoing collaborations among community and regional partners.

6. Funding provided under the proposal would also improve accessibility of research and testing, provide long-term assistance on environmental issues and create outreach events to maximize community engagement. For example, using a project grant of \$56,000, LSRI developed, promoted and implemented a pilot study to test 700 privately-owned wells for fluoride concentration and an additional 111 well samples for metals (arsenic, iron, manganese, aluminum, and lead). The intended audience for this community outreach event included homeowners living in 11 northwest Wisconsin counties (Ashland, Barron, Bayfield, Burnett, Douglas, Iron, Polk, Price, Rusk, Sawyer, and Washburn). Homeowners were trained in sample collection and the LSRI provided sample bottle pickups at participating rural health clinics and large community events including county fairs. According to LSRI staff, the project was successful in raising awareness about the need for annual drinking water testing, provided individual homeowners with data about their wells, and provided health officials with a baseline dataset to inform future public health decisions.

7. If the Committee wishes to expand LSRI activities but at a lesser cost, it could provide \$241,500 GPR in 2021-22 and \$300,000 GPR in 2022-23 and 3.0 GPR positions beginning in 2021-22. This would allow LSRI to begin the proposed partnership program with a lesser level of resources, which could be augmented in a subsequent budget request as needed. This funding could be provided in a new appropriation but without specifying the list of activities associated with the higher funding level.

8. If the Committee takes no action on this item, LSRI would not expand its activities as proposed, but could continue operations using base GPR resources and external funds such as grants, contracts, and cooperative agreements.

ALTERNATIVES

1. Provide \$402,500 in 2021-22 and \$500,000 in 2022-23 with 5.0 positions beginning in 2021-22 in a new, annual appropriation for a UW-Superior Lake Superior Research Institute partnership program. Require the Board of Regents to establish a partnership program between UW-Superior's Lake Superior Research Institute and northern Wisconsin communities and fund costs for the program from this appropriation. Specify that the program would be designed to accomplish all of the following objectives: (a) remove barriers and provide easy access to research and testing services for homeowners and businesses; (b) provide follow-up assistance and recommendations to solve environmental issues; (c) secure external funding to solve environmental issues; (d) to develop highly visible outreach events; and (e) create a direct conduit to fully equipped laboratory space and scientific expertise and to fully integrate the institute as the applied-environmental research arm for the region. Require the program to utilize permanent staff and student employees to coordinate directly with county health and conservation departments and with state, tribal, and local entities to develop regional priorities and solutions.

ALT 1	Change to Base	
	Funding	Positions
GPR	\$902,500	5.00

2. Provide \$241,500 in 2021-22 and \$300,000 in 2022-23 with 3.0 positions beginning in 2021-22 in a new, annual appropriation for a UW-Superior Lake Superior Research Institute partnership program.

ALT 2	Change to Base	
	Funding	Positions
GPR	\$541,500	3.00

3. Take no action.

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