FISCAL YEAR 2028
CAPITAL OUTLAY PROJECT REQUEST

Institution Name:	**Saginaw Valley State University**
Capital Outlay Code:	**DTMB File # 344_24114.TYC**
Project Title:	**Lake Huron Environmental Science Research Station**
Project Focus:	■ **Academic** ■ **Research** ■ **Administrative/Support**
Type of Project:	☐ **Renovation** ☐ **Addition** ■ **New Construction**
Approximate Square Footage:	**20,000 sq. ft.**
Total Estimated Cost:	**$15 million**
Estimated Duration of Project:	**FY2024-2030**
Is the Five-Year Plan posted on the institution's public internet site?	■ **Yes** ☐ **No**
Is the requested project the top priority in the Five-Year Capital Outlay Plan?	■ **Yes** ☐ **No**

Project Purpose

Saginaw Valley State University (SVSU) is seeking $11.25 million in state support to assist with a 20,000 sq. ft. building.

The proposed Lake Huron Environmental Science Research Station will be a multi-purpose research facility that contains traditional, general-purpose classrooms, larger meeting spaces, along with research laboratories, and faculty offices. This capital improvement project is intended to construct the first university environmental science research station on Lake Huron to assist with providing data and information for various academic and research purposes.

Scope of the Project

The Lake Huron Environmental Science Research Station located on the waters of the Saginaw Bay and operated by SVSU will offer many various collaborative opportunities with local, state, and federal partners (County Public Health, EGLE, EPA, USGS, NOAA, TNC, MSU-IWR, etc.). The Saginaw Bay and Lake Huron are very important to the Great Lakes ecosystem and economy. Currently, no university-operated research station exists on Lake Huron.

The ecosystem dynamics on Lake Huron are not well understood because of large data gaps for the Lake and various watersheds. Various projects at SVSU, including a recent EPA-funded project, are working to address major data gaps on Lake Huron. This Research Station will involve multiple agencies to study nutrient and sediment transport from tributaries to open water, which would provide key information for the EPA's anticipated delisting of the Saginaw River and Bay Area of Concern by 2030.

A research station on Lake Huron would complement the efforts of many various agencies and universities by enabling direct access for onsite, real-time observations of the Lake and its ecosystem. The real-time observations and monitoring afforded by an on-site research station will provide data and information necessary to adaptively manage the ecosystem for resiliency to various changes. Along with the research activities related to Lake Huron restoration, a research station would serve as an outreach site for the community to showcase the ecosystem and the efforts of the Saginaw Bay Environmental Science Institute of SVSU.

The station would also serve as an educational setting for SVSU classes as well as visiting high-school student programs. Students in the Environmental Science and the Environmental Studies & Sustainability programs at SVSU will benefit from classes held on-site at the Research Station, taking advantage of the direct access to the ecosystem they are studying. Similarly, experiential programs that bring high school students to the Research Station, such as summer internships, will benefit from the accessibility to Lake Huron. The availability of the research station as a teaching location will benefit students at all levels and showcase environmental science education on Lake Huron.

The station would also serve as an educational center for K-12 programs, hosted by SVSU or other entities. Engaging K-12 students with environmental science and STEM benefits the region in numerous ways, including providing the initial stages of workforce development in these areas.

Program Focus of Occupants

The academic programs in the Lake Huron Environmental Science Research Station will include those studying in both the Environmental Science and the Environmental Studies & Sustainability programs; as well as various other science programs at SVSU.

Additional Information:

1. **How does the project enhance Michigan's job creation, talent enhancement and economic growth initiatives on a local, regional and/or statewide basis?**

The creation of the first environmental science research station on Lake Huron is going to be a magnet for freshwater researchers from all over the world. Also, this research station will attract some of the brightest undergraduate students who want to study environmental science to the region. Finally, students enrolled in the program will be entering some of the highest demand jobs in Michigan.

Workforce and Talent Development

As a regional public university, Saginaw Valley State University (SVSU) has a proven commitment to job creation, talent enhancement and economic growth within the Great Lakes Bay Region (Saginaw, Bay, and Midland). Many graduates from SVSU prefer to live and work locally. They are heavily invested in their communities and deeply invested in the future of the region – professionally and economically. An investment in SVSU is really an investment in the future success of Mid-Michigan. Students who complete coursework in this research station will likely go onto work for companies and organizations which

seek graduates in environmental sciences: EPA, EGLE, County Departments of Public Health, Dow, DuPont, as well as many various small organizations and companies located in our Region and State.

Community Partnerships

Community partnerships are an integral part of the culture at Saginaw Valley State University. In 2020-21, over 3,200 SVSU students completed an internship or co-op assignment in business, education, or healthcare. Organizations, such as Dow, DuPont, Consumers Energy, Bay County Health Department, the Nature Conservancy, and EGLE provided internship opportunities to SVSU students. A Lake Huron Environmental Science Research Station will offer many various community partnerships with local, state, and federal partners (County Public Health, EGLE, EPA, USGS, NOAA, TNC, MSU-IWR, etc).

Experiential Learning

Outside of the traditional classroom, SVSU currently has experiential learning environments that enhance student learning. Within the Lake Huron Environmental Science Research Station, there will be various laboratories constructed on-site. As well, a mobile research laboratory and a pontoon boat will be located on-site for students to be able to engage in real time experiential learning on the shores of, or on Lake Huron, as well as in the greater watershed that feeds the lake. These laboratories and opportunities will also attract other academic researchers, providing additional opportunities for SVSU faculty and undergraduate students.

Co-Curricular Opportunities

SVSU has a strong tradition of student engagement, both on campus and in the external community. Environmental science is a broadly interdisciplinary field; with a wide variety of student organizations whose interests overlap. Registered Student Organizations such as the Chemistry Club (an American Chemical Society student chapter), Biology Club, Geography Club, Cardinals for Future, Cardinals for Public Health, Law Club, History Club, and Model United Nations all stand to benefit from the opportunities offered by this facility. The Research Station also will facilitate cross-disciplinary projects, such as engineering design projects related to environmental research, by providing workspace near where the prototypes would be field-tested.

2. How does the project enhance the core academic and/or research mission of the institution?

Saginaw Valley State University's mission is to transform lives through comprehensive, engaged education and experiences that prepare students for tomorrow's challenges and opportunities. In addition, SVSU values:

- Academic exploration
- Student success
- Innovation & institutional excellence
- Ethical behavior
- Finance & environmental stewardship
- Commitment to safety
- Civility
- Diversity, equity, inclusion, and belonging
- Community access, collaboration and success

Our vision is to be widely known for innovative teaching, experiential learning, and our inclusive, welcoming campus. We aspire to be the top choice for those striving for personal and professional success. Our graduates are highly regarded for their outstanding knowledge, leadership, and skills.

Saginaw Valley State University enjoys an outstanding reputation within the Great Lakes Bay Region - a reputation built on strong academic programs and a dedication to serving the people and businesses in this area. SVSU embraces its role as a regional university in attracting and developing world-class talent to compete in a global economy.

We take great pride in our accomplishments to date, but as we look to the future, our vision is to respond to the evolving needs of regional employers and to prepare outstanding graduates from our distinctive programs differentiated on the basis of innovative teaching and experiential learning made possible in large part by state-of-the-art facilities. SVSU has a strong record of engaging students in undergraduate research, a high impact practice that provides multiple benefits for retention and career readiness. This Research Center would provide additional avenues for students to pursue research and be better prepared for post-graduate study or careers. Our graduates will be problem solvers, collaborators, and decision makers who will be ready for careers that contribute to the future success of the region and our state.

The project will enhance the core academic and/or research mission of SVSU as follows:

First, the new research station will assist with facilitating student success through the integration of academic and experiential learning, as well as access to applied research on Lake Huron. This location of this facility will allow us to offer learning opportunities which would not be able to be offered on our current campus. The new station will also create opportunities through access to modern, flexible, and collaborative learning spaces which will also have state-of-the-art technologies.

Second, this research station will become the home for two key academic programs: the Environmental Science program in the College of Science, Engineering and Technology, and the Environmental Studies & Sustainability program in the College of Arts and Behavioral Sciences. Students in both programs will greatly benefit from having access to facilities which meet the learning and research needs of these programs, and the hands-on experiences generated as a result.

Finally, this new building will help enhance our STEM outreach programs with various K-12 schools throughout our Region. Between the new facility and the partnerships that SVSU has with regional STEM programs, this facility will provide access to students and teachers who want to learn more about environmental science. One of the five strategic goals of the University is that our community engagement activities will drive regional and institutional success both locally and worldwide. In 2015, SVSU received the Community Engagement Classification by the Carnegie Foundation for Advancement of Teaching, a distinction attained by less than 10 percent of U.S. colleges and universities. This STEM outreach will help our institution with continuing to receive this classification in the future.

All the activities highlighted, and the resources invested in providing our students with a quality educational experience are consistent with the mission of the University. This new facility aligns well with the University's strategic efforts to increase enrollment, particularly in STEM programs.

3. Describe how the project will address, incorporate, or enhance any equity efforts, policies, or goals for the academic programs within the scope of the project or as a component of your institution and campus at large?

The project will positively affect the understanding of water quality of the Saginaw River, Saginaw Bay, Lake Huron, and potentially the Great Lakes beyond. The make-up of the watershed and affected land areas is very diverse and far reaching and any negative effects of water quality more adversely affect underserved populations. The K-12 outreach and access to the network of researchers from other institutions will provide a positive impact to both SVSU and the region.

4. Is the requested project focused on a single, stand-alone facility? Yes

5. How does the project support investment in or adaptive re-purposing of existing facilities and infrastructure?

Due to this facility being a new facility, there will be minimal re-purposing of existing facilities and infrastructure. The on-campus classrooms and laboratories and facilities which will no longer be used by the Environmental Science program will be re-purposed for use by other high demand programs in the College of Science, Engineering and Technology, such as Chemistry, Biology, and Physics.

6. Does the project address or mitigate any current health/safety deficiencies relative to existing facilities? If yes, please explain.

No.

7. How does the institution measure utilization of its existing facilities, and how does it compare relative to established benchmarks for educational facilities? How does the project help to improve the utilization of existing space and infrastructure, or conversely how does current utilization support the need for additional space and infrastructure?

This new site on Lake Huron would assist with moving specific laboratories to one unified location off-campus and free up laboratory and classroom spaces for other programs in the well-utilized College of Science, Engineering and Technology spaces. The benefit of this facility's location is the proximity to the environmental issues being studied.

*The **SVSU Classroom Utilization Report*** is used to monitor classroom space specifically and this report shows the buildings where environmental science classes are held at nearly 75% during peak times.

8. How does the institution intend to integrate sustainable design principles to enhance the efficiency and operations of the facility?

SVSU building projects have followed LEED standards since 2006 for new construction and major renovations. Several efforts that are designed into our projects are:

- High recycled content building materials
- Environmentally friendly finishes
- High performance glass for optimized energy performance and thermal comfort
- Regionally sourced and manufactured materials

- Energy efficient mechanical building systems with building automation to optimize energy consumption
- Installation of energy efficient LED lighting with use of occupancy sensors and lighting control systems
- White roofing to reduce cooling cost
- Water efficient plumbing fixtures
- Utilize daylight for natural and solar orientation
- Rainwater management for irrigation

9. Are match resources currently available for the project? If yes, what is the source of the match resources?

Yes. A total of $3.75 million of match resources will be available (25%). SVSU will commit University resources of $1 million (6.7%) from capital project reserves, and we will also be seeking alternate funding from donor and federal sources in the amount of $2.75 million (18.3%).

10. If authorized for construction, the state typically provides a maximum of 75% of the total cost for university projects and 50% of the total cost for community college projects. Does the institution intend to commit additional resources that would reduce the state share from the amounts indicated? If so, by what amount?

The project is estimated to cost $15 million. The requested State of Michigan share is $11.25 million (or 75%). SVSU will commit a total of $3.75 million realization of this project which accounts for 25% of the total cost.

11. Will the completed project increase operating costs to the institution? If yes, please provide an estimated cost (annually, and over a five-year period) and indicate whether the institution has identified available funds to support the additional cost.

Yes, we project yearly operational costs for this facility to be $100,000 ($500,000 over a five-year period). The additional operating costs will be added to the University's general fund operating budget.

12. What impact, if any, will the project have on tuition costs?

Tuition costs will not be affected as a result of this project.

13. If this project is not authorized, what are the impacts to the institution and its students?

Our academic and research delivery in environmental studies would continue to have logistical problems. Currently, both the mobile research laboratory and pontoon vessel are located on-campus (20 miles from Lake Huron), which requires additional time and resources to access the lake for research. Our advancement of research and teaching in this area of study would not occur.

14. What alternatives to this project were considered? Why is the requested project preferable to those alternatives?

The only alternative to this project is to continue with our research and studies through our on-campus sites in University Center. This requested project is preferable because it is located off-site, next to the natural resources which the academic programs and researchers would be studying.