**Mission:** The Office of Research and Sponsored Programs serves Western Washington University's research, scholarly, and creative enterprise by providing assistance with all aspects of proposal development during pre-award, offers comprehensive fiscal services to grantees subsequent to the award (post-award), ensures compliance with applicable Federal, State, and University policies and procedures and regulations interfaces with outside agencies, and provides other services to advance scholarly pursuits ([http://www.wwu.edu/rsp](http://www.wwu.edu/rsp)). RSP supports Western Washington University's mission to bring together individuals of diverse backgrounds and perspectives in an inclusive, student-centered university that develops the potential of learners and the well-being of communities, and encourages applications from diverse candidates.

**Strengths:**

Our units directly support and contribute to the Mission of Western Washington University

- A robust culture of research, scholarship, and creative activities among faculty, students, and staff address critical needs within the State of Washington, promotes active learning, helps apply Western’s expertise to strengthen the communities beyond campus, supports critical thinking and societal problem solving, expands access to rigorous and engaging education, and provides rich collaborative opportunities.

Nationally respected and recognized research, scholarship, and creative activities contribute to the status of Western and the high quality of the Western experience

- Western hosts regional and national conferences in a wide variety of disciplines that showcase and disseminate our research, scholarly work, and creative activities and bring outside expertise and diverse perspectives to campus. Additionally, Western’s Scholars Week celebrates undergraduate research and the Graduate Research Conference showcases the work of graduate students.
- Research Experiences for Undergraduates programs at Western “supports active research participation by undergraduate students” on Western’s main campus, SPMC and abroad.
- Western faculty, staff and students receive nationally recognized awards.

Centralized instrumentation within STS ensures that those instruments are used more and widely over their lifespan and that the value for capital investments is maximized.

Dedicated staff members, with a common sense of purpose and joy, provide students, faculty and staff invaluable support for their scholarly endeavors.

**Challenges:**

Western’s research and creative activity infrastructure is too thinly staffed. Some staff have expertise in “one-of-a-kind” positions and some key staff members are nearing retirement.

- Additional staff will be needed to build a scholarly work infrastructure that moves beyond “one-of-a-kind” positions.
• New positions will be needed to support the research/scholarly enterprise across campus and provide new expertise in areas such as technology transfer.

Only a modest amount of funding is available for internally funded research, scholarship, and creative activities for faculty and students (undergraduates and graduate students).

Funding to disseminate research, scholarship, and creative activities is limited.

Summer Research and Teaching grant funding is limited.

Little to no infrastructure for research commercialization and intellectual property licensing.

Research assistants do not receive Tuition Wavers at Western making us less competitive in an ever increasingly competitive external environment.

Extremely limited support for development activities from the Western’s Advancement Office.

Opportunities:

[As federal resources become more and more constrained, new opportunities need to be established with private foundations, industry partners, and crowd sourcing.

Increased societal awareness in research and education issues in areas of Western’s strengths.

There is a potential pool of regional donors passionate about Western’s mission.

With an influx of new faculty hires, Western is in an exceptional position to build upon our already robust research and creative activities base where faculty and students work collaboratively, especially in new and emerging multi- or inter-disciplinary work. Seed funding is needed.

There is an opportunity to develop a multi-user center model around specific types of instrumentation that could better enable external funding from public and private sources as access to modern instrumentation of all kinds is increasingly important for quality.

There is an opportunity to partner with other institutions (e.g. community colleges, high schools, a tribal college) to provide enhanced access, broader impact, and community outreach.

Threats:

Reduced state investment in Higher Education

Increased competition for external funds and declining federal and state resources.

• In an effort to stretch increasingly competitive Federal dollars, awards are often reduced, especially for instrumentation and summer support for faculty

Increased compliance, regulations, and oversight from external agencies.
**Mission:** Educating leaders in science, education, policy, and stewardship through experiential learning integrated with innovative marine and environmental scientific research.

**Strengths:**

- **Research and education in an experiential-learning context** - Successful research program with scientists bringing in National Science Foundation and other national and regionally prestigious grants. Faculty build Western’s reputation in diverse and nationally renowned marine and oceanographic research that successfully engage undergraduate and graduate students. Research is incorporated into **excellent undergraduate and graduate teaching, renowned undergraduate mentorship and scholars cohort programs.** Besides a) WWU catalog courses, SPMC is known for the following: the nationally known b) NSF-funded REU (Research Experience for Undergraduate) program and c) the diversity/underrepresented student mentoring MIMSUP program (1990-2015), both aligned with the University’s goal to increase student diversity in the STEM pipeline, d) the successful **Western Distinguished Marine Scholars program**, and e) new community programs run with SPMC and WWU Extended Education, primarily at elementary and middle school levels so far.

- **Graduate Advising.** MESP graduate program attracts high quality M.S. students to Western
- **Shared values and sense of community.** Staff express joy in the success of others, a willingness to pitch in and help others, and a sense of shared mission between staff, whether academic, administrative, or facilities employees.
- **Location and Facilities.** Classrooms, dormitories, laboratories, coastal access, forests, oceanographic research vessels, WWU dive program, and state-of-the-art scientific equipment offer Western students access to unparalleled experiential learning resource all within an hour of Western, and 1.5 hours of Seattle’s international airport (some marine labs are remote or require travel by ferry or water taxi)
- **Community Support** – SPMC enjoys support from the City of Anacortes, the Anacortes School District, the local business community, marine-focused state agencies, nonprofit organizations, and charities.
- **Attractive to donors.** Programs and facilities are attractive to donors interested in marine issues, undergraduate and graduate student support, and community education programs

**Challenges:**

- Over time, SPMC has developed research capacity as a fundamental infrastructural strength, and faculty science has promoted Shannon Point’s national reputation This high-quality research activity created a scaffolding upon which innovative educational programs were built, attracting undergraduate and graduate students, significant programmatic funding, and a great deal of national attention. However, these strengths are challenged by the following:
  - Decrease in external funding (see above)
  - Decrease in sustainably supported SPMC staff who can offer coordinated education and research programs, thus jeopardizing Shannon Point’s mission
- **Determine how to integrate SPMC point programs with WWU degrees and enrollment pathways.**
- **SPMC faculty (except one) are in non-tenure-track Marine Scientist staff positions not included in the WWU Collective Bargaining Agreement.** No clear model for sustainable faculty salary support and advancement.
• No sustainable model for operating costs. Historically, external federal funds, and an associated model for tuition disbursement, covered many SPMC operating costs. These are no longer available.
• Lack a mechanism for sustainable funding for repair and maintenance of vessels, equipment, and instrumentation used by students and faculty throughout the university in both courses and research.
• Weak critical mass for staff numbers. We are sub-threshold for administrative functioning, and low for mentoring program commitments. May miss opportunities for transmission of institutional knowledge.
• Confusing relationship with Advancement Office, with no gift officer appointed to Shannon Point.

Opportunities:
• Facilities and expertise to support research and training on issues of national and regional concerns to agencies, tribes, and conservation organizations. Research specialties include ocean acidification, biological oceanography, algal and eelgrass biogeochemistry, plankton-fisheries interactions, larval and invertebrate physiology, coastal physics, climate and hypoxia, molecular ecology, and others.
• Build upon the success of the recent pilot WWU Marine Scholars Program to develop new opportunities for students to enroll in a course of study with a clear path leading through experiential learning and residential experience at SPMC. Build upon reputation running successful mentoring programs, particularly those focused on underrepresented students. Examples could include a new degree program, certificate, minor, or possibly avenues with such as self-sustaining short courses, including opportunities for students to stay in SPMC dorms.
• Expand successful new EE community youth programs developed with Anacortes schools into Skagit County districts, with a focus on partnering with Title-One schools. Aligns with WWU mission for diversity recruitment.
• Because of society’s interest in climate, ocean, and water issues, the marine lab is a great showcase and ambassador for the university, and can be increasingly useful in the future
• Expand SPMC’s internal visibility at Western, including with student clubs, non-science-focused groups and departments, and with WWU’s new marine-focused entities (SEA Discovery and Salish Sea Inst.). Expand WWU website presence.
• Possibilities for new interest in Masters of Science training (as opposed to Ph.D. programs) poise Western to promote its strengths in M.S. degrees in environmental, freshwater, and marine systems science. A niche that could really distinguish Western.
• Participate in more university committees so SPMC can have more representation and a voice in university matters, as well as gain understanding of university processes.
• Strive to make facility and programs more accessible for students, faculty, and researchers.
• We have substantial infrastructure and excellent people. We are likely to discover creative, sustainable revenue sources consistent with our mission.

Threats:
• State and federal budgets are both on declining trends. SPMC will not be able to recover from the “MIMSUP funding gap” with federal research grants, and non-federal research grants are typically smaller and provide less meaningful indirect return. This is a threat to one of SPMC’s traditional models for success.
• Strength of graduate programs at WWU often depends on commitment of individual advisors who must add graduate advising to a full teaching load, so graduate programs can slide in departmental priorities,
no matter how well intentioned. This threatens SPMC activities and strengths, many of which depend on graduate assistants to support courses and which are co-mingled with graduate student training.

- No mechanism for sustainable funding for repair or replacement of vessels, equipment, or instruments, although these are assets used by students and faculty from throughout the university.

### SCIENTIFIC TECHNICAL SERVICES - January 2017

The **mission** of Scientific Technical Services is to:

- Help faculty, undergraduate and graduate students solve scientific and engineering challenges through access to centralized technical resources, training, and expertise.

The **vision** of Scientific Technical Services is to:

- Foster creativity, enhance problem-solving, and promote a culture of innovation at Western.

**Strengths:**

**STS Overall**

- STS improves access to scientific instrumentation for WWU students, particularly those majoring in STEM fields, contributing to the university's mission and serves the people of the State of Washington
- STS improves our competitiveness for extramural funding by providing necessary research support services and infrastructure.
- Five dedicated STS technicians have approximately 120 years of technical experience providing service to the Western community.
- Equipment repair and maintenance made possible by STS instrument and fabrication expertise results in significant cost savings to the University.
- STS has a strong service-oriented culture.

**STS Instrument Center**

- STS improves access to advanced instrumentation for WWU students by providing high-quality services in support of classroom activities (e.g. training, lab instruction, and lab development).
- The STS Instrument Center and its staff provide student and faculty training and access to advanced scientific instrumentation in support of research.
- Centralization of instrumentation ensures that instrumentation is used more and widely over its lifespan and that the value for capital investments is maximized.
- STS instrumentation is kept operational and ready for use in research and teaching applications.

**STS Machine, Electronics, and Fabrication Shops**

- The STS machine and electronics shops provide fabrication services for customized instrumentation that would otherwise require off-campus
manufacturing.
• STS supports departments and individual researchers by maintaining and repairing non-STS instrumentation not covered by service contracts.

Challenges:

STS Overall

• STS is critically understaffed. Moreover, each technician in the shops has a unique skill set, with insufficient overlap among staff.
• Stronger systems of advocacy and leadership are being developed, but more work remains to be done.
• Technical staff need to be offered market-competitive compensation.
• STS requires adequate space for housing offices, the Instrument Center and the Machine, Electronic and Fabrication Shops

STS Instrument Center

• Dramatic increases in enrollment in upper-division STEM laboratory classes and the number of research-active faculty have created increased demand for access to instrumentation. Without additional staffing, new requests for instrument support may not be accepted and opportunities for outreach to other institutions, local high schools and community colleges are limited.
• The instrumentation that STS supports has also grown increasingly sophisticated, placing greater demands on the level of staff expertise, maintenance costs, and user training required.
• The STS Instrument Center requires more space, and physical infrastructure suitable for instrumentation where performance is affected by temperature fluctuations, vibrations, or inadequate ventilation.
• An equipment replacement strategy is needed. With only one exception, all of the instruments in the STS Instrument Center are more than 10 years old. Many are no longer supported by the vendor.

STS Machine, Electronics, and Fabrication Shops

• There is an emerging strategic plan for replacement of staff.
• Without some level of overlap with replacement technicians, staff loss could lead to severe service disruption. There is an emerging replacement plan.

Opportunities

STS Instrument Center

• Access to modern instrumentation is increasingly important for a quality STEM education. STS can collaborate with other institutions (e.g. community colleges, high schools, and a tribal college) to provide expanded access to instrumentation for education purposes. These activities are exactly the kind of broader impacts that are valued by external granting
agencies.

- Expanded interactions with external clients could provide a modest, additional source of revenue, and lead to stronger community relationships.
- There is an opportunity to develop a multi-user center model around specific types of instrumentation (e.g. electron microscopy and mass spectrometry) that could better enable external funding from public and private funding programs.

**STS Machine, Electronics, and Fabrication Shops**

- There may be an opportunity to re-envision operation of the shops around an expanded access model similar to ‘makerspace’ models being adopted on some other university campuses.

**Threats:**

**STS Overall**

- Reduced state investment in higher education.
- Institutional funding continuing to not keep pace with increased demand, or with the increased costs of the instrumentation and services STS provides.
- STS is a small academic support unit with no academic program of its own. Thus, in the past it has been a target for budget cuts.
- Designs used in modern instrumentation, along with vendor company policies, make it increasingly difficult to provide in-house maintenance.
- Inability to properly maintain aging instrumentation may lead to critical failures in safety.

**STS Instrument Center**

- Some peer institutions exceed our capabilities in state of the art instrumentation, placing us at competitive disadvantage in recruiting and retaining students and faculty and attracting external