

# WSDOT Research Problem Statements

## Budget Worksheet 19-21 BN

Use this worksheet to develop an estimated budget for your 2019-21 research problem statement.

Most WSDOT Research Projects are conducted through academic institutions and involve the oversight of a faculty member who serves as the Principal Investigator. Principal Investigators select graduate students to conduct research under their guidance. The most desirable time frame for a project involving a graduate student is two years.

Most research projects include the following costs:

### 1. Principal Investigator salary & benefits:

Est. months \_\_\_\_\_ x Est. monthly cost \_\_\_\_\_ = Est. total \_\_\_\_\_

*Plan to include one to 3 months of the principal investigator's salary and benefits with a typical project. Faculty salary rate = \$8,500 to \$12,000 per month (depends on experience); benefits = 24.9 (UW) or 29.1% (WSU). If you have a preferred or anticipated researcher, use actual costs as your basis. NOTE: UW TRAC professional staff are billed at an hourly rate. Rates vary per individual researcher. Contact the individual PI to get the current rate for that individual.*

### 2. Research Assistant salary & benefits:

Est. months \_\_\_\_\_ x Est. monthly cost \_\_\_\_\_ = Est. total \_\_\_\_\_

*Plan to include (12 to 18) months of a research assistant's time for a typical project. Salaries (rates \$2,466/month) and benefits (18.4% - not including tuition) for UW. Some RAs - such as late stage PhD students will be slightly more expensive, MS students will be slightly cheaper.*

*WSU salary rates for Master's students are \$1,687 per month as of Jan. 1, 2018 (Step 32). PhD students are \$1,862 per month as of Jan. 1, 2018 (Step 42). Benefits are 1.5% of salary, plus health insurance at \$1,888 for appointments more than 9 months. Rates vary by appointment start date. Please refer to the budget workbook at <http://orso.or.wsu.edu/guidelines.asp> for benefits rate calculator and GRA Matrices.*

### 3. Tuition

Est. semesters/quarters \_\_\_\_\_ x Est. cost \_\_\_\_\_ = Est. total \_\_\_\_\_

*Tuition for the graduate student hired as the Research Assistant on the project, is covered for each semester or quarter of the project. Tuition costs vary by institution. Current tuition costs at Washington State University are \$5,445/semester or \$12,333/year and at University of Washington are on average \$5,633/quarter or \$16,899/year.*

#### 4. Equipment and resources

List anticipated equipment and resources needed and estimate the cost for each item.

*Projects may or may not include equipment costs. Consider whether a computer, field equipment, safety equipment, or lab equipment are needed. Projects may or may not include costs for software applications, data, permits, traffic management, shipping, or materials. Note that single pieces of equipment that cost more than \$2,000 are classified as “equipment and are not charged indirect costs on top of their direct costs. When individual pieces of equipment cost less than \$2,000 (like most modern computers) they are classified as a “supply” not as “equipment.”*

*For WSU, equipment items costing more than \$5,000 are considered capital equipment and are exempt from F&A.*

#### 5. Travel

*Projects may include field work or travel to meet with technical committees. In addition, WSDOT encourages principal investigators and students to present research findings through agency seminars or technical conferences.*

#### 6. Publication

*Projects culminate in a published report unless specifically exempted. List all publication costs, including technical editing or unusual costs of publication (if paper copies are required, include the cost, including costs of color images). Costs for publication in scientific journals may be included.*

#### 7. Indirect costs

All research institutions require some overhead. The current rates at the University of Washington and Washington State University are as follow:

- University of Washington
  - 55.5% On Campus from period July 01, 2018 to June 30, 2020
  - 26% Off Campus from period July 01, 2015 to June 30, 2020
- Washington State University
  - 53% On Campus from period July 01, 2017 to June 30, 2019
  - 26% Off Campus from period July 01, 2017 to June 30, 2020

All costs except tuition and large pieces of equipment that cost more than \$2,000 (\$5,000 for WSU) are subject to the indirect rate. For WSU, subcontract amounts over \$25,000 are exempt from F&A.

WSU's Federally Negotiated Indirect Cost Rate Agreement can be viewed at:

<http://sps.wsu.edu/2015%20F&A%20Final%20Rate%20Agreement.pdf>

## **8. State Force Work (SFW)**

The project may require some state force work time for traffic management, data gathering, testing, or other support. Include these costs, as needed, in the estimate for the project. In addition, equipment and material costs that WSDOT plans to purchase for this project may be included as SFW in this budget.