



**Washington State
Department of Transportation**

A light green map of Washington state is positioned behind the title text. The map shows the state's coastline and major islands.

STATE PLANNING & RESEARCH WORK PROGRAM

2021-2023 Biennium

June 16, 2021

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PART 1: Planning & Data

Area 1: System Performance and Analysis

Area 1 contains descriptions, mandates, objectives, revenue, and deliverables related to the following subareas:

- Subarea 1.1: Performance and Accountability Analysis
- Subarea 1.2: Performance Framework
- Subarea 1.3: Travel Demand and Economic Modeling and Analysis

Subarea 1.1: Performance and Accountability Analysis

Subarea description

Lead WSDOT performance and accountability to advance rigorous data analysis and evaluation that enables and informs performance-based decision making. Support WSDOT's strategic direction to improve equitable, sustainable multimodal transportation performance. Build credibility and promote transparency through effective collaboration and consultant services. Providing quality information, performance and strategic management expertise and guidance to help others align their work with the agency's strategic plan, mitigate risk and maximize return on investment.

Federal mandates

[23 USC Sec 119](#) ; [23 USC Sec 167](#) ; [23 USC Sec 148](#) ; [23 USC Sec 135](#)

Objectives

- Analysis & Evaluation - Evaluate WSDOT performance to increase credibility and transparency, reduce risks, enhance quality and foster achievement of the agency's strategic plan.
- Engagement - Provide an environment that fosters positive partnerships, working together with a common vision for achieving the agency strategic goals.
- Leadership - Lead through proactive and systematic execution of products and services that align with agency strategic goals.
- Performance - Champion performance excellence through strategic business planning, organizational alignment, and workforce development.
- Administration - Integrate performance with innovation and excellence to ensure programs run efficiently while balancing agency compliance.

Contact

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Summary revenues

Revenue source	Baseline
Federal	\$1,687,920
State	\$421,980
Local	•
Total	\$2,109,900
FTE Count	8

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Ongoing*	<p>Transportation Performance Management (TPM, formerly MAP-21) Engagement - Coordination and Collaboration: Collaborate with internal partners (WSDOT program leads), MPOs and FHWA to set, review, adjust and meet federal TPM requirements for safety performance targets (PM1) pavement/bridge performance targets (PM2), and system performance/ freight/ CMAQ performance targets (PM3).</p> <p>Deliverables and products associated with this work include annual target setting, updating and finalizing for PM1; biennial target setting, updating and finalizing for PM2 and PM3; reports, timelines, and collaboration with MPO technical teams and policy makers.</p>
2	Ongoing*	<p>TPM (MAP-21) Performance – Communication: Collaborate with WSDOT program leads to develop and present formal target setting recommendations to WSDOT executives. Submit federal reports.</p> <p>Deliverables and products associated with this work include annually or biennially updated folios, briefing papers, PowerPoints for PM1, PM2, PM3, MAP-21 pavement, bridge, system performance, freight and Congestion Mitigation and Air Quality (CMAQ).</p>
3	Ongoing*	<p>System Performance Analysis – Workflows: Develop and refine workflows to structure work, manage integration and interactions between performance and accountability systems and events, support team development, enforce policy and facilitate decision making.</p> <p>Deliverables and products associated with this work include templates for MAP-21, Gray Notebook (GNB) kick-off meetings, GNB design and layout in InDesign and Illustrator and Multimodal Mobility Dashboard (MMD) workflow. Process improvements mean potential updates to templates, thus their ongoing nature. For example, we may create templates necessary for MAP-21 performance rules; these templates become tools for our stakeholders.</p>
4	Ongoing*	<p>Performance - Continuous Refinement: Update dashboards to inform WSDOT's performance story. Continuously refine live dashboards to provide performance metrics that accurately reflect progress toward current agency priorities. Strategic Plan & COVID-19 ongoing/Multimodal Mobility Dashboard (MMD) 6/21 (then ongoing)/GNB 12/21 (then ongoing).</p>

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
5	Ongoing*	<p>System Performance Analysis – Roles: Define roles and responsibilities in producing multimodal transportation system performance analysis, ensuring accountability.</p> <p>Internal deliverables and products associated with this work include performance evaluations (PMPs), classified position description (CPD) updates and agreements. PMPs are conducted as scheduled, and CPDs are updated as needed basis. External deliverables include consultations and collaborations with partners. An example of this is ongoing coordination between the TSSA and Capital Program Development and Management (CPDM) division to support the agency's asset management.</p>
6	Ongoing*	<p>Strategic Planning and Policy – Consultation: Provide robust performance consultant services to WSDOT executives, senior managers, divisions, regions and program staff, partners and stakeholders to eliminate silos, align programs and projects to support decision making.</p> <p>Deliverables and products associated with this work include consultations with others, such as the Environmental Services Office (ESO), to help them ascertain that their business plan is in alignment with the Strategic Plan (SP). Another example is producing the Strategic Plan section of the Governor's Transition Memo; these types of deliverables are high level, emergent assignments that come to us on short notice and require a quick turnaround to deliver the product.</p>
7	Ongoing*	<p>Strategic Alignment – Partnerships: Represent WSDOT in partnerships with USDOT, Federal Highway Administration (FHWA), the Institute of Transportation Engineers (ITE), the Transportation Research Board (TRB), the American Association of State Highway and Transportation Officials (AASHTO), the National Cooperative Highway Research Program (NCHRP), universities, colleges, university transportation centers and/or others.</p> <p>Deliverables and products associated with this work include TRB, AASHTO and NCHRP panel committee work; collaboration/consultant services to determine targets for MAP-21; and assistance provided to partners in support of their deliverables.</p>
8	Ongoing*	<p>Compliance: Comply with financial constraints and practices for federal SP&R funds. Deliverables and products associated with this work include SPR quarterly, annual and biennial reports for Subarea 1.2.</p>

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
9	Ongoing*	<p>Strategic Alignment - Deliver Requirements: Provide tactical guidance, agency-wide strategic direction and policy recommendations for performance and accountability analysis by facilitating processes that lead to strategically aligned state and federal performance measures.</p> <p>Deliverables and products associated with this work include continuous collaboration and vetting for the quarterly GNB process, Multimodal Mobility Dashboard, the Strategic Plan (SP) Dashboard and other dashboards. We collaborate with the Office of Financial Management (OFM) and transportation partners to revise and update Attainment Report objectives and measures. We assist internal WSDOT programs moving agency SP goals forward; this includes regular meetings with the Strategic Plan project team. We consult and collaborate on FHWA Transportation Asset Management Plan (TAMP) alignments with the GNB. TPM includes MAP-21 performance progress reports to FHWA. We also contribute to the Results Washington process.</p>
10	Ongoing*	<p>Systems Alignment: Strategically align reporting systems and set performance expectations that demonstrate a return on investment and support decision making.</p> <p>Deliverables and products associated with this work include ongoing, aligned, streamlined processes that contribute to the success of asset management, transportation systems management and operations (TSMO), the performance framework and the Highway System Plan, as well as efficiencies achieved in performance reporting.</p>
11	Ongoing*	<p>Performance, Analysis & Evaluation – Data: Inspect, cleanse, transform and model data to support decision making. Ascertain availability and reliability of data, compile data and conduct data analysis for dashboards and publications.</p> <p>Deliverables and products associated with this work include data analysis for dashboards (Strategic Plan, COVID-19, MMD, GNB) that addresses multiple modes, quality control to ensure reliability of data, and seamless inclusion of data from TRACFLOW.</p>
12	Ongoing*	<p>Performance Communication – Publications: Prepare, publish and tell the state's multimodal transportation system performance story.</p> <p>Conduct and communicate analysis of multimodal systems and program performance. Employ qualitative and quantitative techniques and visual representations to enhance understanding of data. GNB 8 Quarterly/MMD 2 Annual/Attainment Report 10/22, others are ongoing.</p>
13	Ongoing	<p>Performance Dashboard - Technical Development: Develop multimodal transportation system performance dashboard prototypes. MMD report to be submitted on June 2021 and GNB report to be submitted on December 2021.</p>

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
14	Ongoing	<p>Pandemic Dashboard – Development and Maintenance: Support development and maintenance of COVID-19 Multimodal Transportation System Performance Dashboard.</p> <p>Deliverables and products associated with this work are the daily manual update of dashboard models for executive decision making, and ongoing technical maintenance thereof.</p>
15	Ongoing*	<p>Proprietary Enterprise Software - System Development: Continue TRACFLOW development to integrate enterprise mobility analysis software to enable/streamline travel time data for WSDOT systems analysis and TPM System Performance rule.</p> <p>Deliverables/products associated with this work include streamlined data for the toll division, quarterly reports, region project analysis and multimodal analysis. This includes continuous improvement of software interactive data retrieval and quality control.</p>
16	Ongoing*	<p>Proprietary Enterprise Software - System Maintenance: Maintain TRACFLOW software to leverage statewide traffic-flow data and evaluate performance to better analyze the transportation system, including ongoing development work to meet evolving agency needs.</p> <p>Deliverables and products associated with this work include improving the functionality and adding data to the TRACFLOW tool. This includes adding region data to the enterprise software platform, upgrading the process to include post-process data for multimodal mobility analysis, and developing ad-hoc functionalities on request.</p>
17	Ongoing*	Transit Data Processing – Streamline: Develop multimodal capacity methods to streamline transit data processing and performance evaluation.
18	Ongoing*	<p>System Performance - Conduct Analysis: Using TRACFLOW, conduct travel data analysis and performance calculations to identify capacity deficiencies within the roadway network, support multimodal mobility reporting, before and after project analysis and other reports.</p> <p>Deliverables and products associated with this work include individual corridor analysis, Toll Division quarterly reports, Before and After project analyses providing evaluation of transportation system performance for projects and studies.</p>
19	Ongoing	System Performance Analysis - Story Maps: Update performance story maps using ArcGIS online as necessary. Investigate Tableau capabilities to streamline this task

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
20	Ongoing*	<p>System Performance Analysis - Sounding Board: Lead Multimodal Systems Analysis Working Group to facilitate gathering essential feedback for multimodal analysis.</p> <p>Deliverable and product associated with this work is feedback (specific to mobility). Work includes leading a working group, consulting with individuals as needed to produce the agency's multimodal mobility analysis.</p>
21	Ongoing*	<p>Strategic Alignment – Budget: Work with agency budget staff to ensure the strategic plan, performance, and risk inform the budget and support resiliency and flexible, adaptable investment strategies. The ultimate product and deliverable is WSDOT's budget (the agency's budget calendar dictates the timing of this deliverable). The Transportation Safety & Systems Analysis Office (TSSA) incorporates a systems thinking approach, providing consultant services, getting executive buy-in and constant ongoing efforts to align budget with performance, risk, strategic and knowledge management. The deliverable is a better- quality budget that has been created through better decisions that incorporate the strategic plan, performance and risk. Our consultation is intended to ensure that the risks associated with funding decisions are fully considered.</p>
22	Ongoing*	<p>Strategic Alignment - Governor's Office: Facilitate WSDOT's involvement with new and upcoming outcome measures and leading indicators under development with the Results WA team and the Attainment Report.</p> <p>Products and deliverables associated with this work include the Governor's Results Washington Public Performance Reviews. TSSA is a liaison between the Results Washington team and WSDOT, particularly our Deputy Secretary's office and WSDOT's subject matter experts. Results Washington effectiveness is reported through Public Performance Reviews; we will lend our expertise in developing outcome measures and selecting leading indicators. WSDOT plays a supporting role in all five of the Governor's Results Washington goals.</p>
23	Results WA monthly / Attainment Report 10/22*	<p>Engagement - Governor's Office: Provide applicable WSDOT-related performance data to inform the Governor's Results Washington dashboards. Support development of biennial Attainment Report.</p>
24	Ongoing*	<p>Workforce Development, Education & Training, and Engagement: Employ processes, tools and techniques to manage the people side of change to support and achieve the agency's strategic plan goals.</p> <p>Deliverables and products associated with this work include managing the agency's Change Management Community of Practice, facilitating monthly tools, providing tools and resources to improve the outcome of change efforts at WSDOT. We currently maintain a SharePoint site and are considering adding a Teams channel, training curriculum and other tools.</p>

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
25	Ongoing*	<p>Address Justice, Equity, Diversity and Inclusion: Support the agency's Inclusion goal by participating in Diversity Advisory Groups and other activities. Report agency progress toward Inclusion goal.</p> <p>Deliverables and products associated with this work include a division Diversity Advisory Group (DAG), participation in the HQ DAG, and assisting with theme development, planning and promoting diversity events, monthly meetings and special events.</p>
26	Ongoing*	<p>Emerging Initiatives: Support emerging initiatives, providing expertise and connecting people and processes by strategically aligning efforts through performance and accountability.</p> <p>Deliverables and products associated with this work include weekly, monthly or quarterly meetings for LIDAR< Open Data, Multimodal Technical Forum (MMTF), Transportation Systems Management and Operations (TSMO), Performance Framework, Asset Management, Highway System Plan and Data Governance. We also review and provide input on executive orders on request, such as the Practical Solutions EO, the Anti-Racism and Equity EO.</p>

Subarea 1.2: Performance Framework

Subarea description

The Performance Framework implements WSDOT's strategic direction based on federal and state transportation policy goals by identifying performance measures and metrics beyond the required MAP-21 measures. WSDOT Statewide Planning staff works across the agency to link these measures and metrics to WSDOT program objectives and WSDOT guidance documents, manuals, and business processes related to planning, scoping, programming and design. When considering new performance measures, WSDOT will engage MPOs, RTPOs, Tribes, and other transportation stakeholders in their development to improve alignment with our partners.

Federal mandates

[23 USC Sec 119](#) ; [23 USC Sec 148](#) ; [23 USC Sec 167](#) ; [23 USC Sec 135](#)

Objectives

- Adopt the Performance Framework for all the transportation policy goals set by state law (RCW 47.04.280).
- Adopt a standard agency process to refine and update performance measures and metrics in the Performance Framework.
- Identify objectives consistent with the Performance Framework for at least two WSDOT programs.
- Review and refine at least two WSDOT guidance documents, manuals or business processes to align and link to Performance Framework guidance.
- Support the use of accessibility metrics in at least two statewide, regional, corridor, subarea, or project decisions.
- Review and refine the Performance Framework guidance as needed.

Contact

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Summary revenues

Revenue source	Baseline
Federal	\$198,320
State	\$49,580
Local	•
Total	\$247,900
FTE Count	1

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Jul-21	Identify Environmental policy goal performance measures and metrics.
2	Jun-23	Two WSDOT guidance documents, manuals, or business process are reviewed and refined to align with the Performance Framework.
3	Jun-23	Two statewide, regional, corridor, subarea, or project decisions use accessibility metrics to support decisions.
4	Jun-23*	Performance Framework Guidance is reviewed and refined as needed.

Subarea 1.3: Travel Demand and Economic Modeling and Analysis

Subarea description

Macro, meso, and micro simulation models are developed to forecast travel demand and conduct traffic operational analysis for various WSDOT projects and plans. Expertise is provided for scoping, cost estimation, review of consultants' models, analyses, and preparing reports. Under economic impact modeling, benefit cost analysis, and regional economic analysis are carried out for WSDOT projects and plans using Regional Economic Model, Inc. (REMI) software. Vehicle emission models are developed for analyzing conceptual scenarios for various plans that investigate interactions between transportation, land use, economic activities, and demography. In addition, travel data is analyzed to develop performance measures for state highway segments and the system as a whole.

Federal mandates

[23 CFR 450.208](#) ; [23 CFR 450.206](#) ; [23 USC Sec 135](#)

Objectives

- Develop and maintain data aggregation and analysis tools for statewide system performance measurement.
- Provide travel demand modeling and expertise to WSDOT projects and regions.
- Analyze emission data, lead special transportation studies, and manage consultant contracts for special projects including various types of modeling.
- Provide project cost estimation tool and develop models for assessing broader economic impacts of transportation project and policies.
- Provide guidance in the application of current modeling techniques required by transportation planning, corridor planning, engineering, and performance measurement activities.
- Travel demand and economic modeling helps WSDOT make decisions among competing projects during the planning stage by analyzing future operational characteristics.

Contact

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Summary revenues

Revenue source	Baseline
Federal	\$962,640
State	\$240,660
Local	•
Total	\$1,203,300
FTE Count	3.75

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Ongoing*	Maintain access to travel demand modeling and traffic operational simulation software for WSDOT projects and regions. This includes paying annual software maintenance costs to the vendors. The product is providing access to WSDOT and its region staff to various travel demand modeling software (current versions).
2	Ongoing*	Serve on committees focused on regional land use and federal transportation-related research. Memberships on: Regional council committees Census Transportation Planning Products (CTPP) Oversight Board under AASHTO
3	Ongoing*	Provide project oversight and assist educational institutions and consultants in writing reports for executive management. Examples: Working with UW on state or federal funded studies.
4	Ongoing*	Perform travel demand modeling, dynamic traffic assignment, and traffic operational simulation modeling for traffic forecasting, engineering analyses, corridor studies, and toll projects. The product will be providing expertise and help on modeling projects in the state. It may be as simple as providing feedback on modeling contracts and estimates or as complicated as doing hands on projects and reviewing products from consultants. Typical number of projects vary between 1 to 5.
5	Ongoing*	Assess statewide, regional, and corridor-level operational performance. Deliverables: Review data and documents, help prepare the Multimodal Mobility Report (MMR) each year. Coordinate with OIT, Freight Office, and TDGMG, and update the Freight and Goods Transportation System (FGTS) segments; extract statewide freight data by corridor; and develop performance measures for publishing biennial FGTS report.
6	Ongoing*	Manage research, studies, and projects funded by the Transportation Research Board and FHWA. Examples include: NCHRP project panels. TRB standing committee memberships.

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
7	Ongoing*	<p>Maintain an in-house planning-level cost estimation tool for planning and project support. This tool provides planning-level cost estimates for projects and conceptual alternatives for corridor studies, as well as benefit-cost analyses to assist in selecting projects and/or alternatives that provide the most significant improvements to the transportation network relative to cost.</p> <p>The products of this effort include:</p> <p>Update of the tool and associated data and manual.</p> <p>Training staff from other divisions on the use of the PLCE tool. Help with application of PLCE tool for transportation projects.</p>
8	Ongoing*	<p>Model short- and long-term operational and economic effects of proposed transportation projects and policies.</p> <p>Products will include helping economic modeling using REMI for WSDOT projects. The number of projects varies based on the need.</p>
9	Dec-21	<p>Develop VisionEval models and analyze data for conceptual scenarios for the Highway System Plan Update.</p> <p>Product will be:</p> <p>Application of VisionEval for HSP and carrying out evaluation of various scenarios.</p>
10	Ongoing*	Travel demand modeling – macro, meso and micro simulation for WSDOT projects and plans and to provide expertise to consultants working on WSDOT projects.
11	Ongoing*	Economic impact modeling and benefit cost analyses for WSDOT project and plans.
12	Ongoing*	Assist in the development of the State Highway System Plan (HSP).

Area 2: Transportation Data, Analysis and Stewardship

Area 2 contains descriptions, mandates, objectives, revenue, and deliverables related to the following subareas:

- Subarea 2.1: Performance and Accountability Analysis
- Subarea 2.2: Performance Framework
- Subarea 2.3: Travel Demand and Economic Modeling and Analysis
- Subarea 2.4: Annual Federal Reporting of Vehicle and Financial Statistics
- Subarea 2.5: Information Technology Development and Support

Subarea 2.1: Travel Data Collection, Processing, Analysis and Reporting

Subarea description

In order to meet state and federal planning needs, collect, maintain, analyze, and report motorized vehicle usage data for the state's highway system. Collect bicycle and pedestrian usage data for both roads and trails within the state. Capture and maintain video imagery of the state highway system.

Federal mandates

[23 USC Sec 119](#) ; [23 USC Sec 167](#) ; [23 USC Sec 135](#)

Objectives

- Acquire, deploy, and maintain traffic counting hardware and equipment for short-duration counts and permanent installations in order to capture system usage data such as vehicle volumes, speeds, and weights.
- Collect travel data using automated and short-duration counters consistently with federal reporting requirements and state planning needs.
- Collect bicycle and pedestrian usage data using automated counters on roadways and trails within the state.
- Process travel data and apply temporal and axle-correction factors as appropriate to create reliable annual roadway usage statistics.
- Design and steward internal and external data reporting systems, as well as data transformation and analysis tools, in order to meet the travel data needs of the public, the department, and other state agencies.
- Calculate interim liquidated damages for construction projects that will close lanes, close shoulders, or interrupt Intelligent Transportation System (ITS) equipment.
- Collect 360-degree imagery of the state highway system, providing this imagery through an interface that associates it with the Department's roadway geometry and feature data. This tool has many uses, such as allowing engineering staff to do preliminary site assessments from their desks.

Contact

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Summary revenues

Revenue source	Baseline
Federal	•
State	\$7,723,000
Local	•
Total	\$7,723,000
FTE Count	29.35

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Ongoing*	Automated Traffic Count: Collect, process, analyze, and report vehicle volume, speed, and classification data from 174 permanent traffic recorders (and weight data from a small subset of these) in a manner and an extent consistent with federal requirements and departmental needs. Examples of uses include annual federal data submittals for the HPMS and Bridge & Tunnel programs, various data extractions available through the department's business intelligence software, interactive public-facing tools such as the WSDOT Traffic Geoportal, etc.
2	Ongoing*	<p>Short Duration Count: Collect, process, analyze, and report vehicle volume, classification, and turning movement data in a manner and an extent consistent with federal requirements and departmental needs. Examples of uses include annual federal data submittals for the HPMS and Bridge & Tunnel programs, various data extractions available through the department's business intelligence software, interactive public-facing tools such as the WSDOT Traffic Geoportal, etc.</p> <p>The number of expected short-duration counts is usually 1,500 per year. But due to COVID restrictions, etc. we anticipate lower counts in FY1.</p>
3	Ongoing*	<p>Calculate interim liquidated damages for construction projects as needed for departmental contracts.</p> <p>The number of projects supported through this task varies by year, but on average is 95 per annum.</p>
4	Ongoing*	<p>Collect imagery for the entirety of the mainline, spur, couplet, alternate route, and reversible lane portions of the state highway system.</p> <p>This imagery is made available through the State Route Viewer (SR View) application. Typically, half of the state route system is filmed each year.</p> <p>The total center lane miles that will be filmed in a FY will range between 3200 to 3800 miles.</p>

Subarea 2.2: Crash Data Collection, Analysis and Reporting

Subarea description

As the authoritative source of crash data for Washington state, WSDOT ensures the timely and accurate collection, analysis and dissemination of crash data which includes incidents involving vehicles, pedestrians and bicyclists. This data supports numerous efforts such as the Highway Safety Improvement Program (HSIP) and the Strategic Highway Safety Plan (Target Zero). This data is essential for federal, state and local planning and research efforts along with identifying safety improvements to decrease fatalities and serious injuries on all Washington public roadways. This data is also used to ensure the safe movement of people and freight throughout our state and fosters livable communities and economic vitality.

Federal mandates

[23 USC Sec 148](#)

Objectives

- Provide timely, accurate, and complete crash data within 45 days of the date of the crash to federal and state agencies, state and local traffic engineers as well as fulfilling public disclosure requests received from the public, media, legislature, research institutions and others within the boundaries of RCW 42.56 while ensuring the protection afforded under 23 USC Sections 149 and 409.
- Provide expert level stewardship, support and management of WSDOT's Crash Data Mart and Crash Data Portals both public and restricted.
- Provide technical support and training to WSDOT planners, engineers and MPO/RPTO representatives and other federal and state safety partners.
- Participate on the multi-agency initiative to replace the Statewide Electronic Crash and Ticketing Online Records (SECTOR) application used by law enforcement to submit crash reports and tickets electronically.

Contact

Warren Stanley | Multimodal Planning & Data Division (MPDD) | 360-570-2497

Summary revenues

Revenue source	Baseline
Federal	\$2,298,000
State	\$624,500
Local	•
Total	\$2,922,500
FTE Count	14

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Weekly*	Provide weekly crash data feeds of all reportable crashes on Washington public roadways along with technical support to the Washington State Patrol for their Collision Access Tool (CAT) and their Commercial Carrier SAFETYNET Tool. WSP utilizes the data by WSDOT to meet their federal reporting requirements to the Federal Motor Carrier Safety Administration. Providing information to WSP so they can make informed decisions on where to implement emphasis patrols and other law enforcement counter measures.
2	Monthly*	Provide monthly crash data feeds of all reportable crashes on Washington public roadways along with technical support to the Department of Social and Health Services for their Medicaid Fraud Program and to the County Road Administration Board as well as other local county engineering and planning professionals for use in their safety, planning and engineering programs.
3	Daily*	Provide daily crash data feeds of all reportable crashes occurring on Washington public roadways along with technical support to the National Highway Safety Administration (NHTSA) for inclusion in their Electronic Data Transfer (EDT) Program and WSDOT's Transportation Safety and Systems Analysis (TSSA) Office for the COVID-19 Dashboard.
4	Jul-22	Work with WSDOT IT to enhance the Crash Location and Analysis System (CLAS) to resolve frequent database connection issues to support current and future telework efforts by June 2022.
5	Aug-21 & Aug-22*	Provide crash summary reports and technical support to the WSDOT TSSA and all MPOs/RTPOs to support the development of their MAP-21 Safety Performance Measures as outlined in 23 USC Section 148.
6	Apr-21 & Apr-22*	Complete the processing and analysis of the annual crash data file which includes all reportable crashes occurring on Washington public roadways for use by numerous federal and state agencies and researchers.
7	Ongoing*	Provide Suspected Serious Injury crash data on a quarterly basis along with technical support to the Washington Traffic Safety Commission for the Washington Strategic Highway Safety Plan known as Target Zero.
8	Jun-23	Enhance the GIS Layer that allows crash data users to associate crashes with an intersection.
9	Dec-21	Collaborate with the Office of Financial Management (OFM) on exploring opportunities to integrate the crash data record with the state's health, vehicle and citation records for research and planning purposes.

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
10	May-22 & May-23*	Funds (\$50,000) will be passed through to WaTech (Washington Technology Solutions) to support the Justice Information Network Data Exchange (JINDEX), which is responsible for routing electronic tickets and crash reports to all agencies that require the data in order to meet their business obligations. Timely, completed and accurate electronic crash data is essential to support WSDOT's goal in reducing serious injuries and fatalities on Washington State roadways. \$25,000 will be provided in May for each fiscal year of the biennium.

Subarea 2.3: Enterprise GIS Services and Roadway Data Collection, Analysis and Reporting

Subarea description

This team leads the agency's enterprise GIS technical architecture, application development, support services, governance and fundamental transportation system data stewardship. These geospatial resources, services, and data enable multimodal planning, project development, and maintenance decision making within WSDOT and the Federal Highway Administration. We maintain the agency's roadway network inventory as a mapped linear referencing system (LRS) dataset with associated geometric, safety, condition, use, and classification descriptors. We compile, analyze, report, and certify key roadway data to meet multiple state and federal planning business needs and reporting requirements, including those for Federal Functional Classification, and Highway Performance Monitoring System (HPMS).

Federal mandates

[23 USC Sec 119](#) ; [23 CFR Part 460](#) ; [23 CFR Part 490](#) ; [23 CFR Part 924](#) ; [23 CFR Part 658](#) ; [23 CFR Part 470](#)

Objectives

- Compile, analyze, report, and certify key roadway data to meet multiple state and federal planning business needs and reporting requirements, including those for Federal Functional Classification, HPMS, and the Model Inventory for Roadway Elements (MIRE).
- Lead agency enterprise GIS administration, support, development, and governance to enable transportation system planning, development, operations, and maintenance activities across all regions and headquarters, including public engagement and outreach.
- Migrate and modernize enterprise GIS technology, applications, and use to align with evolving industry and agency technology standards and strategic directions.
- Maintain and support existing GIS applications, tools, web-based resources for agencywide use.
- Maintain the agency Linear Referencing System for state and federal highways.

Contact

Elizabeth Lanzer | Multimodal Planning & Data Division (MPDD) | 360-596-8925

Summary revenues

Revenue source	Baseline
Federal	\$4,046,480
State	\$1,011,620
Local	•
Total	\$5,058,100
FTE Count	18.4

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Ongoing*	Functioning and efficient operational GIS technology resources for agencywide use by a remote workforce.
2	Ongoing*	GIS educational and user support services, and web-based resource system administration for migrating end users to a web-based GIS solutions.
3	Mar-22 & Mar-23*	Annual State Highway Log.
4	Apr-22 & Apr-23*	Annual GIS-enabled Linear Referencing System Data.
5	Apr & Jun-22, Apr & Jun-23*	Annual HPMS Data Submittals.
6	Jun-22 & Jun-23*	Annual Certified Public Road Mileage.
7	Jun-22 & Jun-23*	Annual Certification of State Routes through Cities and Towns.
8	Jun-23	Decennial Update to the Highway Urban Area Boundaries.
9	Jan-22 & Jan-23*	Updates to public roadway Federal Functional Classification and National Highway System designations.
10	Ongoing*	Support and enhance over 30 existing geospatial applications and tools used by multiple agency business groups for functions such as safety data collection, multimodal community planning coordination, environmental assessment, and highway maintenance operations.
11	Ongoing*	Provide GIS project management and business analysis services for significant GIS data and tool development efforts.

Subarea 2.4: Annual Federal Reporting of Vehicle and Financial Statistics

Subarea description

Administer and update the financial reporting system for cities and counties, collect and evaluate data for FHWA financial and statistical reports, update and maintain state and local financial and statistical databases.

Federal mandates

[23 CFR 450.208](#) ; [23 CFR 420.117](#)

Objectives

- Serve the needs of WSDOT and the federal government by completing mandatory federal highway reports. Collect and evaluate state and local revenue and expenditure data for FHWA financial and statistical reports reflecting transportation related activities.
- Collect detailed information from the state's 39 counties and 280 cities, reflecting their highway-related financial activities. Work with the local agencies to ensure accuracy of data provided and prepare required FHWA report.
- Work with the state auditor, state agencies, and local governmental units furnishing transportation financial information to improve the quality and timeliness of data provided and work to merge out two web-based reporting systems into one financial reporting system.
- Use data accumulated in the preparation of required FHWA reports, develop and maintain databases of state and local financial and statistical information for use in legislative requests, transportation studies, and special analyses.
- Study proposed federal legislation to determine the impact to WSDOT on federal funding levels for WSDOT program areas receiving federal funds.
- Provide a quarterly federal funds forecast with information on the federal authorization act and other federal appropriation laws.

Contact

Lizbeth Martin-Mahar | Budget & Financial Analysis Division, Economic Analysis Office | 360-705-7942

Summary revenues

Revenue source	Baseline
Federal	•
State	•
Local	•
Total	\$0
FTE Count	•

No SPR funding is used for this subarea.

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	4x a yr.*	Quarterly Transportation Revenue Forecast Council (TRFC) documents (Volumes I-III and twice a year Volume IV). Produce quarterly forecasts of federal revenue and a breakdown of those revenues by state and local programs.
2	4x a yr.*	Quarterly forecast summary reports and detailed tables describing the forecast. Produced and presentations are produced for WSDOT management and others to make presentations on the latest financial information.
3	Monthly*	Support the Transportation Commission benchmark performance measures, transportation planning, legislative analyses, and special studies using data from FHWA reports.
4	Monthly*	Continuously participate on federal forecast regarding new federal transportation funding package or COVID relief funding work groups.
5	Monthly*	Maintain the collection, analysis and reporting of transportation financial data will be maintained.
6	Monthly*	Process data from 39 counties and 280 cities will be processed for the 2021 and 2022 FHWA reports.
7	Monthly*	Educate local city and county officials on financial transportation reports.
8	Monthly*	Respond to requests for local, state and federal financial and economic data.
9	Monthly*	Evaluate local financial special reports used by metropolitan and other local planning organizations, cities, counties, educational institutions, state legislative transportation committees, and WSDOT management.
10	Monthly*	Produce special economic analyses and reports used by state legislative transportation committees, Transportation Improvement Board, the State Auditor's Office, County Road Administration Board, local government agencies, and other WSDOT divisions.
11	Jan-22 & Jan-23*	Prepare FHWA reports for state motor fuel tax collections, motor vehicle registrations and fees, state bonding activities, and highway income and expenditures on a fiscal year basis for FY 2021 and FY 2022.
12a	Jan-22 & Jan-23*	532 – State Highway Expenditures
12b	Jan-22 & Jan-23*	534 – Highway Expenditures by Functional Class and System
12c	Jan-22 & Jan-23*	536 – Local Finance Report

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
12d	Jan-22 & Jan-23*	539 – Toll Facility Receipts and Disbursements
12e	Jan-22 & Jan-23*	541 – Transportation Bonds Issued
12f	Jan-22 & Jan-23*	542 – Status of Bond Debt
12g	Jan-22 & Jan-23*	556 – Fuel Tax Receipts
12h	Jan-22 & Jan-23*	561 – Vehicle Registrations and Fees
12i	Jan-22 & Jan-23*	566 – Vehicle Fees and Distribution
12j	Jan-22 & Jan-23*	571 – Motor Carrier Tax Receipts
13	Monthly*	Legislative analyses and fiscal notes.

Subarea 2.5: Information Technology Development and Support

Subarea description

Provide project management, develop applications, act as a liaison between TDGM Group and the Information and Technology Division (ITD), and provide technical support for the collection, storage, processing and reporting of Crash, Travel Analysis and Roadway Office data in support of their federal and state mandates.

Work with the state auditor's office and state chief information office to investigate, validate and document compliance with new and existing policies and procedures as it relates to the acquisition, storage, processing and dissemination of data for Category 2 and 3 data elements.

Federal mandates

[23 USC Sec 119](#) ; [23 USC Sec 405](#) ; [23 USC Sec 148](#) ; [23 CFR Part 490](#)

Objectives

- Provide project management, application development, and support for the collection, storage, processing and reporting of Crash, Travel Analysis and Roadway Office data in support of their federal and state mandates.
- Improve the security of these systems in accordance with the State Auditor's Office as well as compliance with the Office of the Chief Information Officer (OCIO) policies and procedures.
- Upgrade and modernize existing applications as necessary to ensure they are kept current as deficiencies are identified from either a technology or security standpoint.

Contact

Bob Maxwell | Information Technology Division | 360-705-7705

Summary revenues

Revenue source	Baseline
Federal	\$720,000
State	\$180,000
Local	•
Total	\$900,000
FTE Count	3

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Jun-23	Modify the Collision Location and Analysis System (CLAS) to resolve frequent database connection issues while teleworking. The application is currently configured to connect directly to the database, resulting in numerous timeouts while working from home. The system will be modified so that database connections will instead be made through a web service.
2	Jun-22	Implement programming modifications to existing systems to supply the Highway Safety Information System (HSIS) a more robust XML dataset instead of the existing mainframe database extract.
3	Apr-22	Enhancements to a new application for a restricted version of the Crash Data Portal for use by Regional Transportation Planning Organizations (RTPOs) and Metropolitan Planning Organizations (MPOs). This application will facilitate the ability of RTPOs, MPOs, and state and local engineers to satisfy requirements for transportation plans and programs as stipulated by USC 23 Section 148 of the FAST Act/Map 21. The enhancements will include expanded crash filtering and GIS capabilities.
4	Dec-22	Implement a new application that would allow the Crash Branch to perform Suspense File Processing using a web/server architecture instead of the current mainframe architecture. This process allows analysts to relocate collisions after a road is realigned. Migrating crash data processing to a secure web environment is part of WSDOT's effort to replace its legacy mainframe systems.
5	Sep-21	Resolve all known issues with a recently modernized application used for calculating Accumulated Route Mileages (ARMs) on state routes. While the new application corrected most errors produced by the old system, several pre-existing issues need to be corrected to produce completely accurate results.
6	Apr-22	Modernize web site used by cities and counties to enter data into the Highway Performance Monitoring System (HPMS). The current site uses outdated technology. The new site will utilize modern technology and security methods and will facilitate the transfer of data from city and county analysts to HPMS.
7	Ongoing*	Maintain high availability of the systems required to collect, store, process and report those data elements needed by either the Crash, Travel Analysis or Roadway Offices enabling them to successfully complete their work.
8	Ongoing*	Work with the Crash Office as needed to assist in fulfilling highly complex public disclosure requests.

Area 3: System Performance and Analysis

Area 3 contains descriptions, mandates, objectives, revenue, and deliverables related to the following subareas:

- Subarea 3.1: Statewide Long-Range Transportation Planning and Implementation
- Subarea 3.2: Priority Statewide Planning
- Subarea 3.3: Planning Guidance, Training, Tools and Data
- Subarea 3.4: Implementation of Planning Guidance, Training, Tools, and Data
- Subarea 3.5: Community Engagement
- Subarea 3.6: Cooperative Automated Transportation (CAT) Program
- Subarea 3.7: Active Transportation Plan Update
- Subarea 3.8: Rail, Freight and Ports
- Subarea 3.9: Washington State Ferries Transportation Planning
- Subarea 3.10: Incorporating Equity into Planning Recommendations

Subarea 3.1: Statewide Long-range Transportation Planning and Implementation

Subarea description

WSDOT develops and implements long-range statewide plans to meet state and federal requirements. The Washington Transportation Plan, Phase 2, adopted in April 2018, meets the federal long-range statewide transportation planning requirements and the state multimodal transportation plan requirements. It also implements the Washington Transportation Plan, Phase 1, the state policy plan prepared by the Washington Transportation Commission.

WSDOT will continue to implement Phase 2 by coordinating, integrating, and aligning it with other plans at WSDOT (e.g.: ferries, highways, rail, aviation, freight, active transportation, public transportation). Each plan update is an opportunity to both implement Phase 2 and prepare for its next update. Decision makers rely on the recommendations from WSDOT plans to inform future planning, scoping, programming, and design decisions.

WSDOT provides transportation planning data to and coordinates statewide planning activities with MPOs, tribes, federal land management agencies, and other transportation stakeholders. Additionally, WSDOT is working with MPOs and other regional transportation planning organizations on developing a collaborative Investment Strategy process to identify, vet, and prioritize statewide and regional transportation investments.

Federal mandates

[23 CFR 450.206](#) ; [23 CFR 450.210](#) ; [23 CFR 450.208](#) ; [23 USC Sec 135](#)

Objectives

- Implement the federally-compliant long-range statewide transportation plan and prepare for its update by coordinating, integrating and aligning it with other statewide plans.
- Provide statewide transportation planning data to and coordinate statewide planning activities with MPOs, tribes, federal land management agencies, and other transportation stakeholders.

Contact

Karena Houser | Multimodal Planning & Data Division (MPDD) | 360-705-7876

Summary revenues

Revenue source	Baseline
Federal	\$1,484,480
State	\$371,120
Local	•
Total	\$1,855,600
FTE Count	7

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Jun-23	Update the Highway System Plan, including coordination with MPOs, tribes, federal land management agencies, and other transportation stakeholders.
2	Jun-23*	Guide, inform, and participate in other statewide plans for the purpose of implementing the federal long-range transportation plan and coordinating statewide planning activities with MPOs, Tribes, federal land management agencies, and other transportation stakeholders.
3	Jun-23*	Maintain and continuously improve the WSDOT Community Planning Portal to provide statewide transportation data to MPOs, Tribes, federal land management agencies, and other transportation stakeholders.
4	Dec-22	Develop a coordination strategy for the federally-compliant long-range statewide transportation plan and other statewide plans.
5	Jun-23	Develop and pilot a collaborative Investment Strategy process with MPOs and regional transportation planning organizations. As of spring 2021, the detailed scope of work is being developed in partnership with MPO/RTPO participants.

Subarea 3.2: Priority Statewide Planning

Subarea description

Priority Statewide Planning provides resources for analysis tools and consultant services to support the following statewide planning priorities: Highway System Plan update, collaborative Investment Strategy process, and statewide planning coordination and connection to other agency business areas (e.g. programming, design). See also subarea 3.1 Statewide Long-range Transportation Planning and Implementation.

Federal mandates

[23 CFR 450.210](#) ; [23 CFR 450.208](#) ; [23 CFR 450.206](#)

Objectives

- Secure consultant planning and outreach services and develop virtual tools for public engagement for the Highway System Plan Update (see subarea 3.1 Statewide Long-range Transportation Planning and Implementation).
- Secure consultant facilitation services and plan and implement pilot projects to develop a collaborative Investment Strategy process with metropolitan and regional transportation planning organizations (see subarea 3.1 Statewide Long-range Transportation Planning and Implementation).
- Secure consultant services to increase statewide planning coordination and collaboration across the agency and foster more efficient connections between planning work and downstream agency processes (e.g. programming, design) (see subarea 3.1 Statewide Long-range Transportation Planning and Implementation).

Contact

Karena Houser | Multimodal Planning & Data Division (MPDD) | 360-705-7876

Summary revenues

Revenue source	Baseline
Federal	\$800,000
State	\$200,000
Local	•
Total	\$1,000,000
FTE Count	0

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Mar-22	Support the update of the Highway System Plan with consultant services and the development of virtual engagement tools.
2	Jun-23	Support the development of a collaborative Investment Strategy with metropolitan and regional transportation planning organization through consultant services and pilot funding.
3	Jun-23	Support the statewide planning coordination and collaboration across the agency to foster more efficient connections between planning work and downstream agency processes (e.g. programming, design) through consultant services.

Subarea 3.3: Planning Guidance, Training, Tools and Data

Subarea description

Work in this area includes prioritizing needs related to guidance, training, tools, and data and facilitating their implementation. This includes engaging with the planning and data community to identify needs and establish an agreed-upon process for prioritizing investments. This work also identifies areas where needs can be addressed in-house for low or no cost. Consistent with our commitment to workforce development, work in this area includes identifying, tracking, and sharing training opportunities with the planning community as well as establishing of a mentorship program for planning and data staff.

For the 2021-2023 biennium, work will focus on implementing a robust planning and data training curriculum (Planning and Data Academy), providing guidance where needed, as well as providing planning tools and data needed to be the center of excellence in planning and a national example of how planning informs decision making at WSDOT. We will engage with customers and WSDOT's planning and data community to update the prioritized list of needs developed in the 2019-2021 biennium, and work to implement them within available resources.

Federal mandates

[23 CFR 450.208](#) ; [23 CFR 450.210](#)

Objectives

- Prioritize unfunded needs related to training, guidance, tools & data.
- Share training and networking opportunities.
- Increase collaboration and sharing of resources.
- Align priorities with funding as it becomes available.
- Make Multimodal Planning & Data (MPDD) the center of excellence for all planning and data needs.

Contact

Bill Bennion | Multimodal Planning & Data Division (MPDD) | 360-878-0727

Summary revenues

Revenue source	Baseline
Federal	•
State	\$418,300
Local	•
Total	\$418,300
FTE Count	1.55

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Oct-21*	Evaluation of the process used to prioritize unfunded needs in the 19-21 biennium.
2	Oct-21*	Meetings with individual planning stakeholders including Multimodal Planning & Data staff, Region & Modal planning, and others in the planning community to identify unfunded needs.
3	Nov-21*	Workshop to prioritize the list of unfunded needs.
4	Nov-22*	Prioritized list of unfunded training, guidance, tool and data needs.
5	Jun-22*	Implementation of priorities within available resources.
6	May-23*	Planning and data conference.
7	Jan-23*	Align unfunded needs with available funding.
8	Jun-23*	Organize 24 monthly training sessions consistent with SPR contents instructing existing and new planners and data specialist on WSDOT's transportation planning principles and data collection methods.
9	Jul-21*	Add a "DEI in Planning" track to ongoing professional development for WSDOT's planning and data community.
10	May-21*	Address DEI topics at the Statewide Planning Conference and other professional development venues throughout the year.
11	Jun-23*	Establish a mentorship program for all planning and data staff.

Subarea 3.4: Implementation of Planning Guidance, Training, Tools and Data

Subarea description

Work in this area implements the high priority, high cost unfunded needs identified in Subarea 3.3: Planning Guidance, Training, Tools, and Data. This subarea was added to track this one-time funding separately from spending on base budget for subarea 3.3. These funds will be used to deliver items that rise to the top tier of the prioritized list for building capacity and advancing implementation of WSDOT's planning and data programs. Because funds are limited and to ensure strategic distribution among areas, the director may sometimes apply these funds to items that appear to be lower on the prioritized list.

Federal mandates

[23 USC Sec 119](#) ; [23 CFR 450.208](#) ; [23 USC Sec 135](#)

Objectives

- Coordinate investments in training, guidance tools and data to maximize benefit to WSDOT's planning and data programs.
- Apply funding to high priority and high-cost needs related to training, guidance, tools & data.
- Increase collaboration and sharing of resources.
- Provide planning and data staff with the best training and tools needed to successfully address current and further challenges.

Contact

Bill Bennion | Multimodal Planning & Data Division (MPDD) | 360-878-0727

Summary revenues

Revenue source	Baseline
Federal	•
State	\$371,400
Local	•
Total	\$371,400
FTE Count	0.25

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Ongoing*	This work is focused on implementing the prioritized needs identified in SPR subarea 3.3. Priorities identified through that process will be evaluated at least quarterly and the highest priority items will be funded through this subarea. This includes, but is not limited to, implementing a training program, implementing a structured mentorship program, purchasing data, funding tools and/or preparing guidance. These funds may also be used to pay for items related to delivery of a planning conference.

Subarea 3.5: Community Engagement

Subarea description

WSDOT's federally compliant Community Engagement Plan is an important part of the agency's emphasis on greater community engagement, inclusion, workforce development, and Practical Solutions. In particular, the plan and its implementation are important milestones in achieving the agency's inclusion goal. The plan meets federal requirements for a documented public involvement process for statewide planning, and guides how WSDOT engages with partners, stakeholders, tribes, communities, and the public. It lets people know what to expect from WSDOT during engagement processes.

Work in this subarea also supports developing relationships through communication. This includes communications support for the director of Multimodal Planning & Data Division (MPDD) managers and staff, and broader planning community. Supporting document and graphic production, meetings, and web presence ensures we are engaging as effectively as possible internally and externally. Working closely with our communications division guarantees planning products are consistent with agency branding, messaging, plain-talk and look-and-feel.

Federal mandates

[23 CFR 450.210 \(a\)](#)

Objectives

- Guide agency community engagement.
- Support effective communication.
- Let the traveling public know what to expect. Share best practices.
- Meet requirements.

Contact

Bill Bennion | Multimodal Planning & Data Division (MPDD) | 360-878-0727

Summary revenues

Revenue source	Baseline
Federal	•
State	\$447,700
Local	•
Total	\$447,700
FTE Count	0.7

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Jun-22 & Jun-23*	Update Strategic Plan Dashboard.
2	Jun-22*	Update Community Engagement Plan consistent with guidance from 2021 Legislature.
3	Jun-22*	Represent MPDD on agency Inclusion Strategic Plan Goal.
4	Dec-22*	Update Community Engagement Training Program.
5	Jun-23*	Update Community Engagement E-Learning.
6	Jun-23*	Support planning communications.
7	Jan-23*	Work with WSDOT Office of Equal Opportunity, Environmental Services Office, and Active Transportation Division to develop a database of outreach contacts.
8	Monthly*	Organize and facilitate a monthly meeting of statewide planners from regions and modes to discuss areas for collaboration, current events in planning and data, upcoming opportunities, collaboration, best-practices and other hot topics.

Subarea 3.6: Cooperative Automated Transportation (CAT) Program

Subarea description

The WSDOT Cooperative Automated Transportation program develops and advances the agency's CAT role and strategic vision, with a focus on how new, semi-automated and automated capabilities can advance the state's multimodal transportation system and enhance the communities we serve. WSDOT envisions a future where automated, connected, electrified, and shared mobility contributes toward a safe and efficient transportation system that emphasizes public transit and active transportation and promotes livable (walkable/bikeable), economically vibrant communities with affordable housing and convenient access to jobs and other activity centers.

Federal mandates

[23 CFR 450.206](#)

Objectives

- Develop and advance WSDOT's role and strategic vision in Cooperative Automated Transportation locally and nationally.
- Participate in CAT-related forums, conferences, legislative meetings and other engagement and communication opportunities to be able to provide reliable, timely and relevant policy direction and recommendations for WSDOT programs, agency executives and the Washington State Autonomous Vehicle (AV) Work Group.
- Identify multimodal and infrastructure CAT related deployment opportunities (i.e., automated shuttles and other CAT related Mobility on Demand and shared mobility services, real time work zone data and roadway striping enhancements). The deployment of these type of projects requires increased cross-agency planning and collaboration. Continue to seek internal and external partnership and funding commitments throughout the biennia.

Contact

Daniela Bremmer | M2D2-CAT Program – Traffic Operations Division | 360-705-7953

Summary revenues

Revenue source	Baseline
Federal	\$283,120
State	\$70,780
Local	•
Total	\$353,900
FTE Count	1

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Ongoing*	Participate in CAT, connected and automated vehicles (CAV) and AV- related forums, conferences, legislative meetings, and other engagement opportunities to support technical, research and planning learning needs, maintain leadership roles and communicate WSDOT's strategic vision for Cooperative Automated Transportation locally and nationally. This results in increased partnership opportunities; development of national workshops; national policy development; close collaboration with FHWA on various efforts such as the current, National Con Ops Initiative.
2	Ongoing*	Continue to lead the WSDOT CAT Work Group, working with all agency divisions and agency programs to provide technical support, policy guidance and facilitate partnership opportunities and support CAT policy and deployment planning and implementation. Facilitate knowledge transfer, guidance, regular communication, and information exchange.
3	Ongoing*	Provide policy guidance and staff support to the secretary and other WSDOT executives engaged in various, national CAT/CAV/AV/ITS related committees and groups. Continue to staff the Washington State AV Work Group and the related Infrastructure and Systems Subcommittee. The Work Group is to identify the measures – including regulatory, policy, infrastructure and other changes – necessary to enable and ensure the safe operation of AVs on public roadways and provide recommendations to the WSTC, the Legislature and Governor. The specific 2021 Infrastructure and Systems Subcommittee work plan items are currently being finalized.

Subarea 3.7: Active Transportation Planning and Policy Development

Subarea description

The Active Transportation Director leads and manages the work of the Active Transportation Division. This includes dissemination of the Washington State Active Transportation Plan and implementation. The Active Transportation Plan equity focus and decision tools will be integrated into WSDOT planning, project development and maintenance practices. Coordination with local agencies will foster active transportation network connections, especially those that support low income, black, indigenous, and people of color communities.

Other work includes facilitating in the development and adoption of new speed limit setting and speed management practices and/or policy as well as updating the pedestrian and bicyclist chapter of the Washington State Strategic Highway Safety Plan (Target Zero).

Federal mandates

[23 USC Sec 119](#) ; [23 CFR 450.206](#) ; [23 USC Sec 148](#) ; [23 CFR 450.208](#)

Objectives

- Develop policies to identify and prioritize steps to complete the active transportation network.
- Support implementation of the Safe Systems Approach in agency policies and practice. Incorporate an equity framework in evaluation of active transportation systems.
- Increase the percentage of everyday short trips made by walking or bicycling.
- Collaborate and coordinate with local, regional, state, tribal, and federal partners to improve conditions for people who walk and bike.

Contact

Barb Chamberlain | Active Transportation Division | 509-869-2949

Summary revenues

Revenue source	Baseline
Federal	\$313,680
State	\$78,420
Local	•
Total	\$392,100
FTE Count	1

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Ongoing*	Updates to WSDOT decision making guidance, manuals, and policies regarding active transportation.
2	Jun-23*	Updated Target Zero pedestrian and bicyclist chapter.
3	Jun-22*	WSDOT speed setting and speed management practice changes or policy.
4	Dec-21*	Active Transportation Plan Part II.

Subarea 3.8: Rail, Freight and Ports

Subarea description

Develop federally required planning studies and engage in activities relevant to the rail, freight and port industries. The Rail, Freight and Ports (RFP) division will update the state freight plan to align with the national freight strategic plan, examine trends, issues, needs and develop strategies, including defining truck parking and freight investment priorities while engaging stakeholders in the process. The RFP division will also develop future service goals and objectives for the intercity passenger rail program and shortline rail system owned by the state. Efforts will continue to expand data collection, analysis and reporting of freight data. These efforts support decision-making and planning activities related to advanced transportation technologies and pertinent agency initiatives.

Federal mandates

[23 CFR 450.208](#) ; [23 USC Sec 167](#) ; [23 CFR 450.210](#)

Objectives

- Update the state freight plan using SPR funds to meet federal requirements by:
 - Aligning state freight plan with National Freight Strategic Plan.
 - Examining multimodal trends, issues, needs and develop strategies.
 - Defining truck parking and freight investment priorities.
 - Engaging freight stakeholders and agency offices in freight plan development.
- Develop future service goals and objectives for the intercity passenger rail program using SPR funds by:
 - Conducting an intercity passenger rail and multimodal market analysis.
 - Developing Amtrak Cascades service scenarios.
 - Developing growth alternatives and identifying investment options.
- Update program goals and objectives for the state-owned shortline rail system using SPR funds by:
 - Assessing shortline performance and needs analysis.
 - Engaging freight, rail, and agriculture stakeholders.
 - Developing growth investment strategies.
- Update the Washington State Freight and Goods Transportation System (FGTS) procedures by performing the following activities using SPR funds:
 - Improving freight data collection and analysis to include urban and rural county freight data.
 - Establishing volume and tonnage benchmarks due to the pandemic.
 - Engaging local, regional, and state government entities in the update process.
- Support decision-making and planning activities using SPR funds by engaging in ongoing activities:
 - Advanced technologies such as Connected Autonomous Transportation, Ultra High-Speed Ground Transportation, Electric aircraft and ferry vessels.

- National and regional freight and rail collaboration through NCHRP, AASHTO, TRB and Great Northern Corridor Coalition.
- Agency Practical Solutions coordination.

Contact

Jason Beloso | Rail, Freight & Ports Division | 206-464-1259

Summary revenues

Revenue source	Baseline
Federal	\$929,600
State	\$232,400
Local	•
Total	\$1,162,000
FTE Count	4

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Dec-22	State Freight Plan.
2	Ongoing*	Freight Advisory Committee.
3	Dec-22*	Service Development Plan.
4	Dec-22	PCC Shortline Rail System Plan.
5	Nov-21	Freight and Goods Transportation System Update.
6	Jun-23	Ultra-High Speed Ground Transportation Report.

Subarea 3.9: Washington State Ferries Transportation Planning

Subarea description

The Washington State Ferries 2040 Long-Range Plan is a blueprint for transportation investment for Washington State's Marine Highway and mass transportation system (RCW 47.60.017). The plan is built around the guidance listed in RCW 47.60.327 and 47.60.375. The plan was developed with extensive public outreach and consultation with advisory groups for technical, policy and executive staff. It was completed in December 2018 and identifies numerous follow-on studies to be addressed in the 2021 – 2023 biennium. The follow-on studies will assist in making periodic revisions to the plan to keep it updated more frequently than every ten years. The four major themes of the long-range plan will be listed as objectives below and work program items tied to the four themes in the listing.

Washington State Ferries also plans for seasonal service adjustments, including significant data analysis and public participation (RCW 47.60.330).

Federal mandates

[23 CFR 450.206](#) ; [23 CFR 450.208](#)

Objectives

- Reliable service.
- Customer experience.
- Manage growth.
- Sustainability and resilience.

Contact

Ray Deardorf | Ferries Division | 206-719-6468

Summary revenues

Revenue source	Baseline
Federal	•
State	\$581,200
Local	•
Total	\$581,200
FTE Count	2

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Dec-22	Planning support for the Fauntleroy Terminal Replacement project. This project will utilize the Planning and Environmental Linkages (PEL) process to streamline getting to construction. Planning staff will aid the Terminal Engineering Department in that process, providing transportation planning analysis as needed.
2	Quarterly*	Quarterly Ridership and Fare Revenue Forecasts. These ridership and fare revenue forecasts are updated every quarter for adoption by the state Transportation Revenue Forecast Council. Forecast deadlines are four times a year (February/March, June, September and November). June forecasts will be provided in the SPR annual report. WSF staff work with consultants in the preparation of the inputs to the forecasts as well as the forecast development process.
3	Oct-21 & Oct-23*	Fare Structure Analysis and Review. WSDOT/WSF is directed by the legislature to make recommendations to the Washington State Transportation Commission on fare levels and policy. WSF works with an advisory group and the state legislature to determine these fare recommendations. WSF staff manages the process for fare modifications.
4	Ongoing*	Vessel Related Studies Support. The long-range plan identified the need for new vessels in the WSF fleet. WSF planning staff provide support to efforts to design and assign to routes for the new vessels. The Hybrid- Olympic Class vessels are currently under design, and WSF will begin the process to build another class of 124-car vessels.
5	Ongoing*	Ferry Terminal Studies. The 2040 Long-Range Plan identified several ongoing terminal studies. As of this writing it is uncertain of the funding for these efforts in the 2021 – 2023 biennium. No target dates set yet.
6	Quarterly*	Detailed Ferry Ridership and On Time Performance Analysis. WSF relies on accurate ridership and on time performance information for service and long-range planning.
7	Jan-22*	Service Planning Dashboard Buildout. This effort involves the delivery of a dashboard to allow easy access to all aspects of data and analysis related to the development of service plans and schedules for WSF.
8	Ongoing*	Support for Sailing Schedule Development. Ongoing technical and policy analysis and support for the development of WSF's sailing schedules.
9	Jan-22*	Data Systems and Information Flow Mapping/Documentation. Documentation of WSF's various data systems and mapping the flow of information.

Subarea 3.10: Incorporating Equity into Planning Recommendations

Subarea description

This work area focuses on incorporating diversity, equity, and inclusion (DEI) in WSDOT's planning and data products as well as developing actionable recommendations that can be implemented in downstream processes such as programming and development. Funding for this area will support statewide, regional, and/or modal plans that incorporate equity as a desired outcome. Funds will be administered based on requests from region planning offices, data offices, modal planning divisions, and other planning offices. These funds should only be used to enhance existing planning efforts with the goal of including actionable recommendations targeted at correcting past harms or improving diversity, equity, and inclusion in accessing and using Washington State's transportation facilities or services.

Federal mandates

[23 CFR 450.220](#)

Objectives

Incorporate equity into planning recommendations by:

- Encouraging planning teams to explore and include actionable DEI recommendations in their products and services elements in products.
- Providing funding for enhanced outreach that leads to actionable DEI recommendations.
- Encouraging planners at all levels to think 'outside the box' about solutions to correct past harms.
- Support innovative approaches to DEI in the planning and data processes, leading to actionable recommendations.

Contact

Bill Bennion | Multimodal Planning & Data Division | 360-878-0727

Summary revenues

Revenue source	Baseline
Federal	•
State	\$150,000
Local	•
Total	\$150,000
FTE Count	0

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Aug-21	Develop performance measures to evaluate effectiveness of this program.
2	Dec-21*	Identify planning and data products and services that can benefit from further DEI consideration.
3	Dec-21*	Coordinate with owners of the above products and services to discuss options for considering DEI in their work.
4	Dec-21*	Establish a process for administering/delivering DEI funds.
5	Apr-22*	Review requests for funding.
6	Dec-22*	Assign funding.
7	Jun-23*	Monitor expenditure of funds.
8	Jun-23*	Periodic and final report on results, audit process for effectiveness, share success stories and recommend direction for 2023-2025.

Area 4: Metropolitan and Regional Planning

Area 4 contains descriptions, mandates, objectives, revenue, and deliverables related to the following subarea:

- Subarea 4.1: MPO/RTPO Program Stewardship and Coordination

Subarea 4.1: MPO/RTPO Program Stewardship and Coordination

Subarea description

A Metropolitan Planning Organization (MPO) is a federally mandated organization of representatives from local government and transportation agencies in urbanized areas that have a population of 50,000 or more. MPOs provide a forum for local decision-making on transportation issues of a regional nature. The metropolitan planning process promotes consistency between transportation improvements and state and local planned growth and economic development patterns. MPOs cover urbanized area only and receive federal funding in support of their planning efforts.

Federal rules require WSDOT to provide fiduciary oversight and stewardship for the MPOs. State law and rules require WSDOT to perform similar functions for Regional Transportation Planning Organizations (RTPOs), which are fully funded by the state. When the MPO is acting as lead for the RTPO, it uses non-SPR funding. When it is acting as lead for an MPO, it uses SPR funding. There are 12 MPOs in the state, and 10 of these serve as the RTPO lead agency.

As the steward of federal metropolitan planning funding in Washington state, WSDOT has the responsibility to oversee and coordinate the work done by MPOs and RTPOs. In partnership with the MPOs and RTPOs, WSDOT ensures that a continuing, cooperative, and comprehensive transportation planning process is used to identify funding priorities for the transportation system. This section also identifies how WSDOT will coordinate transportation planning activities with non-metropolitan planning partners.

Federal mandates

[23 USC Sec 134](#) ; [23 CFR Part 420](#)

Objectives

- Guide the work of each MPO/RTPO and foster working relationships among all levels of government to ensure compliance with 23 CFR 450 and improve long-range transportation planning practices in Washington.
- Distribute Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) planning funds to Washington's 12 MPOs and oversee expenditures to ensure compliance with federal law.
- Facilitate the MPO/RTPO/WSDOT Coordinating Committee, which is a forum of representatives from WSDOT headquarters, regions, and external partners that works to improve data sharing, compliance with federal requirements, and consistency among regional and statewide plans.
- Coordinate with tribes, RTPOs and WSDOT Regions on transportation planning activities to fulfill WSDOT's requirements to consult with nonmetropolitan local officials as specified in 23 CFR 450.210.

Contact

Gabe Philips | Multimodal Planning & Data Division (MPDD) | 425-647-0030

Summary revenues

Revenue source	Baseline
Federal	\$1,063,520
State	\$265,880
Local	●
Total	\$1,329,400
FTE Count	5.25

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Ongoing*	Ensure proper agreements are in place with each MPO, including metropolitan planning and funding agreements.
2	Dec-21 & Dec-22*	Collaborate with federal partners to provide Unified Planning Work Program (UPWP) guidance to the MPOs by December 31 every year for the following state fiscal year (SFY). Guidance for SFY 2023 will be to the MPOs by December 31, 2021, and UPWP Guidance for SFY 2024 by December 31, 2022.
3	Spring-22 & Spring-23*	Schedule and attend UPWP onsite review meetings.
4	Jun-22 & Jun-23*	Distribute final UPWPs to FHWA/FTA for approval upon receipt after adoption by each MPO policy board. *Lewis Clark Valley MPO (LCV MPO) by September 30, 2021 and 2022.
5	Sept-21 & Sept-22*	Distribute the MPO Annual Performance and Expenditure Reports to FHWA/FTA. *LCV MPO by December 31, 2021 and 2022.
6	Oct-21 & Oct-22*	Approve MPO self-certification forms.
7	Nov-21 & Nov-22*	Review and approve MPO Transportation Improvement Program (TIPs) for the upcoming 4-year period.
8	Monthly*	Process MPO TIP amendments.
9	Ongoing*	Process requests for reimbursement from each MPO.
10	Ongoing*	Assist FHWA and FTA in the review and certification of each Transportation Management Area (TMA) to ensure compliance with the Congestion Management Process.

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
11	Ongoing*	Organize quarterly coordination meetings with MPOs/RTPOs, FHWA/FTA, and WSDOT. These certifications are on a four-year cycle; timing is specific to each TMA. PSRC is expected to be reviewed during this biennium.
12	Quarterly*	Attend MPO Policy Board and Technical Committee meetings as required. Provide support, assistance, and/or data as needed.
13	Ongoing*	Attend Air Quality Interagency Consultation Group, International Mobility and Trade Corridor Program, and other regional coordination meetings.
14	Ongoing*	Assist in development of each Metropolitan/Regional Transportation Plan as they are updated.
15	Quarterly*	Participate in statewide Tribal Transportation Planning Organization (TTPO) meetings and Tribal Transportation conferences.
16	Ongoing*	Provide funding support for the TTPO.
17	Annually*	Periodic evaluation of facilities repeatedly receiving federal emergency relief funds for repair and reconstruction activities. This work ensures that reasonable alternative analysis and consideration of findings is occurring at these locations consistent with requirements found in 23 CFR 667.
18	As needed*	Facilitate the review and recommendation of potential Route Jurisdiction Transfers.
19	As needed*	Review and submit applications for national scenic byway designations.

The following table illustrates the SPR funds that will be passed through to MPOs in Washington state.

Metropolitan Planning Organization	SFY 2022		SFY 2023		2021-2023 Biennium Total
	FHWA PL Funds	FTA Section 5303	FHWA PL Funds	FTA Section 5303	
Benton Franklin Council of Governments	\$363,000	\$126,000	\$362,000	\$126,000	\$977,000
Chelan - Douglas Transportation Council	\$195,000	\$48,000	\$194,000	\$48,000	\$485,000
Cowlitz - Wahkiakum Council of Governments	\$154,000	\$30,000	\$154,000	\$30,000	\$368,000
Lewis Clark Valley MPO	\$64,000	\$11,000	\$63,000	\$11,000	\$149,000
Puget Sound Regional Council	\$4,222,000	\$1,637,000	\$4,219,000	\$1,637,000	\$11,715,000
Skagit Council of Governments	\$199,000	\$50,000	\$199,000	\$50,000	\$498,000
Southwest Washington Regional Transportation Council	\$535,000	\$200,000	\$536,000	\$200,000	\$1,471,000
Spokane Regional Transportation Council	\$607,000	\$208,000	\$605,000	\$208,000	\$1,628,000
Thurston Regional Transportation Council	\$321,000	\$96,000	\$321,000	\$96,000	\$834,000
Walla Walla Valley MPO	\$148,000	\$27,000	\$147,000	\$27,000	\$349,000
Whatcom Council of Governments	\$275,000	\$78,000	\$273,000	\$78,000	\$704,000
Yakima Valley Conference of Governments	\$324,000	\$87,000	\$324,000	\$87,000	\$822,000
Total Metropolitan Planning Organizations	\$7,407,000	\$2,598,000	\$7,397,000	\$2,598,000	\$20,000,000

The following table illustrates the state planning funds that will be passed through to RTPOs in Washington state.

Regional Transportation Planning Organization	SFY 2022	SFY 2023	2021-2023 Biennium Total
Benton Franklin Council of Governments	\$123,500	\$123,500	\$247,000
Chelan - Douglas Transportation Council	\$87,000	\$87,000	\$174,000
Island County RTPO	\$52,500	\$52,500	\$105,000
Northeast Washington RTPO	\$91,500	\$91,500	\$183,000
Okanogan County RTPO	\$38,500	\$38,500	\$77,000
Palouse RTPO	\$111,500	\$111,500	\$223,000
Peninsula RTPO	\$137,000	\$137,000	\$274,000
Puget Sound Regional Council	\$754,000	\$754,000	\$1,508,000
Quad-County RTPO	\$122,000	\$122,000	\$244,000
Skagit Council of Governments	\$71,500	\$71,500	\$143,000
Southwest Washington RTPO	\$183,500	\$183,500	\$367,000
Southwest Washington Regional Transportation Council	\$176,000	\$176,000	\$289,000
Spokane Regional Transportation Council	\$144,500	\$144,500	\$352,000
Thurston Regional Transportation Council	\$97,000	\$97,000	\$194,000
Walla Walla Valley MPO	\$52,000	\$52,000	\$104,000
Whatcom Council of Governments	\$89,000	\$89,000	\$178,000
Yakima Valley Conference of Governments	\$99,000	\$99,000	\$198,000
TOTAL Regional Transportation Planning Organizations*			\$4,860,000

*RTPO allocation funding available is \$4,860,000. \$40,000 is reserved for special regional planning projects.

Area 5: Local, Network and Corridor Planning

Area 5 contains descriptions, mandates, objectives, revenue, and deliverables related to the following subareas:

- Subarea 5.1: Land Use and Transportation Planning Integration
- Subarea 5.2: Transportation Planning Studies
- Subarea 5.3: WSDOT Regional Planning
- Subarea 5.4: WSDOT Region Priority Work

Subarea 5.1: Land Use and Transportation Planning Integration

Subarea description

Transportation trends are made up of the aggregate individual decisions of all the people traveling in our state. People make choices based on their perceptions of the options reasonably available to them and the relative costs, risks and merits of those options. For more than half a century we have invested heavily in making driving convenient. In many places around the state, there are no other options for safe and convenient access to the destinations of people's daily lives. For walking, bicycling, transit, and other more sustainable options to be competitive, there need to be complete networks for these options that are safe and comfortable. These networks must be integrated with land use to provide destinations within convenient travel time for each of these options.

The Legislature directed WSDOT to initiate work on vehicle miles traveled reduction targets in the 21-23 biennium. The agency is directed to work with the state's Department of Commerce to produce by June 30, 2023 a process for establishing vehicle miles traveled reduction targets, a recommended suite of options for local jurisdictions to achieve the targets, and funding requirements for state and local jurisdictions. Given land use patterns are key factors in travel demand and should be taken into consideration when developing the targets, the Legislature directed the state agencies to partner with local jurisdictions, regional transportation planning organizations and other stakeholders to inventory existing laws and rules that promote transportation and land use, identify gaps and make recommendations for changes in laws, rules and agency guidance, and establish a framework for considering underserved and rural communities.

WSDOT plays an important role – both through the agency's own decisions and actions as well as in the way WSDOT informs and supports decisions and actions by local agencies. It is the goal for land use and transportation integration strategies to consider and implement the following factors. These are broader goals shared across many WSDOT programs. This subarea focuses on the aspects that are unique to land use and transportation integration, in collaboration with and complementing other WSDOT programs:

- Support economic vitality.
- Increase the safety of the transportation system for motorized and active transportation users; Increase the security of the transportation system for motorized and active transportation users.
- Increase accessibility and mobility of people and freight.
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns.
- Enhance the integration and connectivity of the transportation system for people and freight across and between modes throughout the state.
- Promote efficient system management and operation.
- Emphasize the preservation of the existing transportation system.
- Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.
- Enhance travel and tourism.

Federal mandates

[23 CFR 450.206](#) ; [23 CFR 450.208](#)

Objectives

- Broaden WSDOT's understanding and use of integrating planning and decision-making for land use, growth, economic development and transportation systems. This, in part, implements WSDOT's federal planning responsibilities under 23 CFR 450.206. This subarea develops influence on, and involvement with, local and sub-regional transportation and land use decision-making regarding impacts to/implications for the state's transportation systems. This HQ function serves as the lead for WSDOT region planning teams on these topics; and supports WSDOT regions to effectively influence local land use decision making to improve WSDOT's ability to manage the transportation system that supports social, economic, and environmental goals.
- Develop policies and methods applicable throughout WSDOT related to practical solutions, economic development, land use and growth, transportation-efficient communities, multimodal accessibility and connectivity, climate and energy, and sustainability and resiliency.
- Understand the existing local land use and growth and development context and future vision for the areas our state transportation facilities serve, including supporting the economic vitality, safety, security, accessibility and mobility of people and freight.
- Integrate local and state information to be used in planning for roadways, active transportation facilities, transit operations, freight, and other transportation modes to identify common problems and solutions.

Contact

Gabe Philips | Multimodal Planning & Data Division (MPDD) | 425-647-0030

Summary revenues

Revenue source	Baseline
Federal	•
State	\$991,800
Local	•
Total	\$991,800
FTE Count	2.6

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Ongoing*	Lead joint Transportation Efficient Communities efforts with Washington State Departments of Health, Commerce, and Ecology, including content for the Transportation Efficient Communities website.
2	Jul-22*	Co-host land use trainings and related workshops.
3	Ongoing*	Participate in discussions with local transportation advocacy groups.
4	Jun-22*	Lead WSDOT's internal comprehensive plan review work group to share best practices for integrating land use and transportation, support enhanced collaboration efforts with local governments, recommend incentives for encouraging increased consideration of the impacts to state transportation facilities during local land use and transportation planning, and develop the organizational structure for internal and external comprehensive plan engagement.
5	Ongoing*	Provide technical assistance regarding legislative requests or legislation development related to land use and transportation. Assist with understanding and implementing new legislation. Those assisted may be within WSDOT, with other state agencies, or with partners.
6	Dec-21*	Develop written guidance and an engagement plan for addressing land use and transportation across the agency and with our partners.
7	Jun-23	Develop a series of three reports to the legislature that outline a process for establishing vehicle miles traveled reduction targets, a recommended suite of options for local jurisdictions to achieve the targets, and funding requirements for state and local jurisdictions.

Subarea 5.2: Transportation Planning Studies

Subarea description

Support regions as they develop planning studies that provide decision makers with multimodal recommendations that reflect Practical Solutions. The studies will be conducted, reviewed, and approved through the concurrence process recently adopted by WSDOT known as the Multimodal Multidisciplinary (M2) Team. As per the concurrence process, regions lead and approve the studies, a team of HQ subject matter experts provides input and statewide perspective to the regions on the content of a planning study, and the Planning Studies Office acts as liaison between the regions and the team of HQ subject matter experts.

Federal mandates

[23 CFR 450.206](#) ; [23 CFR 450.208](#) ; [23 CFR 450.210](#)

Objectives

- Facilitate the planning studies concurrence process so that regions can develop recommendations that reflect WSDOT policies and priorities.
- Participate in Multimodal, Multidisciplinary, Multi-agency (M3) Team (WSDOT region and external partners) meetings and share best practices/lessons learned with other regions and the M2 Team.
- Coordinate with regions to track, publicize and implement successful outcomes of planning studies.
- Implement WSDOT's equity goals.

Contact

Richard Warren | Multimodal Planning & Data Division (MPDD) | 206-498-5071

Summary revenues

Revenue source	Baseline
Federal	\$285,200
State	\$71,300
Local	•
Total	\$356,500
FTE Count	1

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Jun-22	Develop worksheets that identify modal context of a planning study through consultation with HQ subject matter experts and regions.
2	Ongoing*	Serve as liaison (primary point of contact) between regions and headquarters to coordinate HQ support and input and prepare for MPDD director concurrence. Consult with regions during development of plans and provide subject matter expert feedback.
3	Monthly*	Guide and Facilitate team of HQ subject matter experts, known as the Multimodal, Multidisciplinary (M2) Team. Capture policy development that occurs through M2 process, document and publicize; Publicize outcomes of planning studies, including tracking of implementing actions. Coordinate as appropriate with Development Division multimodal labs.
4	Ongoing*	Participate and represent the MPDD in HQ policy committees such as the Environmental Justice Workgroup, Transportation Systems Management and Operations (TSMO), Resiliency Workgroup, Multimodal Tech Forum, and the Plan Review Work Group.
5	Quarterly*	Represent WSDOT in the Oregon-Washington Transportation Working Inspiration Group convened to coordinate and collaborate with WSDOT, ODOT, Western Federal Lands Highway, and Federal Land Management Agencies (FLMA's) in Washington and Oregon.
6	Ongoing*	Serve on project teams and/or advisory groups for WSDOT plans developed by HQ, modes, and regions. These teams include the M2 Team and M3 Teams.

Subarea 5.3: WSDOT Regional Planning

Subarea description

The six regions and the Management of Mobility (MOM) Division provide multimodal planning and regional coordination services for WSDOT; Tribal, county, city, governments; state agencies; and regional planning organizations. This includes providing expertise on others' plans; providing and analyzing data; and participating in committees.

The regions manage all aspects of a planning study or other planning documents such as work plan, schedule, budget, community engagement, briefings, and development of recommendations. This work also includes planning studies identified by Legislative Provisos.

The Management of Mobility Division has two groups focusing on planning in central Puget Sound:

- The Regional Planning and Policy Group works on addressing system challenges and issues in the central Puget Sound by focusing on regional transportation planning and policy. The current focus includes High Occupancy Vehicle (HOV) policy and planning for the I-5 system. The team also serves as the liaison to Puget Sound Regional Council (PSRC) for the agency, working to engage and coordinate on regional transportation issues.
- The Technical Planning Group works to implement corridor level practical solutions to provide safe and reliable mobility choices in the central Puget Sound. Current focus is conducting multimodal corridor planning studies and developing plans as directed by the Legislature; local agency plan review and collaboration; and working with partners to provide an integrated multimodal system.

Federal mandates

[23 CFR 450.206](#) ; [23 CFR 450.208](#) ; [23 CFR 450.210](#)

Objectives

- Engage in Statewide Planning processes described in 23 CFR 450.206 and 23 CFR 450.210. This includes:
 - Developing planning studies for WSDOT owned and managed transportation infrastructure and services through internal and external community engagement.
 - Participating in HQ led efforts such as statewide and modal plan updates; data gathering and analysis; policy reviews; statewide coordination committees.
 - Conducting community engagement consistent with WSDOT's documented public involvement process (Community Engagement Plan) and the Process for Consulting with Non-Metropolitan Local Officials, Tribes, and Federal Land Management Agencies, as described in 23 CFR 450.210.
 - Performing Environmental Title VI analysis and monitor compliance particularly relating to planning efforts and other functional areas.
- Coordinate planning processes described in 23 CFR 450.208. This includes:
 - Providing data, modeling advice, analysis, and other support to planning partners including Metropolitan Planning Organizations (MPOs), Regional Transportation Planning Organizations (RTPOs), Tribal Transportation Planning Organization, transit agencies, counties, cities, Tribes, and federal land management agencies consistent with WSDOT's Community Engagement Plan and

WSDOT's Process for Consulting with Non-Metropolitan Local Officials, Tribes, and Federal Land Management Activities.

- Representing WSDOT by participating in MPO/RTPO policy and technical committee meetings and other related activities.
- Engage in enhanced collaboration with local governments to promote consistency between transportation improvements and state and local planned growth and economic development patterns, as per 23 CFR 450.206(5). This includes:
 - Coordinating with local governments as they develop their comprehensive land use and other transportation-related plans. The coordination includes participation in planning efforts, providing data, and performing/reviewing analysis.
 - Reviewing comprehensive plan and other land use decisions/proposals to identify and coordinate addressing potential impacts to state facilities.
 - Participating in various local agency planning efforts by developing planning teams to respond to requests for staff time and information. The planning team strives to understand local concerns by working with local jurisdictions and local advocacy groups. One goal of the team is to achieve mutual benefits for the local interests and to fulfill our responsibility for the operation of the state transportation system.

Contact

Richard Warren | Multimodal Planning & Data Division (MPDD) | 206-498-5071

Summary revenues

Revenue source	Baseline
Federal	\$5,696,720
State	\$6,635,080
Local	●
Total	\$12,331,800
FTE Count	34.95

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Mar-22	Represent the Highway System Plan in conversations with local and regional organizations, seek feedback and share responses with the project team.
2	Mar-22	Inform the Highway System Plan technical chapters, performance curves, and level of service technical work.
3	Jun-23*	Participate in headquarters-led statewide planning initiatives, such as statewide multimodal transportation plan updates, land use/growth management policy issues, planning studies guidelines update, and similar statewide efforts.
4	Jun-23*	Provide data, technical assistance, and review of regional plan updates.
5	Jun-23*	Participate in various local, regional, Tribal, state, and federal transportation planning efforts. This includes serving on technical teams, providing data, and performing technical review of studies and plans.
6	Jun-23*	Coordinate with local governments as they develop their comprehensive land use and other transportation-related plans. The coordination includes participation in planning efforts, providing data, performing/reviewing analysis.
7	Jun-23*	Review comprehensive plan and other land use decisions/proposals to identify and coordinate address of potential impacts to the state facilities and services.

Eastern Region: Charlene Kay, 509-324-6196

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Jun-23	Develop the US 2 West Plains Subarea Plan – Phase 1 planning study.
2	Jun-23	Monitor, assess, and update West Plains Subarea Plan US 2 Vicinity on-line presence.
3	Jun-23	West Plains Subarea Plan I 90 Vicinity – Phase 2 (Participant/Contributor).
4	Dec-21	US 2 Division Connects Study (Participant).
5	Dec-21	US 195 / I 90 Transportation Study (Participant).
6	Jun-23	Land Use demands necessitate on-going monitoring and assessment of US 195/I 90 Transportation Study.
7	Jun-22	Northeast Washington Regional Transportation Plan Update (Provide technical assistance).
8	Jun-23	Identify and partner with MPO/RTPO (if possible) in the acquisition of multimodal data to inform Practical Solutions planning analysis and strategy development.
9	Jun-23	Develop a WSDOT internal interactive Region Planning webpage to serve as region repository of planning related services, data, and products.
10	Jun-23	Identify and pursue coordinated study efforts within Eastern Region. Such plans may include region state facility active transportation gap assessment and strategy plan with region partners, region Environmental Justice Assessment, Palouse region Freight Study update, transition to sustainable landscaping plan along the I 90, and/or planning study efforts.

NW Region – Mt. Baker: Todd Carlson, 360-757-5980

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Dec-21	SR 542/Deming – WSDOT-led corridor development planning study with Whatcom County, Nooksack Tribal Community, and the Mount Baker School District. WSDOT will participate in additional community engagement activities needed to finalize this study.
2	Jun-23	SR 532/Stanwood – Corridor development with Island County, Island Transit, City of Stanwood and Snohomish County.
3	Jun-22	I-5 study in the Burlington/Mount Vernon urban areas (this will follow a similar process to what we just completed for I-5 in the Bellingham urban area – this work will be coordinated with Region/HQ Traffic and FHWA).
4	Jun-23*	Participate in the Lincoln/Lakeway Multimodal Transportation Study led by the City of Bellingham. WSDOT will offer technical support to practical solutions development involving access to I-5, local street connectivity, active transportation, and transit improvements.

NC Region: Nick Manzano, 509-667-2905

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Jun-23*	SR 28 Corridor Planning partnership with Chelan-Douglas Transportation Council.
2	Jun-23*	SR 285 NEPA partnership on multimillion-dollar transportation investments on the SR 285 corridor in NCR.
3	Jun-23*	Continue to engage disparate groups in the conversation surrounding system resiliency and the fire to flood linkages.

OR Region: Dennis Engel, 360-357-2651

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Dec-21*	I 5 Tumwater to Mounts Road Planning and Environmental Linkage study.
2	Aug-21*	Study of the weigh station on I 5 at Mounts Road.
3	Jun-23*	SR 302 Corridor Study in Victor area (proviso).
4	Jun-23*	SR 161, SR 7, SR 507, and I 5 Connectivity Study (proviso).

SCR Region: Paul Gonseth, 509-577-1630

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Jan-23*	Moxee to Yakima Integrated Scoping planning study.
2	Jan-22	W Powerhouse Road Transportation system analysis.
3	Jun-23*	US 12, Pasco Vicinity Transportation system analysis.

SW Region: Laurie Lebowsky, 360-905-2082

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Jun-23*	Develop a planning study for SR 503 in Clark County from the City of Vancouver UGA to the Battle Ground UGA.
2	Jun-23*	Develop a plan to address ADA accessibility on SR 142 in the community of Klickitat.
3	Jun-23*	SR 4 Couplet Vicinity study.

Management of Mobility: Robin Mayhew, 206-464-1264

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Jun-23*	Develop the SR 167 Master Plan (Proviso).

Subarea 5.4: WSDOT Region Priority Work

Subarea description

Work in this subarea is a result of a one-time additional funding that is available for the 21-23 biennium for high priority planning deliverables. Therefore, WSDOT will track and report on these deliverables separately from subarea 5.3

Four regions and the Management of Mobility Division (MoM) requested funding to perform high priority planning activities in addition to their base work described in 5.3. The types of activities include partnering with a Regional Transportation Planning Organization on a freight study; coordinating with local governments to follow-up on actions identified in a recent planning study; developing a planning study with local partners to identify strategies in a newly congested transportation corridor; working with local governments to identify and respond to transportation impacts from expected growth; coordinating with regional transit agencies to improve multimodal access to transit facilities; and purchasing data.

Federal mandates

[23 CFR 450.206](#) ; [23 CFR 450.208](#) ; [23 CFR 450.210](#)

Objectives

- Engage in Statewide Planning processes described in 23 CFR 450.206 and 23 CFR 450.210. This includes:
 - Developing planning studies for WSDOT owned and managed transportation infrastructure and services through internal and external community engagement.
 - Conducting community engagement consistent with WSDOT's documented public involvement process (Community Engagement Plan) and the Process for Consulting with Non-Metropolitan Local Officials, Tribes, and Federal Land Management Agencies, as described in 23 CFR 450.210.
 - Performing Environmental Title VI analysis and monitor compliance particularly relating to planning efforts and other functional areas.
- Coordinate planning processes described in 23 CFR 450.208. This includes:
 - Providing data, modeling advice, analysis, and other support to planning partners including Metropolitan Planning Organizations (MPOs), Regional Transportation Planning Organizations (RTPOs), Tribal Transportation Planning Organization, transit agencies, counties, cities, Tribes, and federal land management agencies consistent with WSDOT's Community Engagement Plan and WSDOT's Process for Consulting with Non-Metropolitan Local Officials, Tribes, and Federal Land Management Activities.
 - Representing WSDOT by participating in MPO/RTPO policy and technical committee meetings and other related activities.
- Engage in enhanced collaboration with local governments to promote consistency between transportation improvements and state and local planned growth and economic development patterns, as per 23 CFR 450.206(5). This includes:
 - Coordinating with local governments as they develop their comprehensive land use and other transportation-related plans. The coordination includes participation in planning efforts, providing data, and performing/reviewing analysis.

- Reviewing comprehensive plan and other land use decisions/proposals to identify and coordinate address of potential impacts to the state facilities.
- Participating in various local agency planning efforts by developing planning teams to respond to requests for staff time and information. The planning team strives to understand local concerns by working with local jurisdictions and local advocacy groups. One goal of the team is to achieve mutual benefits for the local interests and to fulfill our responsibility for the operation of the state transportation system.

Contact

Richard Warren | Multimodal Planning & Data Division (MPDD) | 206-498-5071

Summary revenues

Revenue source	Baseline
Federal	\$1,886,800
State	\$400,000
Local	●
Total	\$2,286,800
FTE Count	2

Deliverables

Eastern Region: Charlene Kay, 509-324-6196

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Jun-23*	Potential freight study in Palouse RTPO.

NW Region – Mt. Baker: Todd Carlson, 360-757-5980

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Jun-23*	I-5 Integrated Scoping to implement Focus Area #1 & #2 from the I 5 Operations and Demand Management Analysis, (completed in fall 2019 with concurrence by RA and MPDD). This work will accomplish scoping for the ramp meters, advanced traveler information systems, other necessary ITS, and local traffic operational changes where ramp geometrics may not allow for meters.

OR Region – Dennis Engel, 360-357-2651

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Aug-22	SR 512 to SR 167 Congestion Study.

SW Region: Laurie Lebowsky, 360-905-2082

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Jun-23*	SR 500 Planning Study from east Vancouver to Camas to address growth.
2	Jun-23*	Transportation Systems Management and Operations (TSMO) study for how land use influences TSMO strategies in Clark County.
3	Jun-23*	Work on TSMO Capability Maturity Model.

Management of Mobility: Robyn Mayhew, 206-464-1264

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Jun-23*	<p>Work with internal and external partners to improve multimodal access to high-capacity transit stations on, and adjacent to, WSDOT facilities (roads and park and rides). Establish the inventory of station areas and matrix of factors with which to generate a prioritized list of focus areas.</p> <p>Define and establish a program that yields a WSDOT planning-funding-design-construction pipeline strategy. Develop a toolbox of solutions and internal WSDOT support necessary to be poised for a variety of funding opportunities (statewide) now and in the future.</p>
2	Jun-23*	<p>Conduct a series of mini corridor studies that focus on spot locations of concern primarily due to safety and mobility issues. The following six corridors have been selected as candidate study areas based on factors including crash history, land use context, and limited community representation resources (unincorporated and small cities). In coordination with Northwest Region Traffic and other WSDOT offices, the intent is to complete at least five of these segments.</p> <p>SR 516, SR 527, SR 524, SR 509, SR 99, SR 96</p>
3	Jun-22	Purchase a one-year INRIX license to provide data support and analysis capabilities for regional corridor studies.

SC Region: Paul Gonseth, 509-577-1630

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Jun-23	SR 240, City of Richland - Demonstration of integrated transportation and demand management planning.

MPDD: Richard Warren, 206-498-5071

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Jun-23	MPDD staff to provide technical support to region planning teams performing studies and other planning work. Technical support may include modeling and data analysis, as well as Periodic reporting to exec/senior managers on planning outcomes – “tell the region planning story”; Develop connection to planning study outcomes in design manual, traffic operations manual, scoping guidance, etc.; Capture and document final outcomes/recommendations of the planning studies (i.e. web presence, etc.).

Area 6: Economic and Financial Planning

Area 6 contains descriptions, mandates, objectives, revenue, and deliverables related to the following subareas:

- Subarea 6.1: Financial Planning
- Subarea 6.2: Economic Forecasting and Analysis

Subarea 6.1: Financial Planning

Subarea description

To serve the needs of WSDOT and other state and local agencies by developing financial plans for transportation accounts, support debt issuances to fund capital projects and toll financing. This includes supporting the Office of the State Treasurer (OST) to issue debt and work with OST, toll division, capital programs, and mega projects to ensure the department is in compliance with federal IRS regulations, Bond Resolutions, and the Transportation Infrastructure Finance and Innovation Act (TIFIA) Loan. Financial planning is also responsible for maintaining financial plans and cash balances for transportation accounts. Additionally, financial planning develops and updates financial models used to analyze various transportation revenue sources and uses.

Federal mandates

[23 CFR 420.117](#)

Objectives

- Assist programs and mega projects with the development and analyzing financing options for projects. Provide financial support to the agency that includes educating program and project teams on the bond sale process, funds management (cash flow), financial plan (including asset management plans) and bond compliance. Support toll division with developing and reviewing the Traffic and Revenue forecasts/studies and toll facility financial plans. Toll facilities require more reporting and oversight because of extra complexity. Serves as the department's primary contact for debt and financial related questions.
- Develop and evaluate the department's 10-year financial plans, methodology and criteria for statewide transportation accounts. A financial plan is required as part of the department's budget submittal for transportation. Also, it informs the executive team on budget decisions.

In the 2019-21 Biennium, the department supported the sale of over \$1 billion in transportation bond proceeds. This includes supporting the Office of State Treasurer in developing the bond sale documents and presentations, materials for the State Finance Committee and determines the bond proceed needs by analyzing cash flow and compliance documents.

Contact

Nguyen Dang | Budget & Financial Analysis Division, Economic Analysis Office | 360-705-7512

Summary revenues

Revenue source	Baseline
Federal	●
State	●
Local	●
Total	\$0
FTE Count	●

No SPR funding is used for this subarea.

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Aug/Sept-21, Jan/Feb-22, Aug/Sept-22 & Jan/Feb-23*	Support the Office of State Treasurer in developing bond sale documents and presentations, materials for the State Finance Committee and determine the bond proceed needs by analyzing cash flow and compliance documents to fund capital projects.
2	Sept-21 & Sept-22*	Develop 10-Year biennial financial plans; used by: Department of Licensing, Department of Revenue, Office of the State Treasurer, State Legislative Transportation Committees, Office of Financial Management, Transportation Improvement Board, County Road Administration Board, local government agencies, and other WSDOT divisions.
3	Sept-21, Nov- 21, Feb-22, Jun-22, Sept- 22, Nov-22, Mar-23, & Jun-23*	Forecast WSDOT business related revenues and upload the revenue forecast to The Executive Information System (TEIS) used by: the Office of Financial Management, State Legislature, Transportation Committees, and other state agencies.

Subarea 6.2: Economic Forecasting and Analysis

Subarea description

This section creates unbiased economic and revenue forecasts for transportation. State law requires the Governor and Legislature to adopt a balanced budget and the first step in this process is having a realistic and unbiased long-term revenue forecast for all transportation revenues. This work helps not only WSDOT management but also the Governor and Legislature.

Federal mandates

[23 CFR 420.117](#)

Objectives

- Serve the needs of WSDOT and other state and local agencies by producing unbiased economic and revenue forecasts for transportation.
- Maintain databases and evaluate economic and demographic factors impacting transportation revenues to communicate the importance of transportation in our state and local economies.
- Develop and update econometric models used to forecast various transportation revenue sources to have as accurate a forecast for budgeting and long-range planning as possible. Interact with all agencies interested in transportation revenues and support economic and financial studies.
- Analyze state and national economic activities, policies, laws and forecasts to assess impacts on transportation policies, plans, and programs.
- Evaluate proposed state and federal legislative and financing alternatives for all modes of transportation.

Contact

Lizbeth Martin-Mahar | Budget & Financial Analysis Division, Economic Analysis Office | 360-705-7942

Summary revenues

Revenue source	Baseline
Federal	•
State	•
Local	•
Total	\$0
FTE Count	•

No SPR funding is used for this subarea.

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	4x a year*	Quarterly Transportation Revenue Forecast Council (TRFC) documents (Volumes I-III and twice a year Volume IV).
2	4x a year*	Quarterly forecast summary reports and detailed tables describing the forecast are produced, as well as presentations for WSDOT management and others to make presentations on the latest financial information.
3	4x a year*	Continuously update econometric models used in forecasting.
4	Sept-21 & Sept-22*	Every September we update the statewide vehicle miles traveled (VMT) forecast with the latest actuals and updated economic variables.
5	4x a year*	Four times a year in February/March, June, September and November we create new monthly cash flow forecast and then tracked those monthly forecasts with actual revenue received.
6	Monthly*	Monthly cash flow analyses: fuel revenue, fuel revenue distribution, vehicle fees and distribution.
7	4x a year*	Legislative analyses and fiscal notes.
8	Monthly*	Analyze new federal and state legislation and new revenue proposals.
9	Ongoing*	Quarterly Fuel and Vehicle Trends Reports.
10	4x a year*	Forecast fuel prices and highway construction cost indices quarterly for setting budgets.
11	Monthly*	Research and evaluate the long-term economic benefits of Selected Transportation Projects.
12	Ongoing*	REMI-Transight contract maintenance for economic impact analysis software (updated annually).
13	Monthly*	Supervise staff members on utilizing the Washington state REMI- Transight economic impact model for Washington state transportation.
14	2x a year*	Conduct economic impact analysis and oversee cost benefit analysis for federal grants for highway projects.
15	Monthly*	Special economic analyses and reports.
16	Monthly*	Coordinate the results from various economic impact analysis and prepare summary reports and jobs multipliers for economic impacts.

Area 7: Prioritization and Programming

Area 7 contains descriptions, mandates, objectives, revenue, and deliverables related to the following subarea:

- Subarea 7.1: Prioritization and Programming

Subarea 7.1: Performance and Accountability Analysis

Subarea description

The Prioritization and Programming of Capital Improvement Projects implements RCW 47.05 (Priority Programming for Highway Development). This aligns with the state transportation policy goals listed in RCW 47.04.280 (Economic Vitality, Preservation, Safety, Mobility, Environment, and Stewardship) as the RCW states: “The priority programming system must ensure preservation of the existing state highway system, relieve congestion, provide mobility for people and goods, support the state's economy, and promote environmental protection and energy conservation.” These RCWs also align with 23 U.S. Code § 150 National goals and performance management measures, as it uses performance-based planning and decision making considering the seven national goals (Safety, Infrastructure Condition, Congestion Reduction, System Reliability, Freight Movement and Economic Vitality, Environmental Sustainability, and Reduced Delivery Delays).

The primary deliverable is an annual Project Delivery Plan. This plan meets the Federal Highway Administration's requirement for states to program four years of projects in the State Transportation Improvement Program (STIP) and includes all projects funded by the State Legislature. The plan is updated annually to ensure that budget changes on projects match up with enacted budgets.

Federal mandates

[23 USC Sec 119](#) ; [23 USC Sec 150](#) ; [23 USC Sec 148](#)

Objectives

- Develop and publish the 2022 Project Delivery Plan (July 2022).
- Develop and publish the 2023 Project Delivery Plan (July 2023).
- Continue development of criteria and a model that prioritize WSDOT's capital assets, including further incorporation of Equity and Environmental Justice analyses.
- Continue to work with the Traffic Office, Development Division and Transportation Safety, Quality, and Enterprise Risk and the Washington State Traffic Safety Commission on implementing “Target Zero,” which is in 23 USC Sec 148.
- Update WSDOT project scoping and program management manuals.
- Continue to evaluate and implement a series of project performance estimates based on specific investment scenarios.
- Continue work with the Environmental Services Office to refine and implement the department's fish barrier program. This includes working with all programs to consider addressing fish barriers in the context of other transportation improvement work.
- Further develop and refine processes for robust project scenario analysis given differing funding and revenue assumptions.
- Continue development of a ten-year plan for retrofitting existing impervious roadway surfaces for storm water treatment. Primary emphasis is placed on urbanizing areas in the Puget Sound.
- Continue working with the Development Division to update and refine Scoping Instructions to make the transition to and design phase of projects more efficient.

Contact

Jay Alexander | Capital Program Development & Management Division | 360-705-7121

Summary revenues

Revenue source	Baseline
Federal	\$639,760
State	\$159,940
Local	•
Total	\$799,700
FTE Count	3

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Jul-22	Develop and publish the 2022 Project Delivery Plan.
2	Jul-23	Develop and publish the 2023 Project Delivery Plan.
3	Ongoing*	Continue to expand the use of geospatial analysis and presentation of existing and future processes, including expansion of existing map library.
4	Ongoing*	Implement an asset management process for state highway features consistent with FHWA's final rules on asset management and update or coordinate changes to meet established performance objectives.
5	Ongoing*	Refine criteria and models that prioritize WSDOT's capital assets.
6	Ongoing*	Continue to work with the Traffic Office, Development Division and Transportation Safety, Quality, and Enterprise Risk and the Washington State Traffic Safety Commission on implementing "Target Zero," which is in 23 USC Sec 148.
7	Ongoing*	Update WSDOT project scoping and program management manuals.
8	Ongoing*	Continue to evaluate and implement a series of project performance estimates based on specific investment scenarios.
9	Ongoing*	Continue work with the Environmental Services Office to refine and implement the department's fish barrier program. This includes working with all programs to consider addressing fish barriers in the context of other transportation improvement work.
10	Ongoing*	Further develop and refine processes for robust project scenario analysis given differing funding and revenue assumptions.
11	Ongoing*	Continue development and implementation of a ten-year plan for retrofitting existing impervious roadway surfaces for storm water treatment. Primary emphasis is placed on urbanizing areas in the Puget Sound.
12	Ongoing*	Continue work with the Development Division to update and refine Scoping Instructions to make the transition to the design phase of projects more efficient.

Area 8: Statewide Transportation Improvement Program (STIP)

Area 8 contains descriptions, mandates, objectives, revenue, and deliverables related to the following subarea:

- Subarea 8.1: WSDOT's Local Programs Division

Subarea 8.1: WSDOT's Local Programs Division

Subarea description

WSDOT's Local Programs (LP) Division develops and manages the Statewide Transportation Improvement Program (STIP). The STIP is a four-year, fiscally constrained prioritized multimodal transportation program of state, local, tribal, and public transportation (transit) projects, which includes highways, streets, roads, rail roads, transit-hubs, park-and-ride lots, bridges, sidewalks, bike lanes, ferry terminals, trails and safety projects funded with federal, state, tribal and local sources. The STIP is a calendar year document and is developed on an annual basis with monthly updates from January through October.

The STIP is developed from local, metropolitan planning organizations (MPOs), and regional transportation planning organizations (RTPOs) transportation improvement programs (TIPs). Projects are identified through state, metropolitan, regional, tribal, and local planning processes. An environment of community engagement is woven into each stage of the planning process merging public dialogue forums with practical solutions to deliver transportation projects that “fit” into the communities and augment their transportation needs.

Projects programmed in the STIP are the highest priority for the available funding, to preserve and improve the state's transportation network and achieving the national goals established in the Moving Ahead for Progress in the 21st Century Act (MAP-21) and continued in the Fixing America's Surface Transportation Act (FAST) and its one-year extension.

Only those projects programmed in the STIP can be authorized by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) to utilize federal funds. Once projects are approved in the STIP, agencies may request federal fund authorization of the project.

Finally, WSDOT must certify that the transportation planning process is addressing the major issues facing the state and its non-urbanized areas and is being conducted in accordance with all applicable requirements.

Federal mandates

[23 CFR 450.218](#)

Objectives

- Develop, prepare, and submit the 2022-2025 and 2023-2026 STIP to FHWA and FTA for approval.
- After federal approval, continue to provide public access via the web:
<https://wsdot.wa.gov/LocalPrograms/ProgramMgmt/STIP.htm>

Contact

Stephanie Tax | Local Programs/Program Management Office | 360-705-7389

Summary revenues

Revenue source	Baseline
Federal	●
State	●
Local	●
Total	\$0
FTE Count	●

No SPR funding is used for this subarea.

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Dec-21 & Dec-22	Develop, prepare, and submit the 2022-2025 and 2023-2026 STIP to FHWA and FTA for approval.
2	Ongoing*	After federal approval, provide public access via the web: https://wsdot.wa.gov/LocalPrograms/ProgramMgmt/STIP.htm
3	Ongoing*	Continue to work with FHWA, FTA, MPOs, RTPOs, and other partners in meeting the federal STIP requirements (fiscal constraint by year).
4	Ongoing*	Develop, prepare, and submit monthly amendments for the STIP as applicable throughout this timeframe.
5	Ongoing*	Provide annual training, best practices, and on-call training for the web-based STIP.
6	Ongoing*	Continue to review and update the public involvement process, as applicable.
7	Ongoing*	Continue to review, engage, and coordinate on the research and proposals for inclusion of performance measures, as applicable.
8	Ongoing*	Provide on-call assistance and troubleshooting as issues arise with the program for all users.

Area 9: Management and Administration

Area 9 contains descriptions, mandates, objectives, revenue, and deliverables related to the following subareas:

- Subarea 9.1: Program Management
- Subarea 9.2: Program Administration
- Subarea 9.3: Downtown Seattle Office Lease and Administrative Support

Subarea 9.1: Performance and Accountability Analysis

Subarea description

The management and administration section of the SPR covers planning functions for the Assistant Secretary's Office, Multimodal Planning & Data Division (MPDD) and Budget Support Office.

The Assistant Secretary's Office will provide for policy formulation and executive administration. Costs incurred to this item are salaries, benefits, travel expenses, materials, supplies, and other expense of the Assistant Secretary and executive assistant.

MPDD will provide for policy formulation and executive administration for the division. It performs policy, technical, and fiduciary oversight of planning and data activities. Additional management and support activities include budget final approvals and monitoring assistance, as well as financial systems services for the MPDD. Costs incurred to this item include salaries, benefits, travel expenses, materials, supplies, and other expenses of the director and administrative assistant. Also included are funds to support Transportation Data and GIS group management and administration and travel and training funds for MPDD staff.

The Program Analysis and Management Services (PAMS) Office prepares and manages the transportation planning and research program plan for Program T, which optimizes available revenue. This work provides support to the Multimodal Planning & Data Division and the Office of Research and Library Services in program development, accounting and financial management, budget support, work orders, contracts, and agreements.

Federal mandates

[23 CFR Part 420](#)

Objectives

- Practical Solutions Development.
- 21-23 Planning Budget (Program T in state transportation budget) and SPR Work program monitoring.
- 23-25 Planning Budget (Program T in state transportation budget) and SPR Work Program final approval.
- Staff communications and workforce development.

Contact

Kerri Woehler | Multimodal Planning & Data Division (MPDD) | 360-705-7958

Summary revenues

Revenue source	Baseline
Federal	•
State	\$2,289,000
Local	•
Total	\$2,289,000
FTE Count	7.5

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Ongoing*	Practical Solutions is one of three goals for WSDOT's Strategic Plan. Under the Assistant Secretary direction and associated work plans are updated and implemented on a continuous basis.
2	Ongoing*	Address emergent Practical Solution initiatives and planning data needs that may be identified during the biennium.
3	Ongoing*	Program T Budget and SPR work program monitoring begins with the new biennium and is addressed periodically throughout the two-year period. Development of the budget and SPR work program for the 2021-2023 biennium will likely begin in Fall 2022 and will be completed at the close of State Fiscal Year 2021.

Subarea 9.2: Program Administration

Subarea description

This core function within the Multimodal Planning and Data Division (MPDD) administers the state transportation planning, data, and research budget (Program T), planning budget, reports on budget status, tracks and manages multiple budget work orders, and assists with over and under running budgets. In addition, the program administration function helps provide administrative support to the Multimodal Planning & Data Division. This subarea also develops the state planning and research work program (SPR) to support a transportation system that enhances quality of life and economic vitality.

Federal mandates

[23 CFR Part 420](#)

Objectives

- Administer Program T in collaboration with the Program Analysis and Management Services (PAMS) Office.
- Support budget development, status, and reporting in collaboration with PAMS and Central Budget Office.
- Develop and support SPR Work Program. Coordinate with FHWA on SPR development.
- Provide administrative support for Multimodal Planning & Data Division.

Contact

Faris Al-Memar | Multimodal Planning & Data Division (MPDD) | 360-705-7956

Summary revenues

Revenue source	Baseline
Federal	•
State	\$530,100
Local	•
Total	\$530,100
FTE Count	2

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Jul-21*	Work with the Program Analysis and Management (PAMS) Office on identifying and assigning work orders to all Program T.
2	Sept-21 & Sept-23*	Track budget regularly and report to FHWA annually on work activity status.
3	Ongoing*	Manage budget change requests and over/under runs.
4	Aug/Sept-21*	Close 2019-2021 budget.
5	Monthly*	Coordinate with PAMS regarding Program T budget status including comparison of planned versus actual spending.
6	Quarterly*	Coordinate, meet, and provide quarterly updates to FHWA.
7	Jun-22 & Jun-23*	Collaborate with 20 offices to compile SPR reports into one document.
8	Jun-23*	Submit the 2023-2025 SPR Work Program to FHWA/FTA for approval.

Subarea 9.3: Downtown Seattle Office Lease and Administrative Support

Subarea description

This subarea pays for a share of expenses associated with leasing office space in Seattle. The space will be shared by MPDD, Rail, Freight and Ports, UMA, and other WSDOT offices. Additionally, this subarea covers the costs associated with providing administrative support to the above offices.

Federal mandates

[23 CFR Part 420](#)

Objectives

This subarea pays for a share of expenses associated with leasing office space in Seattle. The space will be shared by MPDD, Rail, Freight and Ports, UMA, and other WSDOT offices. Additionally, this subarea covers the costs associated with providing administrative support to the above offices.

Contact

Kerri Woehler | Multimodal Planning & Data Division (MPDD) | 360-705-7958

Summary revenues

Revenue source	Baseline
Federal	•
State	\$256,000
Local	•
Total	\$256,000
FTE Count	0

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Ongoing*	On-time lease payments.
2	Ongoing*	Provide ongoing administrative support.

Part 2: Research

Description

WSDOT's Research and Library Services (RLS) is now part of the Transportation Safety and Systems Analysis Division (TSSA) at WSDOT. The TSSA mission is to "advance WSDOT's strategic objectives through rigorous analysis, quality information, and effective collaboration."

RLS develops and manages innovative, specialized research studies to produce data to help inform strategic decisions, adopt new smart technologies, and create better products and work practices. Library Services provides accurate, credible information about transportation and related topics for agency employees, researchers and the public from the Library's print and digital collections. Additionally, the Library belongs to a global network of partner libraries, which extends access to other specialized and technical sources requested by agency.

A worldwide virus pandemic struck the United States in early 2020 and the majority of WSDOT staff including RLS began teleworking in mid-March of 2020 and are continuing to telework. We do not anticipate going back to work at the office in some limited capacity until the late summer of 2021 at the earliest.

Objectives

- Develop ideas, fund, and manage research projects that provide innovative and practical solutions to help advance WSDOT's practices and policies.
- Identify and connect with experts to perform research that yields a return on investment of implementable ideas, products, and best practices.
- Acquire, organize, make accessible and steward current and historical library resources that support the work of agency staff and contractors.
- Create and curate specialized digital and print collections that address customer information needs and support research and technology transfer.
- Publicize research findings via our Webinar Wednesday series featuring subject matter experts, which is open to WSDOT employees, local agency staff and others.
- Answer reference and research queries and perform literature searches that provide decision makers with critical information and help researchers to determine the state of the practice as they develop research proposals.
- Coordinate agency participation in national research and library programs including Transportation Pooled Fund studies.
- Disseminate final research reports and topical and timely news alerts to hundreds of subscribers within and beyond our agency.
- Represent WSDOT in partnerships with Federal Highways, the American Association of State Highway & Transportation Officials, the Transportation Research Board, University Transportation Centers, universities and colleges, and others to fund and conduct research in areas of common interest.
- RLS staff solicit and document feedback that provides clarification, transparency, accountability, and supports the linkage between planning and programming for community engagement.

Research connections to federal planning and statewide transportation system goals

Federal planning factors

- Support the economic vitality of the United States, the states, non-metropolitan areas, metropolitan areas, especially by enabling global competitiveness, productivity, and efficiency.
- Increase the safety of the transportation system for motorized and non-motorized users.
- Increase the security of the transportation system for motorized and non-motorized users.
- Increase accessibility and mobility of people and freight.
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns.
- Enhance the integration and connectivity of the transportation system, across and between modes, throughout the State, for people and freight.
- Promote efficient system management and operation.
- Emphasize the preservation of the existing transportation system.

Strategic plan values

- Safety
- Engagement
- Innovation
- Integrity
- Leadership
- Sustainability

Research areas

- Area 1A: Program and Research Management
- Area 1B: Library Services
- Area 2: Research Projects
- Area 3: Strategic Highway Research Program (SHRP2), Ever Day Counts (EDC), State Transportation Innovation Council (STC), and Accelerated Innovation Deployment
- Area 4A: Transportation Pooled Fund (TPF) Projects
- Area 4B: Transportation Pooled Fund (TPF) Details
- Area 5: National Research Programs

Federal mandates

[23 CFR 420 Subpart B](#) ; [23 CFR 450.208](#)

Contact

Anne Freeman | Transportation Safety & Systems Analysis (TSSA) | 360-705-7945

Summary revenues

Revenue source	Baseline
Federal	\$10,297,760
State	\$1,589,240
Local	\$400,000
Total	\$12,287,000
FTE Count	13

Area 1A: Program and Research Management

Area description

RLS develops and manages innovative, specialized research studies to produce data to help inform strategic decisions, adopt new smart technologies, and create better products and work practices.

Subarea description

Research project selection for our State Planning & Research (SPR) program will begin in the spring of 2021. Projects designated for funding can begin after July 1, 2021 once the new Transportation Budget for 2021-23 is approved by the Governor. WSDOT is off to a later start due to the ongoing worldwide virus pandemic, and the restructuring of the research program to be more agile and resilient in meeting agency needs.

Traditional Research – this category is our conventional research that typically uses a consultant or university to perform research in conjunction with a WSDOT subject matter expert to explore and test solutions to problems faced by the agency. The maximum project amount will be \$200,000 and the total set aside is \$1,200,000 for this category.

Innovation – this is a new category this biennium and will support or offset the costs to evaluate, improve and/or standardize practices such as developing guidance, new methods, standards & specifications, and deploying new technology. The maximum project amount will be \$100,000 and we will have a call for projects in FY 2022 (\$300k) and FY 2022 (\$300k).

Quick Response (QR) Research – this category addresses high priority, opportunistic, or emergent research needs as they arise outside the normal research selection schedule. The maximum project amount is \$50,000 and \$350,000 will be available in FY 2022 and \$350,000 available in FY 2023.

Other fund sources can supplement the SPR funds so a project can be larger. For example, a project request in the Quick Response category asks for \$50,000 and has secured \$15,000 from another source so the total project is now \$65,000 when you combine the two funding sources.

Federal mandates

[23 CFR Part 420 Subpart B](#) ; [23 CFR 450.208](#)

Objectives

- Administer Program T in collaboration with the Program Analysis and Management Services (PAMS) Office.
- Support budget development, status, and reporting in collaboration with PAMS and Central Budget Office.
- Develop and support SPR Work Program. Coordinate with FHWA on SPR development.
- Provide administrative support for Multimodal Planning & Data Division.

Contact

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Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Ongoing*	Increase resources for research, library, and technology/knowledge transfer activities by exploring NCHRP, AID, EDC, and WASTIC and other funding opportunities.
2	Ongoing*	Efficiently execute with full compliance all agreements, contracts, task orders and other administrative requirements in the conduct of research.
3	Ongoing*	Administer research funding for ongoing and new SPR projects. Evaluate project requests for QR funding and assess match fund requests from university transportation centers.
4	Ongoing*	Continue support for client-sponsored research through contracting, study design and knowledge transfer activities.
5	Ongoing*	Participate in peer exchanges with other states to broaden range of options for modernizing research program activities.
6	Ongoing*	Participate in the Washington State Transportation Innovation Council (WASTIC) to seek ideas and innovative solutions to explore and share with other jurisdictions.
7	Ongoing*	Continue to develop and deploy technology and knowledge transfer activities to ensure implementation of research results and accessibility of information by diverse users.
8	Ongoing*	Develop and implement a research communication program that targets audiences using diverse methods, including internet, webinars, training, events, electronic documents, and print media.
9	Ongoing*	Continue to review and update WSDOT Research Manual Procedures as needed.
10	Ongoing*	Certify the SPR Research Program.
11	Ongoing*	Hold a Peer Exchange this biennium (2021-23).
12	Ongoing*	Participate in the AASHTO Research Advisory Board activities and the newly formed Innovation Community of Practice.
13	Ongoing*	Assist WSDOT's Multimodal Planning Division with the agency's Highway System Plan (HSP) Update.
14	Ongoing*	Assist WSDOT's Transportation Safety and Systems Analysis Division with the agency's Enterprise Risk Management Plan.

Area 1B: Library Services

Area description

Library Services support WSDOT's workforce by disseminating information related to the many disciplines involved in operating and maintaining our state transportation system. Library Services directly supports the Research Program in many ways, such as: Partnering to host Webinar Wednesdays to publicize research results, working with Research Managers to publish research reports, and by conducting literature searches required as part of research project proposals submitted for funding.

The Library's Five-Year Strategic Plan was implemented in 2018 and guides efforts to deliver exemplary service and relevant information resources. In 2021, the mid-point of our Strategic Plan, we will assess the effectiveness of our plan by redistributing the library survey, originally done in 2017, that was the catalyst for our plan. Survey responses will indicate areas where we have made progress and/or met our goals, and areas where we need to improve. We will revise our Plan accordingly and continue to work toward delivering library services at the highest level possible.

Federal mandates

[23 CFR Part 420 Subpart B](#) ; [23 CFR 450.208](#)

Contact

Anne Freeman | Transportation Safety & Systems Analysis (TSSA) | 360-705-7945

Deliverables

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Ongoing*	Efficiently execute with full compliance all contracts and other administrative requirements supporting the delivery of library services.
2	Ongoing*	Convene a WSDOT Librarian Summit this biennium for all agency librarians to share information and ideas on how to collaborate more fully to improve library services and dissemination of information throughout the agency.
3	Ongoing*	Per the Library Strategic Plan, develop a library training program that targets audiences using diverse methods, including intranet/internet articles, live and recorded webinars, in-person training, and other means to increase employees' awareness of library resources and how to access them, including effective online search techniques.
4	Ongoing*	Per Library Strategic Plan focus area, support agency initiatives around knowledge and information management: Partner with agency's Knowledge Strategist and participate in cross-agency teams working to increase organization of and access to internal data and information sources.
5	Ongoing*	Participate in peer exchanges with other states, and other forums at the national level, as feasible, to learn of options for modernizing library services, innovative ways to increase collaboration with researchers and how to help develop more effective knowledge and technology transfer within our agency.
6	Ongoing*	Continue dissemination of research results, including distribution of WSDOT research reports that are accessible to diverse users.
7	Ongoing*	Assist WSDOT's Multimodal Planning Division with the agency's Highway System Plan (HSP) Update.

Area 2: Research Projects

Area Description/Objectives

RLS is planning on three (3) research program areas for 2021-23 for approximately \$2.5 million that will make our agency's research needs more agile and nimble during these difficult times.

Traditional Research – this category is our conventional research that typically uses a consultant or university to perform research in conjunction with a WSDOT subject matter expert to explore and test solutions to problems faced by the agency. The maximum project amount will be \$200,000 and the total set aside is \$1,200,000 for this category.

Innovation – this is a new category this biennium and will support or offset the costs to evaluate, improve and/or standardize practices such as developing guidance, new methods, standards & specifications, and deploying new technology. The maximum project amount will be \$100,000 and we will have a call for projects in FY 2022 (\$300k) and FY 2022 (\$300k).

Quick Response (QR) Research – this category addresses high priority, opportunistic, or emergent research needs as they arise outside the normal research selection schedule. The maximum project amount is \$50,000 and \$350,000 will be available in FY 2022 and \$350,000 available in FY 2023.

Other fund sources can supplement the SPR funds so a project can be larger. For example, a project request in the Quick Response category asks for \$50,000 and has secured \$15,000 from another source so the total project is now \$65,000 when you combine the two funding sources.

SPR Funded Research Projects

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Ongoing*	Knowledge Management \$TBD <p>The WSDOT workforce continues to churn resulting in a loss of knowledge and expertise. Work practices to support Practical Solutions continue to evolve, requiring new ways of effectively sharing data and information to support these practices. This project continues to develop the findings of the FHWA AID grant Deploying Practical Solutions using Lean Techniques and Knowledge Management including activities such as: developing a data governance framework and practices; developing a knowledge book for the NWR Mt Baker Area HQ Office to support compliance with practice; developing a knowledge management toolkit; and vocabulary management to improve search and navigation of resources.</p>
2	Ongoing*	Estimating Bicyclist and Pedestrian Volumes with Crowdsourced Data \$90,000 <p>The objective of this research is to identify the best method for using crowdsourced data to supplement WSDOT's current bicyclist and pedestrian count program. The findings may be used by other states as well to help them improve estimating their bicyclist and pedestrian volumes.</p>
3	Ongoing*	SR 520 Noise Research Study \$556,000 <p>The Washington State Legislature allotted the funds from the SR 520 Corridor Account to WSDOT for the University of Washington (UW) Mechanical Engineering Department to complete this phase 2 study and develop potential solutions to the noise associated with modular expansion joints. The UW has the experience from the phase 1 study to complete this task and develop potential solutions to this issue which has not only impacted the citizens of Medina but other areas around the State where noise associated with modular expansion bridge joints has resulted in complaints from residents to their community leaders, state legislators and WSDOT.</p>
4	Ongoing*	Fish Passage at Tidal Crossings \$230,000 <p>WSDOT & the Washington Department of Fish & Wildlife (WDFW) are lacking adequate technical guidance to effectively complete the tidal fish passage barrier inventory & design fish passage structures in tidal environments. Tidal water crossing structures are included in the culvert injunction, which requires state owned crossings to be passable for salmon & steelhead. WDFW will be contracted to study tidal water crossing structures and provide technical guidance for fish passage barrier assessment for WSDOT.</p>

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
5	Ongoing*	<p>Linear Scheduling Evaluation & Best Practices for Design \$125,000</p> <p>This is phase 2 of the research project is based on the report and findings of phase 1 of the study. Phase 2 of the research project looking at utilizing liner scheduling at WSDOT. The project will: (1) define best practices for scheduling WSDOT projects, particularly development and use of linear scheduling during design, and (2) document benefit cost ratio for the use of linear scheduling during design, and (3) provide initial training and vendor selection guidelines.</p>
6	Ongoing*	<p>Evaluation of Biofiltration Swale Media Mixes for Maximizing Phosphorous Removal \$180,000</p> <p>The objective of this study is to identify an ideal media mix for removal of stormwater phosphorus and document the field performance of an amended mix biofiltration swale (AMBS). Biofiltration swales have performed well for removing most pollutants but recently there have been a number of reports showing that phosphorus can bleed out of compost- based media mixes, especially during the early years of operation.</p>
7	Ongoing*	<p>Assessing and Improving the Application of Multimodal Performance Measures in WSDOT Projects \$120,000</p> <p>The objective of this project is to identify potential changes in WSDOT's design process that would more effectively support agency staff in making decisions about the installation and design of multimodal improvements based on performance. For this study, multimodal will include active transportation (e.g., pedestrians, bicycles), freight (e.g., trucks, delivery vans, etc.), transit (e.g., buses, trains, paratransit) and single occupant vehicles.</p>
8	Ongoing*	<p>Assessing Information Needs for Multimodal System Analysis & Evaluation \$250,000</p> <p>The objective of the research is to assess the current information and information decision-making tools owned by WSDOT to determine what multimodal information is available and what information needs to be collected to support performance-based decisions for multimodal facilities from planning through operations.</p>
9	Ongoing*	<p>Cost Comparison of Washington Safety Rest Area Operations with Other States \$20,000</p> <p>The primary objective of this Quick Response study is to compute the unit operating costs of Washington Safety Rest Areas and compare them with other states. With this comparison, the Washington State Department of Transportation (WSDOT) will have an opportunity to better determine if they are operating the Safety Rest Areas in a cost-effective manner.</p>

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
10	Ongoing*	<p>I-90 Snoqualmie Pass East Low-Mobility Wildlife Monitoring \$1,086,221</p> <p>This is a long-term research project with WSDOT's South Central Regional Office and Central Washington University that is doing pre, during and post monitoring of fish, amphibians, and small mammals through new crossing structures (large culverts & bridges) that are being created as part of the large I-90 Snoqualmie Pass construction project. WSDOT Research & Library Services is assisting with the contracting of the project for South Central Region.</p>
11	Ongoing*	<p>Deployment of the Washington State Virtual Environment for Multimodal Integrated Corridor Management \$3,504,361</p> <p>This 3-year project is funding the development and deployment of a Virtual Coordination Center (VCC) for transportation incident management issues faced by the Seattle-area. The project will develop the VCC capabilities, a concept of operations and a virtual collaborative working environment to support the concept of operations. It is funded by an FHWA Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) grant.</p>

Client Sponsored Research (CSR)

Some WSDOT Programs, Divisions, and Project Offices conduct research and experimental activities in addition to research funded by the SPR program. These projects are administered by the Research Office upon request, are referred to as Client Sponsored Research (CSR) projects, and can be funded by various federal, state, or local funding sources.

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Ongoing*	<p>I-90 Snoqualmie Pass East Low-Mobility Wildlife Monitoring \$1,086,221</p> <p>This is a long-term research project with WSDOT's South Central Regional Office and Central Washington University that is doing pre, during and post monitoring of fish, amphibians, and small mammals through new crossing structures (large culverts & bridges) that are being created as part of the large I-90 Snoqualmie Pass construction project. WSDOT Research & Library Services is assisting with the contracting of the project for South Central Region.</p>
2	Ongoing*	<p>Deployment of the Washington State Virtual Environment for Multimodal Integrated Corridor Management \$3,504,361</p> <p>This 3-year project is funding the development and deployment of a Virtual Coordination Center (VCC) for transportation incident management issues faced by the Seattle-area. The project will develop the VCC capabilities, a concept of operations and a virtual collaborative working environment to support the concept of operations. It is funded by an FHWA Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) grant.</p>

Area 3: Strategic Highway Research (SHRP2), Every Day Counts (EDC), State Transportation Innovation Council (STIC) and Accelerated Innovation Deployment (AID)

Area Description

Strategic Highway Research Program

The second Strategic Highway Research Program (SHRP2) is a national partnership of key transportation organizations: The Federal Highway Administration (FHWA), the American Association of State Highway and Transportation Officials (AASHTO), and the Transportation Research Board (TRB). Together, these partners conduct research and deploy products that will help the transportation community enhance the productivity, boost the efficiency, increase the safety, and improve the reliability of the nation's highway system.

SHRP2 has undertaken more than 100 research projects designed to address critical state and local challenges, such as aging infrastructure, congestion, and safety. The research results are available in a series of effective solutions that will improve the way transportation professionals plan, operate, maintain, and ensure safety on America's roadways.

Every Day Counts

In 2009, the FHWA launched Every Day Counts (EDC) in cooperation with the American Association of State Highway and Transportation Officials (AASHTO) to speed up the delivery of highway projects and to address the challenges presented by limited budgets. EDC is a state-based model for identifying and rapidly deploying proven but underutilized innovations to shorten the project delivery process, enhance roadway safety, reduce congestion, and improve environmental sustainability.

Proven innovations and enhanced business processes promoted through EDC facilitate greater efficiency at the state and local levels, saving time and resources that can be used to deliver more projects for the same money. By advancing 21st century solutions, the highway community is making Every Day Count to ensure our roads and bridges are built better, faster, and smarter.

State Transportation Innovation Council (STIC) Incentive and Demonstration Project Program

FHWA's State Transportation Innovation Council Incentive and Demonstration Project Program provides resources to help support this state-based initiative. A STIC brings public and private transportation stakeholders together to evaluate innovations and spearhead deployment in their state. This puts each state's transportation community in the driver's seat when it comes to selecting innovations that best fit their program needs, and then putting those innovations into practice quickly.

The STIC Incentive Program offers federal funding of up to \$100,000 per state, per federal fiscal year to support or offset some of the costs of standardizing innovative practices in a state transportation agency or other public-sector STIC stakeholder. STICs consider innovations from a variety of sources, including but not limited to FHWA's Every Day Counts initiative, to deploy proven technologies and practices, AASHTO's Innovation Initiative, and SHRP2.

Accelerated Innovation Deployment

The AID Demonstration Program provides funding to accelerate the implementation and adoption of innovation in highway transportation.

Proposed Library & Research Activities – Current Strategic Highway Research Program (SHRP2) Projects

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Ongoing*	<p>L36 - Regional Operations Forum Internal Transportation Systems Management & Operations (TSMO) Workforce/Development Training Program \$200,00 (Total project amount is \$300K - from \$200K from SHRP2 and \$100K from Traffic Office)</p> <p>TSMO seeks to operate the existing transportation system as safely and efficiently as possible, many times maintaining or even regaining previous levels of capacity and improving safety performance levels.</p> <p>Implementation of TSMO focuses on cost-effective, near term solutions that are multimodal, cross jurisdictional, and applicable on all roadway types.</p>

Proposed Library & Research Activities – Current State Transportation Innovation Council (STIC) Incentive and Demonstration Projects

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Ongoing*	<p>Integrating New Active Transportation Network Analytical Tools and Data into the Multimodal Decision-Making Process \$59,602 (Also using about \$18,000 of in-kind match through in-house labor)</p> <p>Project will develop several innovative analytical methodologies and update data approaches with respect to active transportation, ADA accessibility and other elements of the system. These efforts will provide the basis for a standard approach to decision-making that supports safety, mobility, and accessibility for an integrated, multimodal transportation system.</p>
2	Ongoing*	<p>Developing Policy Guidance and a Comprehensive Set of Design and Construction Specifications for Buried Bridges \$60,000 (Also using about \$15K of in-kind match through in-house labor.)</p> <p>Project will develop policy and guidance for alternative types of buried bridges to correct fish barriers along state highways.</p>
3	Ongoing*	<p>Extendable Front Snowplow \$53,500</p> <p>Project will provide maintenance operations staff the opportunity to conduct a rigorous evaluation of extendable front snowplow equipment. The team will evaluate efficiencies, mechanical integrity, operator risks and safety, and conduct a cost benefit analysis.</p>
4	Ongoing*	<p>An Innovative Internet of Things (IoT) Technology for Comprehensive Traffic Sensing and V2X Applications \$46,500</p> <p>Project will install and implement Mobile Units for Sensing Traffic along four selected roadways with high crash risks, including segments with horizontal and/or vertical curves, locations with frequent snow or ice coverage, for data collection, condition assessment, and V2X applications to monitor traffic and roadway surface and environmental conditions, and communicate with traffic operations center as well as broadcast useful information to road users when needed.</p>

Proposed Library & Research Activities – Current Accelerated Innovation Deployment Project

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Ongoing*	<p>Deploying Practical Solutions Using Lean Techniques and Knowledge Management \$750,000</p> <p>This project applies Lean methodology to develop a high-level business process map to streamline processes and improve deployment of practical solutions through established knowledge management practices. The project evaluates targeted capital projects, aligning knowledge resources with the Practical Solutions lifecycle. The Practical Solutions approach will identify effective, low-cost solutions to address the management and improvement of the multimodal transportation system. As new practices are integrated into all aspects of transportation lifecycle, the expected result is improved efficiency, productivity, and cost savings. Savings from applying Practical Solutions to capital projects may also be used for other needed transportation projects.</p>

Proposed Library & Research Activities – Current EDC-6 Innovations

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Ongoing*	<p>Crowdsourcing for Advancing Operations</p> <p>Crowdsourced data can be obtained whenever and wherever people travel, allowing agencies to capture in real time what happens between sensors, in rural regions, along arterials, and beyond jurisdictional boundaries. Agencies at all levels can use crowdsourced data integrated from multiple streams to optimize roadway use for reduced congestion and increased safety and reliability.</p> <p>WSDOT is in the demonstration phase; our innovation goal is to move to the assessment phase over the next 2 years.</p>

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
2	Ongoing*	<p>e-Ticketing and Digital As-Builts</p> <p>Converting paper-based materials ticketing systems and as-built plans into electronic (e-Ticketing) workflows and digital as-builts enhances the accessibility of highway project data. e-Ticketing improves the tracking, exchange, and archiving of materials tickets. Digital information, such as 3D design models and other metadata, enhances the future usability of as-built plans for operations, maintenance, and asset management.</p> <p>WSDOT is in the demonstration phase of e-ticketing; our innovation goal is to move towards the institutionalized phase over the next 2 years.</p> <p>WSDOT has not fully implemented Digital As-Builts; our innovation goal is to move to the development phase over the next two years.</p>
3	Ongoing*	<p>Next Generation TIM: Integrating Technology, Data, and Training Traffic Incident Management (TIM) programs aim to shorten the duration and impact of roadway incidents and improve the safety of motorists, crash victims, and responders. New tools, data, and training mechanisms are available that can benefit both new and existing TIM programs, including local agency and off-interstate applications.</p> <p>WSDOT is in the assessment phase; our innovation goal is to be in the institutionalized phase over the next 2 years.</p>
4	Ongoing*	<p>Targeted Overlay Pavement Solutions (TOPS)</p> <p>Pavement overlays represent a significant portion of highway infrastructure dollars. State and local highway agencies can maximize this investment and help ensure safer, longer-lasting roadways by employing innovative overlay procedures that will improve pavement performance, lessen traffic impacts, and reduce the cost of pavement ownership.</p> <p>WSDOT has institutionalized TOPS; workshops and peer exchanges may be implemented over the next two years.</p>

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
5	Ongoing*	<p>Strategic Workforce Development</p> <p>The demand for highway construction, maintenance, and operations workers is growing, while at the same time, emerging technologies require these workers to have new skills. The Highway Construction Workforce Partnership has developed new resources and innovative strategies for identifying, training, and placing individuals in the Contractors' workforce filling the construction jobs that support the Nation's highway system.</p> <p>Workforce Development is one of WSDOT's three goals in its Strategic Plan. The agency's goal is to be an employer of choice by hiring, training, and retaining skilled workers to meet Washington's transportation needs.</p> <p>WSDOT is moving further into the development stage; our innovation goal is institutionalizing additional initiatives over the next two years.</p>
6	Ongoing*	<p>UHPC for Bridge Preservation and Repair</p> <p>Ultra-high-performance concrete (UHPC) is a new material for bridge construction that has become popular for field-cast connections between prefabricated bridge elements. Bridge preservation and repair is an emerging and promising application for UHPC. UHPC-based repair solutions are robust, and offer superior strength, durability, and improved life-cycle cost over traditional methods. State and local agencies can deploy UHPC for bridge preservation and repair to maintain or improve bridge conditions.</p> <p>WSDOT is in the demonstration phase; our innovation goal is to be fully institutionalized over the next two years.</p>
7	Ongoing*	<p>Virtual Public Involvement (VPI)</p> <p>Public engagement during transportation project planning and development helps agencies identify issues and concerns early in the process, which can ultimately accelerate delivery. Virtual public involvement strategies supplement traditional face-to-face information sharing with technology platforms that increase the number and variety of methods agencies use to inform the public, receive feedback, and collect and consider comments.</p> <p>WSDOT has fully institutionalized this innovation in many areas across the enterprise; our innovation goal is to institutionalize the innovation across other areas over the next two years.</p>

Area 4: Transportation Pooled Fund (TPF) Projects

Area description

The Transportation Pooled Fund program is administered by the Federal Highways Administration (FHWA) and allows federal, state, and local agencies and other organizations to combine resources to support transportation research studies.

It is a popular means for State Department of Transportation (DOT), FHWA, local agencies and other organizations program offices to leverage resources to support transportation research studies and achieve common research goals. WSDOT benefits from leading and participating in other State-led and FHWA-led pooled fund studies – pooling resources reduces marginal costs, avoids duplication of effort, and provides efficient use of taxpayer dollars.

Proposed Library & Research Activities – WSDOT Lead Transportation Pooled Funds Projects

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Ongoing*	TPF-5(241) Western States Rural Transportation Consortium (WSRTC) The purpose of the WSRTC is to promote innovative partnerships, technologies, and educational opportunities to facilitate and enhance safe, seamless rural travel throughout the western United States. The WSRTC shall also provide a collaborative mechanism to leverage research activities in a coordinated manner to respond to rural transportation issues among western states related to Technology, Operations and Safety.
2	Ongoing*	TPF-5(291) Development of an SPS-2 Pavement Preservation Experiment The Strategic Study of Structural Factors for Rigid Pavements, led by WSDOT, is the most comprehensive ongoing concrete research effort in the nation. It represents a national investment of in the order of \$15- 20 million for the construction, sampling and testing, monitoring, and analysis of concrete pavements. Development of SPS-2 Pavement Preservation Experiment OY11728 \$402,040.
3	Ongoing*	TPF-5(343) Roadside Safety Research for AASHTO's Manual for Assessing Safety Hardware (MASH) Implementation The objective of the Roadside Safety Pooled Fund Program, led by WSDOT, is to provide a cooperative approach to conducting research on roadside safety hardware. Emphasis is placed on assisting state DOTs with their implementation of MASH and addressing other roadside safety needs of common interest.

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
4	Ongoing*	<p>Impact Performance Evaluation of Modified Minnesota Swing-Away Mailbox T4541-CT \$181,659</p> <p>Thrie/W-Beam/Tubular Barrier Gap Rail for MASH TL-3 T4541-CZ \$215,821</p> <p>Shorter TL-3 MASH W-Beam Transition T4541-DO \$88,332 2019 MASH Coordination Effort T4541-DQ \$65,000</p> <p>Design and Testing of a Thrie-beam Guardrail System at a Fixed Object T4541-DW \$176,184</p> <p>Design and Testing of a MASH TL-3 Thrie-Beam System for Roadside and Median Applications T4541-DX \$258,780</p> <p>A Study of Acceptable Sidewalk Heights and Widths T4541-DV \$150,154</p> <p>MASH TL-3 Transition Design with Storm Drain Inlet T4541-DY \$149,700</p> <p>Determination of the Length-of-Need for Guardrail without Anchorage Phase 2: MASH Crash Testing T4541-DZ \$131,269</p>
4a	Ongoing*	<p>Development of A Thrie-Beam Retrofit for Upgrading Obsolete Bridge T4541-EA \$227,675</p> <p>2021 Administrative Support T4541-EB \$ 20,602</p> <p>Develop non-proprietary MASH compliant three-pound and four-pound post systems \$165,000</p> <p>Develop Guidelines for attaching MASH-compliant thrie beam transitions to rigid concrete barriers other than the rigid barrier tested when evaluating the thrie beam transition \$90,000</p> <p>Exploration into Variations in Beam Guard Approach Transitions to Rigid Barrier \$85,000</p> <p>Testing Type III Barricades with Aluminum Panels and Mounted Signs \$175,000</p> <p>Transition Between Guardrail and Tangent Anchored Portable Concrete Barriers \$205,000</p> <p>Multi-directional base design for steel beam non-proprietary large sign supports \$135,000</p>

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
5	Ongoing*	<p>TPF-5(452) International Conference on Ecology & Transportation (ICOET) 2021</p> <p>This pooled fund provides one virtual (due to the worldwide pandemic) in 2021 for communication, technology transfer and information sharing among transportation professionals on ecology issues and transportation. RLS has a Master Agreement with University of California, Davis, for this pooled fund project to provide for the assignment of Research Task Orders.</p>
6	Ongoing*	<p>TPF-5(386) Gravel-Bed River Assessment Tool for Improved Resiliency of Engineering Design</p> <p>WSDOT will develop practical guidance and methods for assessing bed load transport in gravel-bed rivers for more resilient road infrastructure. This guidance will inform engineering design, hazard assessment, and maintenance strategies of roads along or near gravel-bed rivers. Other federal and state agencies support the pilot and are willing to assist in the development and review process. WSDOT anticipates that the U.S. Forest Service, U.S. Fish and Wildlife Service, Oregon DOT, Caltrans, and other public works agencies will use the gravel-bed assessment tool developed by this pilot project.</p> <p>Site Calibrated Bedload Equation Implementation in Python GCB 3179 \$56,500 Install Stream Gage/Glacier Creek GCB 3185 \$ 40,031 Gravel-Bed River Assessment Tool for Resiliency of Engineering Design OY12361 \$14,958</p>
7	Ongoing*	<p>TPF-5(459) Developing and Calibrating Fragmental Rockfall Models using Physics Engines</p> <p>This pooled fund work on simulation software using game engine environments to develop a rockfall model that will help transportation professionals manage the mitigation efforts of potential rockfalls from unstable slopes</p>

Other state-led or FHWA pooled funds that WSDOT personnel participate in:

- A full detail and reports of all the pooled funds can be found at www.pooledfund.org
RLS will not be reporting on these projects but will update the list.
- TPF-5(190) - Northwest Passage Phase III | Lead Agency: Minnesota DOT
- TPF-5(206) - Research Program to Support the Research, Development, and Deployment of System Operations Applications of Vehicle Infrastructure Integration (VII) | Lead Agency: Virginia DOT
- TPF-5(255) - Highway Safety Manual Implementation | Lead Agency: FHWA
- TPF-5(288) - Western Road Usage Charging Consortium | Lead Agency: Oregon DOT
- TPF-5(290) - Aurora Program | Lead Agency: Iowa DOT
- TPF-5(299) - Improving the Quality of Pavement Surface Distress and Transverse Profile Data Collection and Analysis | Lead Agency: FHWA
- TPF-5(307) - Validation of Tsunami Design Guidelines for Coastal Bridges | Lead Agency: Oregon DOT
- TPF-5(313) - Technology Transfer Concrete Consortium (TTCC) | Lead Agency: Iowa DOT
- TPF-5(315) - National Accessibility Evaluation | Lead Agency: Minnesota DOT
- TPF-5(317) - Evaluation of Low-Cost Safety Improvements | Lead Agency: FHWA
- TPF-5(319) - Transportation Management Center | Lead Agency: FHWA
- TPF-5(322) - High Occupancy Vehicle (HOV)/ Managed Use Lane (MUL) | Lead Agency: FHWA
- TPF-5(326) - Develop & Support Transportation Performance Management Capacity Development Needs for State DOTs | Lead Agency: Rhode Island DOT
- TPF-5(337) - Transportation Avalanche Research Pool (TARP) | Lead Agency: Colorado DOT
- TPF-5(350) - Development of Next Generation Liquefaction (NGL) Database for Liquefaction-Induced Lateral Spread | Lead Agency: Utah DOT
- TPF-5(352) - Recycled Materials Resource Center - 4th Generation | Lead Agency: Wisconsin DOT
- TPF-5(353) - Clear Roads Phase II | Lead Agency: Minnesota DOT
- TPF-5(355) - Stormwater Testing and Maintainability Center | Lead Agency: Oregon DOT
- TPF-5(357) - Connecting the DOTs: Implementing ShakeCast Across Multiple State Departments of Transportation for Rapid Post-Earthquake Response | Lead Agency: California DOT
- TPF-5(358) - Wildlife Vehicle Collision Reduction & Habitat Connectivity | Lead Agency: Nevada DOT
- TPF-5(361) - SHRP2 Naturalistic Driving Study Pooled Fund | Lead Agency: FHWA
- TPF-5(362) - Improvements to the Infrastructure Carbon Estimator (ICE) | Minnesota DOT
- TPF-5(365) - National Hydraulic Engineering Conference | Lead Agency: FHWA
- TPF-5(366) - Development of Structural Design Guide for Ultra High-Performance Concrete | Lead Agency: Iowa DOT
- TPF-5(369) - Collaborative Development of New Strategic Planning Models | Lead Agency: FHWA
- TPF-5(370) - Fostering Innovation in Pedestrian and Bicycle Transportation Pooled Fund Study | Lead Agency: FHWA

- TPF-5(371) - Developing “Highway Capacity Manual” Capacity Adjustments for Agency Connected and Autonomous Vehicle Operational Planning Readiness under Varying Levels of Volume and Market Penetration | Lead Agency: Oregon DOT
- TPF-5(372) - Building Information Modeling (BIM) for Bridges & Structures | Lead Agency: Iowa DOT
- TPF-5(376) - Northwest Passage Phase 4 | Lead Agency: Minnesota DOT
- TPF-5(380) - Autonomous Maintenance Technology (AMT) | Lead Agency: Colorado DOT
- TPF-5(382) - Drivers Failing to Yield at Roundabouts | Lead Agency: FHWA
- TPF-5(383) - 2019 Innovations in Freight Data Workshop | Lead Agency: Iowa DOT
- TPF-5(388) - Developing Implementation Strategies for Risk Based Inspection (RBI) | Lead Agency: Missouri DOT
- TPF-5(394) - Western Maintenance Partnership – Phase 3 | Lead Agency: Utah DOT
- TPF-5(399) - Improve Pavement Surface Distress & Transverse Profile Data Collection & Analysis – Phase 2 | Lead Agency: FHWA
- TPF-5(431) - Applications of Enterprise GIS for Transportation, Guidance for a National Transportation Framework (AEGIST) | Lead Agency: FHWA
- TPF-5(433) - Behavior of Reinforced & Unreinforced Lightweight Cellular Concrete for Retaining Walls | Lead Agency: Utah DOT
- TPF-5(435) - Aurora Program (FY20-24) | Lead Agency: Iowa DOT
- TPF-5(437) - Technology Transfer Concrete Consortium (FY20-24) | Lead Agency: Iowa DOT
- TPF-5(440) - Urban Mobility Study | Lead Agency: Texas DOT
- TPF-5(443) - Continuous Asphalt Mixture Compaction Assessment using Density Profiling System (DPS) | Lead Agency: Minnesota DOT
- TPF-5(444) - Traffic Safety Culture (Phase 2) | Lead Agency: Montana DOT
- TPF-5(451) - Road Usage Charge (RUC) West | Lead Agency: Oregon DOT
- TPF-5(470) - Traffic Signal Change & Clearance Interval Pooled Fund Study | Lead Agency: FHWA
- TPF-5(369) - Collaborative Development of New Strategic Planning Models | Lead Agency: FHWA
- TPF-5(370) - Fostering Innovation in Pedestrian and Bicycle Transportation Pooled Fund Study | Lead Agency: FHWA
- TPF-5(371) - Developing “Highway Capacity Manual” Capacity Adjustments for Agency Connected and Autonomous Vehicle Operational Planning Readiness under Varying Levels of Volume and Market Penetration | Lead Agency: Oregon DOT
- TPF-5(372) - Building Information Modeling (BIM) for Bridges & Structures | Lead Agency: Iowa DOT
- TPF-5(376) - Northwest Passage Phase 4 | Lead Agency: Minnesota DOT
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- TPF-5(382) - Drivers Failing to Yield at Roundabouts | Lead Agency: FHWA
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- TPF-5(444) - Traffic Safety Culture (Phase 2) | Lead Agency: Montana DOT
- TPF-5(451) - Road Usage Charge (RUC) West | Lead Agency: Oregon DOT
- TPF-5(470) - Traffic Signal Change & Clearance Interval Pooled Fund Study | Lead Agency: FHWA

Area 5: National Research Programs

Area description

WSDOT participates in the following national research programs:

National Cooperative Highway Research Program (NCHRP)

The NCHRP was created in 1962 to conduct research in acute problem areas that affect highway planning, design, construction, operation and maintenance nationwide. It is administered by the Transportation Research Board (TRB) and sponsored by the member departments (individual state departments of transportation) of the American Association of State Highway and Transportation Officials (AASHTO), in cooperation with the Federal Highway Administration (FHWA).

WSDOT staff contribute not only in development of annual NCHRP problem statements/submittal, but many actively participate as panel members and/or chair these selected projects.

WSDOT staff, for example, submitted 12 NCHRP problem statements for FY 2021 funding and the following 7 were selected:

- A-03 – Assessing and Measuring the Business Value of Knowledge Management
- B-22 – Resources for State DOTs to consider Greenhouse Gas Emissions & Climate Change in NEPA Documents
- B-27 – Guidance for Local Truck Parking Regulations
- F-01 – Guide to Maximize Vehicle and Equipment Surplus Values
- G-02 – Safety Performance of LED and Variable Lighting Strategies
- G-07 – Safety Effectiveness Assessment of Advanced Highway-Rail Grade Crossing Improvements
- G-09 – Intersection Control Evaluation (ICE) Guide

Proposed Library & Research Activities – Current Strategic Highway Program (SHRP2) Projects

Number	Estimated delivery <i>*Continues beyond this biennium</i>	Deliverable description
1	Ongoing*	<p>Transportation Research Board (TRB) Core Program</p> <p>WSDOT invests in the TRB's Core Program, which provides a forum for transportation professionals to identify, facilitate, and share research and information related to transportation. The contribution is based on distributing the cost of the approved budget to all sponsors. Each state DOT's share is prorated to the amount of SPR funding received.</p> <p>WSDOT's investment provides the framework for a significant amount of collaboration on transportation research. The Core Program supports the TRB standing committees, Transportation Research Information database, Research in Progress database, Research Needs Statements database, state DOT visits, and planning for the TRB annual and mid-year meetings.</p>
2	Ongoing*	Report on NCHRP problem statements/submittals and participate in panels and/or projects.
3	Ongoing*	<p>Technical Services Program (TSP) – AASHTO Innovations Initiative (All)</p> <p>WSDOT supports TSP-All. The purpose of All is to identify and champion the implementation or deployment of a select few proven technologies, products or processes that are likely to yield significant economic or qualitative benefits to users. The All works with the AASHTO Special Committee on Research and Innovation (R&I) and the Research Advisory Committee (RAC) as well as others to identify new technologies.</p>

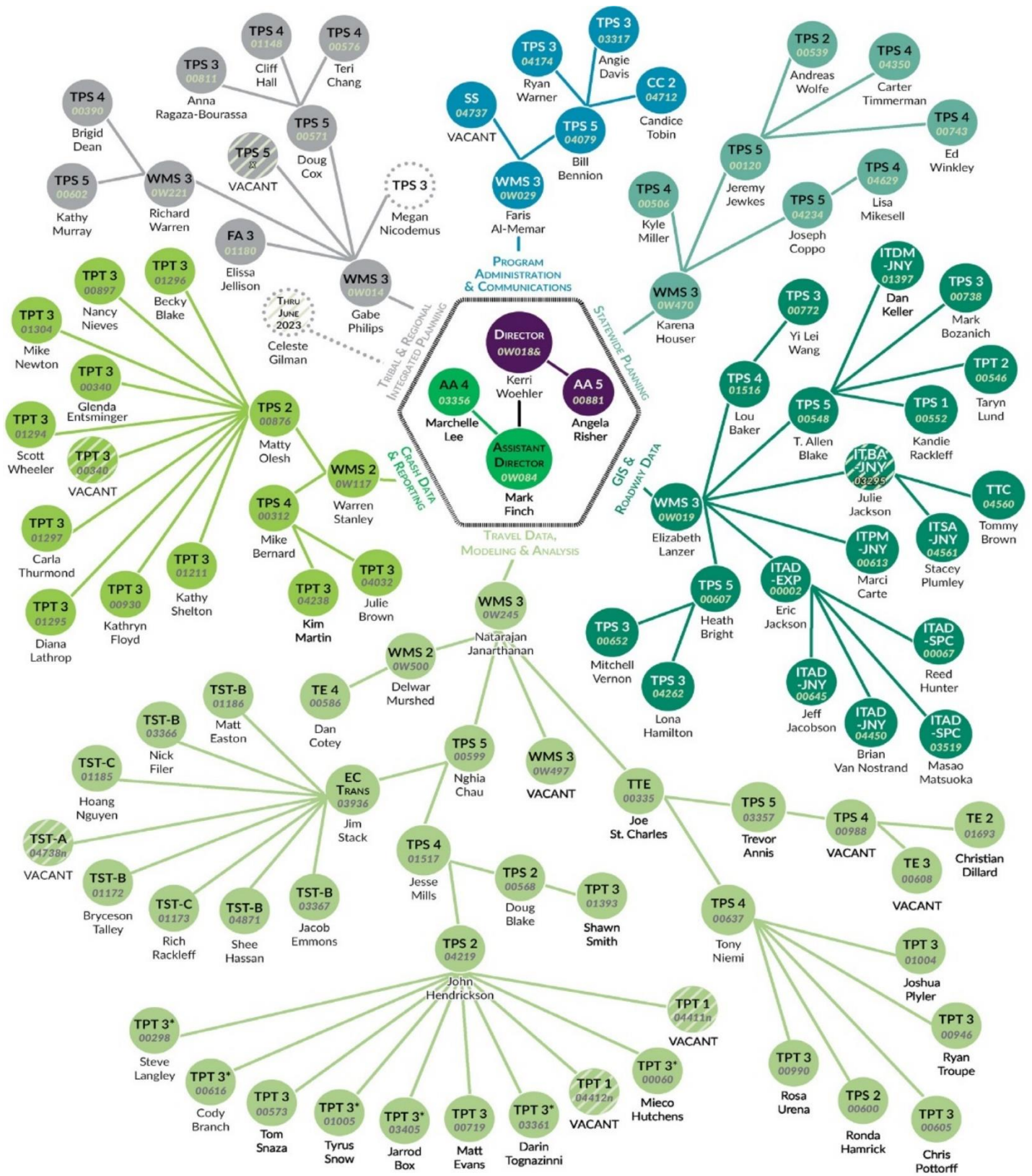


TABLE OF ORGANIZATION | JUNE 2021

Position Number

Jay Alexander, *Director CPDM | Budget Program Confirmation*

Appendix B: Revenue Summary

WORK AREAS	FUNDING				
	FTE	Federal	State	Local	Total
PART 1: PLANNING					
AREA 1: System Performance and Analysis					
Subarea 1.1: Performance and Accountability Analysis	8.00	\$1,687,920	\$421,980		\$2,109,900
Subarea 1.2: Performance Framework	1.00	\$198,320	\$49,580		\$247,900
Subarea 1.3: Travel Demand and Economic Modeling and Analysis	3.75	\$962,640	\$240,660		\$1,203,300
AREA 2: Transportation Data, Analysis, and Stewardship					
Subarea 2.1: Travel Data Collection, Processing, Analysis and Reporting	29.35		\$7,723,000		\$7,723,000
Subarea 2.2: Crash Data Collection, Analysis and Reporting	14.00	\$2,298,000	\$624,500		\$2,922,500
Subarea 2.3: Enterprise GIS Services and Roadway Data Collection, Analysis and Reporting	18.40	\$4,046,480	\$1,011,620		\$5,058,100
Subarea 2.4: Annual Federal Reporting of Vehicle and Financial Statistics					
Subarea 2.5: Information Technology Development and Support	3.00	\$720,000	\$180,000		\$900,000
AREA 3: Statewide Multimodal Plan Implementation					
Subarea 3.1: Statewide Long-range Transportation Planning and implementation	7.00	\$1,484,480	\$371,120		\$1,855,600
Subarea 3.2: Priority Statewide Planning	0.00	\$800,000	\$200,000		\$1,000,000
Subarea 3.3: Planning Policy, Training, Tools and Data	1.55		\$418,300		\$418,300
Subarea 3.4 Implementation of Planning Guidance, Training, Tools, and Data	0.25		\$371,400		\$371,400
Subarea 3.5: Community Engagement	0.70		\$447,700		\$447,700
Subarea 3.6: Cooperative Automated Transportation (CAT) Program	1.00	\$283,120	\$70,780		\$353,900
Subarea 3.7: Active Transportation Planning and Policy Development	1.00	\$313,680	\$78,420		\$392,100
Subarea 3.8: Rail, Freight and Ports	4.00	\$929,600	\$232,400		\$1,162,000
Subarea 3.9: Washington State Ferries Transportation Planning	2.00		\$581,200		\$581,200
Subarea 3.10: Incorporating Equity Into Planning Recommendations	0.00		\$150,000		\$150,000
AREA 4: Metropolitan and Regional Planning					
Subarea 4.1: MPO/RTPO Program Stewardship and Coordination	5.25	\$1,063,520	\$265,880		\$1,329,400
Subarea 4.1: MPO/RTPO Program Stewardship and Coordination - Pass Through Funds	0.00	\$20,000,000	\$4,900,000		\$24,900,000
AREA 5: Local, Network and Corridor Planning					
Subarea 5.1: Land Use and Transportation Planning Integration	2.60		\$991,800		\$991,800
Subarea 5.2: Transportation Planning Studies	1.00	\$285,200	\$71,300		\$356,500
Subarea 5.3: WSDOT Regional Planning	34.95	\$5,696,720	\$6,635,080		\$12,331,800
Subarea 5.4: WSDOT Region Priority Work	2.00	\$1,886,800	\$400,000		\$2,286,800
AREA 6: Economic and Financial Planning					
Subarea 6.1: Financial Planning					
Subarea 6.2: Economic Forecasting and Analysis					
AREA 7: Prioritization and Programming					
Subarea 7.1: Prioritization and Programming of Capital Improvement Projects (State Highway Performance	3.00	\$639,760	\$159,940		\$799,700
AREA 8: Statewide Transportation Improvement Program (STIP)					
Subarea 8.1: WSDOT's Local Programs Division					
AREA 9: Management and Administration					
Subarea 9.1: Program Management	7.50		\$2,289,000		\$2,289,000
Subarea 9.2: Program Administration	2.00		\$530,100		\$530,100
Subarea 9.3: Goldsmith Lease and Administrative Support	0.00		\$256,000		\$256,000
PART 2: Research					
AREA 1: Program and Research Management	13.00	\$10,297,760	\$1,589,240	\$400,000	\$12,287,000
AREA 1A: Program and Research Management					
AREA 1B: Library Services					
AREA 2: Research Projects					
AREA 3: Federal Grants					
AREA 4: Pooled Fund Projects					

Appendix C: Summary of Percentage Calculations

Citation

§ 420.107 What is the minimum required expenditure of State planning and research funds for research development and technology transfer? (a) A State DOT must expend no less than 25 percent of its annual SPR funds on RD&T activities relating to highway, public transportation, and intermodal transportation systems in accordance with the provisions of 23 U.S.C. 505(b), unless a State DOT certifies, and the FHWA accepts the State DOT's certification, that total expenditures by the State DOT during the fiscal year for transportation planning under 23 U.S.C. 134 and 135 will exceed 75 percent of the amount apportioned for the fiscal year.

Calculations

We provided two ways to assess the minimum required investment for Research: one based on fed SPR only; the other based on Fed SPR plus 20% state match.

Option 1: Federal SPR only

\$23,296,240	Fed SPR
\$5,824,060	Minimum 25% for RD&T
\$10,297,760	Actual Expenditure for RD&T

Option 2: Federal SPR plus 20% state match

\$23,296,240s	Fed SPR
\$4,659,250	20% match (state)
\$6,988,870	Minimum 25% for RD&T
\$10,297,760	Actual expenditure for RD&T

Note: The state legislature provides state funding in excess of the required match for SPR. Those additional state dollars are included in the work program for the purpose of sharing information about WSDOT's planning activities. Total state funding reported in the work program: \$24,771,760

Appendix D: SPR Work Areas

WORK AREAS	FUNDING													
	MPDD	ATD	IT	RFP	Ferries	TSSA	Region	RTC	CPDM	BFA	LP	TO	M2D2	
PART 1: PLANNING														
AREA 1: System Performance and Analysis														
Subarea 1.1: Performance and Accountability Analysis						X								
Subarea 1.2: Performance Framework	X													
Subarea 1.3: Travel Demand and Economic Modeling and Analysis	X													
AREA 2: Transportation Data, Analysis, and Stewardship														
Subarea 2.1: Travel Data Collection, Processing, Analysis and Reporting	X													
Subarea 2.2: Crash Data Collection, Analysis and Reporting	X													
Subarea 2.3: Enterprise GIS Services and Roadway Data Collection, Analysis and Reporting	X													
Subarea 2.4: Annual Federal Reporting of Vehicle and Financial Statistics										X				
Subarea 2.5: Information Technology Development and Support			X											
AREA 3: Statewide Multimodal Plan Implementation														
Subarea 3.1: Statewide Long-range Transportation Planning and implementation	X													
Subarea 3.2: Priority Statewide Planning	X													
Subarea 3.3: Planning Policy, Training, Tools and Data	X													
Subarea 3.4 Implementation of Planning Guidance, Training, Tools, and Data	X													
Subarea 3.5: Community Engagement	X													
Subarea 3.6: Cooperative Automated Transportation (CAT) Program												X		
Subarea 3.7: Active Transportation Planning and Policy Development		X												
Subarea 3.8: Rail, Freight and Ports				X										
Subarea 3.9: Washington State Ferries Transportation Planning					X									
Subarea 3.10: Incorporating Equity into Planning Recommendations	X													
AREA 4: Metropolitan and Regional Planning														
Subarea 4.1: MPO/RTPO Program Stewardship and Coordination	X													
AREA 5: Local, Network and Corridor Planning														
Subarea 5.1: Land Use and Transportation Planning Integration	X							X						
Subarea 5.2: Transportation Planning Studies	X													
Subarea 5.3: WSDOT Regional Planning	X						X							
Subarea 5.4: WSDOT Region Priority Work	X						X							
AREA 6: Economic and Financial Planning														
Subarea 6.1: Financial Planning										X				
Subarea 6.2: Economic Forecasting and Analysis										X				
AREA 7: Prioritization and Programming														
Subarea 7.1: Prioritization and Programming of Capital Improvement Projects (State Highway Performance)									X					
AREA 8: Statewide Transportation Improvement Program (STIP)														
Subarea 8.1: WSDOT's Local Programs Division											X			
AREA 9: Management and Administration														
Subarea 9.1: Program Management	X												X	
Subarea 9.2: Program Administration	X													
Subarea 9.3: Goldsmith Lease and Administrative Support	X													
PART 2: Research														
Area 1: Program and Research Management						X								
Area 1A: Program and Research Management						X								
Area 1B: Library Services						X								
Area 2: Research Projects						X								
Area 3: Federal Grants						X								
Area 4: Pooled Fund Projects						X								