

**Final Ranked List of Study Ideas for Eastern Washington**

EWGS Rank	Study Idea #	Study Idea Title	City of Richland	City of Kennewick	City of Pasco	West Richland	Yakima County***	Selah***	Union Gap***	Sunnyside***	City of Yakima	City of Wenatchee*	Douglas County**	Chelan County*	City of East	City of Spokane	Spokane County	City of Spokane Valley	Asotin****	Asotin County****	Clarkston****	Ellensburg	Walla Walla County	City of Walla Walla	City of Pullman	City of Moses Lake	Quad-Cities	Yakima Regional	Wenatchee Regional	Spokane Regional	Asotin Regional	EWGS Score	Brief Summary of Data Collection Required	Lead Entity (LE)	Participating Permittees	
1	1	Modernizing Education and Outreach Strategies	2	3	2	2	3	3	3	3	3	3	3	3	3	2	3	2	3	3	3	2	2	2	3	1	2.3	3.0	3.0	2.3	3.0	2.58	Data will be collected through surveys (multiple choice and yes/no questions) disseminated through multiple methods including mailers, websites, and social media.	City of Kennewick	<b>Cities:</b> Asotin, Clarkston, Kennewick, Pasco, Pullman, Selah, Spokane Valley, Sunnyside, Union Gap, Wenatchee, Yakima <b>Counties:</b> Asotin, Spokane, Yakima	
2	20	Use of Non-vegetative Swale with Native Soils	3	3	3	3	3	3	3	3	2	2	1	2	1	2	3	3	3	3	3	3	1	2	3	3	3	3.0	2.8	1.5	2.7	3.0	2.54	Water quality samples taken below the treatment columns of BMPs will be compared to water quality samples of incoming stormwater to determine the treatment effectiveness of each BMP	Pasco	<b>Cities:</b> Asotin, Clarkston, Kennewick, Moses Lake, Pasco, Pullman, Richland, Selah, Spokane Valley, Sunnyside, Union Gap, Walla Walla, West Richland, Yakima <b>Counties:</b> Asotin, Douglas, Walla Walla, Yakima
3	15	Street Sweeping and Catch Basin Cleaning Comparison	2	3	2	3	2	2	2	2	3	3	2	3	2	2	2	3	3	3	3	3	3	2	3	2	3	2.5	2.2	2.5	2.3	3.0	2.50	Sediments depths will be collectively measured and averaged once a month at a number of catchbasins.	City of Ellensburg	<b>Cities:</b> Asotin, Clarkston, Ellensburg, Moses Lake, Spokane, Spokane Valley, Walla Walla, Wenatchee, West Richland <b>Counties:</b> Asotin
4	2	Mobile Contractor Illicit Discharge Education	2	3	3	2	3	3	3	3	3	3	3	3	3	1	1	3	2	2	2	3	1	2	2	2	2.5	3.0	3.0	1.7	2.0	2.42	Data regarding mobile contractors will be collected (before and after the education campaign is launched) through surveys, interviews, and/or focus groups.	City of Wenatchee	<b>Cities:</b> East Wenatchee, Ellensburg, Kennewick, Pasco, Pullman, Selah, Spokane Valley, Sunnyside, Union Gap, Walla Walla, Wenatchee, Yakima <b>Counties:</b> Chelan, Douglas, Yakima	
5	28	Sand Filter Vault BMP	2	2	1	3	2	2	2	2	1	3	1	3	1	1	3	3	2	2	2	2	2	1	2	3	3	2.0	1.8	2.0	2.3	2.0	2.04	The influent and effluent concentrations will be analyzed and compared to determine the reduction of each pollutant using 12 rainfall (qualifying) events.	Spokane County	<b>Cities:</b> Moses Lake, Pullman, Spokane Valley, Wenatchee, West Richland <b>Counties:</b> Spokane
6	9	BMP Inspection and Maintenance Responsibilities	2	3	3	2	3	3	3	3	2	1	3	1	3	2	1	1	1	1	1	1	2	3	1	2	1	2.5	2.8	2.0	1.3	1.0	2.00	A survey will cover questions related to the how municipalities verify private BMP maintenance program (i.e. inspection strategies and frequency, funding, BMP access, etc.). Stormwater managers perceptions of their programs success will also be collected.	Yakima County	<b>Cities:</b> Pasco, Selah, Spokane Valley, Sunnyside, Union Gap, Wenatchee, Yakima <b>Counties:</b> Walla Walla, Yakima
6	16	Seasonal Differences in Street Sweeping Material Removal	2	2	2	1	1	1	1	1	2	3	2	3	2	1	1	3	3	3	3	3	3	2	3	1	2	1.8	1.2	2.5	1.7	3.0	2.00	Data collected will include street dirt prior to and directly after sweeping, material gradation, organic vs inorganics, street type and conditions, land use data would be collected	City of Spokane Valley	<b>Cities:</b> Asotin, Clarkston, East Wenatchee, Ellensburg, Kennewick, Pasco, Pullman, Spokane Valley, Walla Walla, Wenatchee, Yakima <b>Counties:</b> Asotin, Chelan, Douglas
6	18	Catch Basin Retrofit Device Placement	2	2	3	1	2	2	2	2	2	3	2	3	2	1	2	1	2	2	2	2	2	1	2	2	2.0	2.0	2.5	1.3	2.0	2.00	At specific intervals the quantity of stormwater pollutants of concern will be estimated in the catch basins in both test catchments. The total amount of material removed would be quantified for each system.	Asotin County & City of Spokane Valley	<b>Cities:</b> Asotin, Clarkston, Kennewick, Pullman, Spokane Valley, Wenatchee <b>Counties:</b> Asotin	
9	7	Stormwater BMP Owner Awareness	2	3	3	1	2	2	2	2	2	2	3	2	3	1	1	1	1	1	1	1	3	3	1	3	1	2.3	2.0	2.5	1.0	1.0	1.92	Data will be gathered through a survey to gauge the BMP owner's awareness of the maintenance and inspection requirements of the BMPs on their property.	City of Wenatchee	<b>Cities:</b> East Wenatchee, Ellensburg, Kennewick, Pasco, Pullman, Spokane Valley, Wenatchee, Yakima <b>Counties:</b> Chelan, Douglas, Walla Walla
10	29	Determining Pollutant Contributions from Municipal Stormwater in Eastern WA using GIS	1	2	1	1	2	2	2	2	2	1	2	1	2	1	2	3	3	3	3	3	2	1	1	1	2	1.3	2.0	1.5	2.0	3.0	1.79	Stormwater system mapping, information on land use(s), topography, basins discharging to surface waters, climate, etc.	City of Spokane Valley	<b>Cities:</b> Asotin, Clarkston, East Wenatchee, Moses Lake, Spokane Valley, Yakima <b>Counties:</b> Asotin
11	27	27a Media Thickness Study	3	3	1	1	2	2	2	2	1	2	1	2	1	2	3	2	2	2	2	2	2	2	2	1	1.5	1.7	2.3	2.3	2.3	1.78	Influent and effluent from each of the treatment cells will be collected during qualifying storm events using automated sampling techniques. Samples will be analyzed for identified constituents of concern (TSS, metals, total nitrogen, total phosphorus, fecal coliform, total petroleum hydrocarbons).	Spokane County	<b>Cities:</b> Richland, Spokane Valley <b>Counties:</b> Spokane, Walla Walla	
	24	27b Media Component Study																																		
12	14	Sharp Avenue Porous Pavement Study	2	1	1	1	1	1	1	1	2	2	2	2	2	3	3	2	2	2	2	2	2	1	2	1	1.3	1.2	2.0	2.7	2.0	1.67	Sample data collection of the permeable pavement will include durability, water quality (influent and effluent), and infiltration rates.	City of Spokane	<b>Cities:</b> Spokane, Spokane Valley	
12	24	Biochar Media Stormwater Treatment Study	2	3	1	1	2	2	2	2	1	2	1	2	1	3	3	2	1	1	1	1	1	1	2	2	1	1.8	1.8	1.5	2.7	1.0	1.67	Stormwater sample collection before and after treatment through the biochar media and analysis of sample data.	City of Spokane	<b>Cities:</b> Spokane, Spokane Valley <b>Counties:</b> Spokane
14	12	Long-term Permeable Pavement Sidewalk Infiltration Performance	2	1	1	1	1	1	1	1	1	1	2	1	2	1	2	2	2	2	2	2	2	1	2	1	1	1.3	1.0	1.5	1.7	2.0	1.42	The infiltration rates at multiple locations of each test segment. A qualitative visual assessment would also be completed annually to track the durability of the pavement.	City of Richland	<b>Cities:</b> Richland, Selah, Spokane Valley, Sunnyside, Union Gap <b>Counties:</b> Yakima

\*City of Wenatchee and Chelan County share scores; \*\*City of East Wenatchee and Douglas County share scores; \*\*\*Yakima County, Selah, Union Gap, and Sunnyside share scores; \*\*\*\*Asotin, Asotin County, and Clarkston share scores