

West Plains Stormwater Study Phase 3 Public Meeting

March 11, 2021

Directions for Questions

• Please type questions into the Zoom chat box.



- Questions will be answered at the end of the presentation.
- Responses to public comments will be posted on the website.

Questions? Use the chat box to type in questions.

To: Everyone Y

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Presentation Overview

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- 1. Introductions
- 2. Project Overview
- 3. Conceptual Stormwater Design Overview
- 4. Shared Space Options
- 5. Cost Estimate & Funding
- 6. Next Steps

Introductions Study Team



Stakeholders

- S3R3 Solutions
- Spokane County
- City of Spokane
- Spokane International Airport

Consultant Team

- Osborn Consulting, Inc.
 - Aimee Navickis, PhD, PE
 - Kaela Mansfield, PE
- FCS Group
 - Todd Chase, LEED AP
- GeoEngineers
- SPVV Landscape Architects

Project Overview

Background

The West Plains area is one of the fastest growing areas in the State. To accommodate growth, a study is being conducted to expand and improving stormwater management.

Study Goal

Develop an action plan for expanding and improving Stormwater Management in the West Plains. The long-term vision is to construct a new Regional Stormwater system within the West Plains boundary.



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Project Overview Approach



☑ Collect Data

- ☑ Identify RSIF and Conveyance Options
- ☑ Develop Guidance for Developers
- ☑ Evaluate Conveyance Routes
- Evaluate Paleochannels
- Develop a Capital Improvement Plan (CIP)

□ Strategic Plan

Project Overview Unique Challenges & Opportunities



Several unique challenges/opportunities with managing stormwater:

- Soil Conditions
 - Slow infiltration soils and high groundwater
- Wildlife Concerns
 - Proximity to Airports need approach that will prevent aircraft bird strikes
- Paleochannels
 - Subsurface stream channels created by Missoula floods high infiltration capacity

Conceptual Design Overview

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- 5 Regional Areas
- Treatment Swales
- Conveyance systems
- 5 Regional Facilities
 - o 4 Infiltration Facilities
 - \circ 1 Detention Facility
- Shared Spaces



Conceptual Design Overview Treatment Swales & Conveyance System

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Conceptual Design Overview 4 Subsurface Infiltration Facilities

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Conceptual Design Overview By the Numbers

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- Regional Facilities
 - 26 acres
- Treatment Swales
 171,300 LF
- Conveyance Pipe
 138,700 LF
- Culverts
 - Under driveways
- Manholes Every 300ft



Shared Spaces Concepts Park Above RSIF









Shared Spaces Concepts Park Above RSIF

Native Landscaping

- Shared Space Options Include:
 - Walking trails; Exercise stations
 - Informal fields/meadows
 - Parking areas; Shelter/restroom
 - Fenced natural-landscape dog park
 - Youth soccer or football complex
 - Joint-use/employee recreation; Volleyball, softball fields, etc.





Native Landscapin

Shared Spaces Concepts Roadside Swale





Funding Cost Estimate



	Total	RSIF 1	RSIF 2	RSIF 3	RSIF 4	DET 1
Facility Construction	\$27,287,990	\$8,724,462	\$7,988,615	\$5,135,410	\$3,310,154	\$2,129,500
Conveyance Construction	\$35,738,647	\$6,165,125	\$12,873,047	\$5,560,538	\$3,469,208	\$7,670,729
Pump Station	\$13,419,370	\$3,207,600	\$2,292,969	\$2,447,788	\$1,656,385	\$3,814,628
WQ Swale Construction	\$19,511,840	\$5,093,434	\$5,486,864	\$2,673,035	\$1,759,091	\$4,499,416
Land Acquisition	\$3,034,570	\$858,058	\$828,242	\$379,791	\$290,432	\$678,047
Rock Excavation	\$15,609,400	\$693,600	\$3,090,600	\$2,356,200	\$1,560,600	\$7,908,400
General Construction	\$8,327,710	\$458,480	\$1,895,920	\$1,998,360	\$1,945,910	\$2,029,040
Sub-Total	\$122,929,527	\$25,200,759	\$34,456,257	\$20,551,122	\$13,991,780	\$28,729,760
30% Contingency	\$36,878,858	\$7,560,228	\$10,336,877	\$6,165,337	\$4,197,534	\$8,618,928
Total	\$159,808,385	\$32,760,987	\$44,793,134	\$26,716,459	\$18,189,314	\$37,348,688

Funding Options



Funding Options (Sources)

- ✓ State and federal grants & appropriations
- ✓ Project Partner Contributions
- ✓PDA bonds or loans
- ✓Local Improvement District(s)
- Capital Facility Charge (on new construction)
- ✓ Stormwater Utility Rates (based on impervious surface area)
- ✓ Developer Dedications

Project Cost (Uses of Funds)

- Capital Construction: \$132 to \$159 M
 Estimate for benefit cost analysis: \$142 M
- Financing (interest) & contingencies:
 \$52 M
- Maintenance cost at completion: \$490,000 per year

Funding Cost Benefit Analysis



- Benefit due to Property Cost Avoidance : \$248 M
- Benefit to City/County Governments: \$137 M
- Benefit to State: \$260 M
- Construction benefit: 4,000 jobs
- Permanent benefit: 5,580 jobs

Based on 40% buildout of vacant lands

Expressed in 2020 dollars

Summary of Project Costs and Benefits, Years 1 - 30 (\$ M)

	Benefits	Cost
Construction		\$142
O&M Cost, Years 1 - 30		\$7
Financing/interest/contingencies		\$48
City/County Tax Revenue	\$112	
State Tax Revenue	\$260	
Value of Assets in year 30	\$26	
Property Cost Avoidance	\$248	
Total	\$645	\$197
Benefit-Cost Ratio	\$3.3 : \$1	

Next Steps



- Stormwater Study
 - Complete May 31, 2021
- Select Funding Options
 - Over the next year
- Design & Construction Regional System
 - 5 to 10 years

Questions?

