Getting Together in the Des Moines Creek Basin

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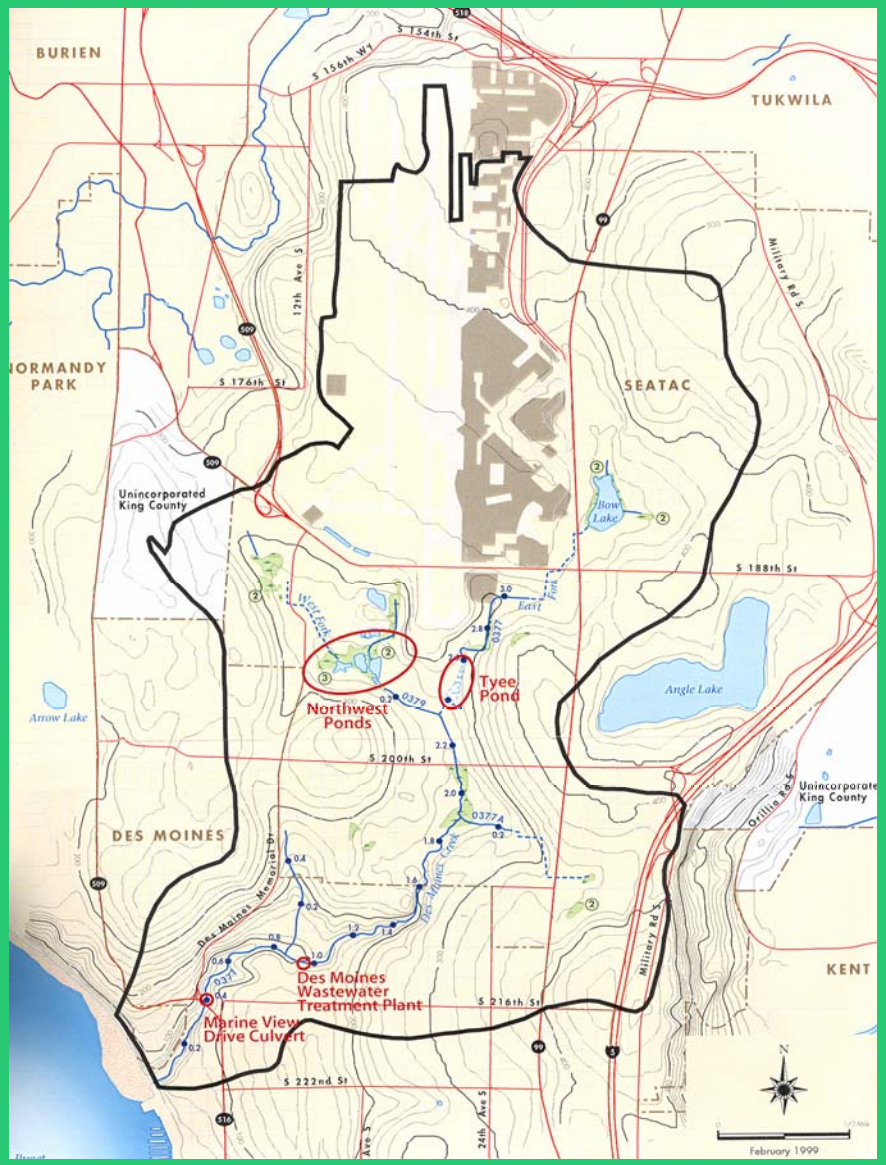
What we will discuss

- Two independent planning efforts
  - Des Moines Creek Basin Plan
  - SR509 Corridor Extension
- Getting Together in a Value Engineering Study
- Developments in the Study
- Win-Win Scenario

Basin Development 1937 to 1997

Basin Plan Committee

- City of SeaTac
- Port of Seattle
- King County
- City of Des Moines

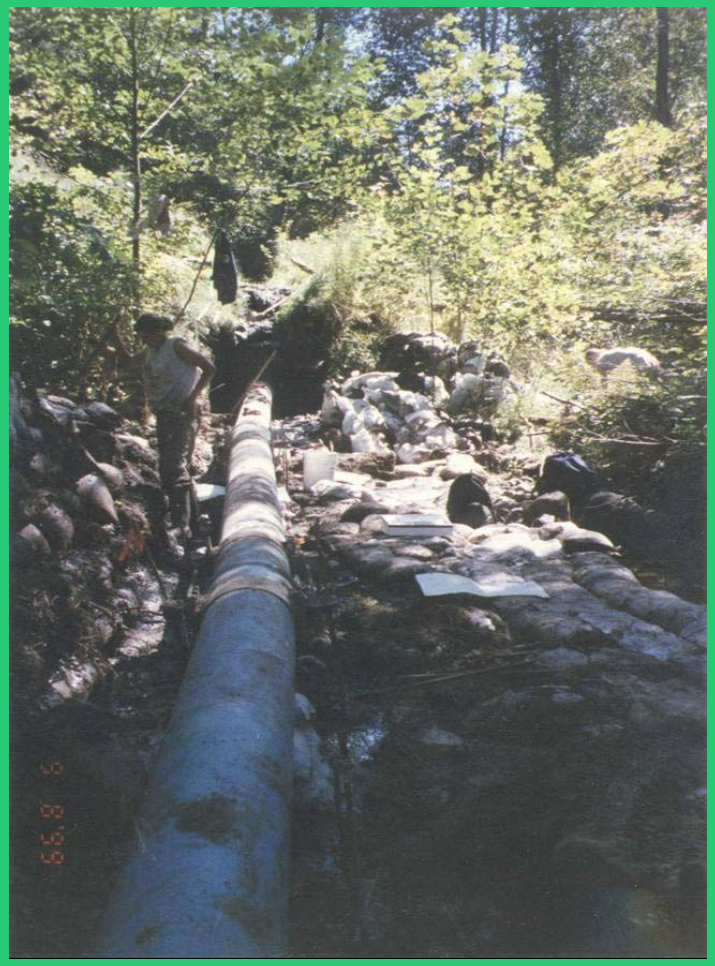


Des Moines Creek Basin Plan

- Return stream flows to forested characteristics
- Reduce erosion to a more natural rate
- Stabilize bank and stream bed habitat
- Increase fish habitat
- Reduce wildlife attraction
- Improve existing wetlands, stream delta, and recreational trail.

Target for Forested Runoff

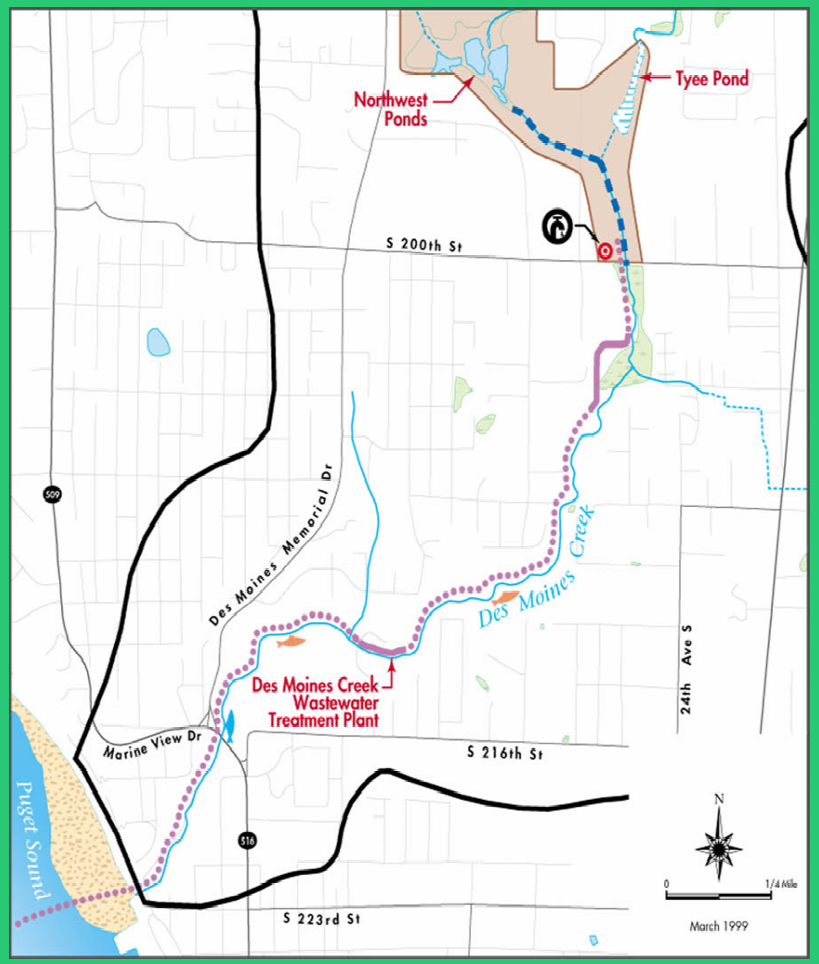
- Divert high flows to the existing pipeline.
- Outfall into Puget Sound.
- Reduce quantity of water in the creek during storms.
- Maximize the efficiency of the detention pond.



Target for natural erosion rates

Des Moines Creek Proposal

- Regional Detention Pond
- High Flow Bypass
- Habitat Enhancement
- Culvert Replacement
- Low Flow Augmentation



SR509 Corridor Extension Project

- Addressing I-5 congestion and freight mobility
- Improved access to commercial centers in Burien, Des Moines, and SeaTac
- Improved access to Sea-Tac International Airport

Washington State
Department of Transportation

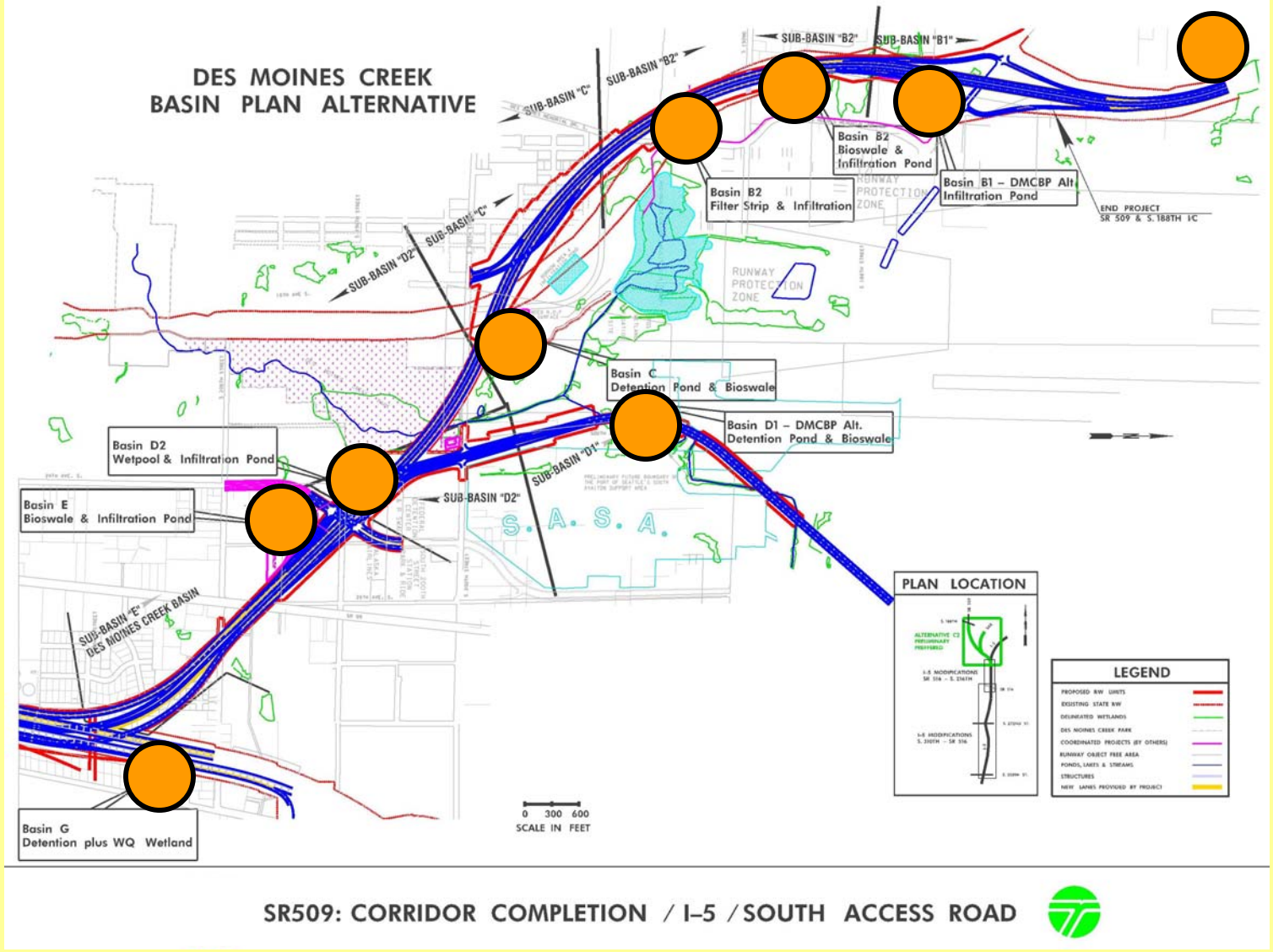
SR 509/I-5 FREIGHT AND CONGESTION RELIEF PROJECT

Looking North from South 216th Street

Corridor Design Approach

- Infiltration ponds or vaults
- Detention ponds
- Biofiltration swales
- Bioretention swales
- Biofiltration strips
- Media filters

SR509 Stormwater Proposal



Getting Together in a Value Engineering Study

- Opportunity
- New approach
- Agency acceptance
- Validation
- Clarify expectations
- Address concerns

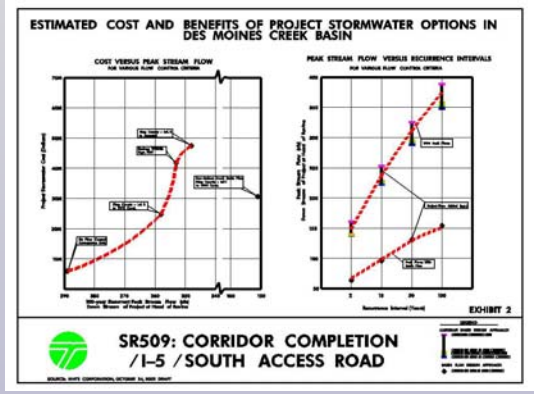
Value Engineering Study
A 6-Phase Study Plan

- Baseline Information
- Function
- Creative Ideas
- Evaluation
- Development
- Presentation

Phase 1 - Baseline Information

Great Highway Planning

- Roadway design avoid physical impacts
- Explored several flow control scenarios



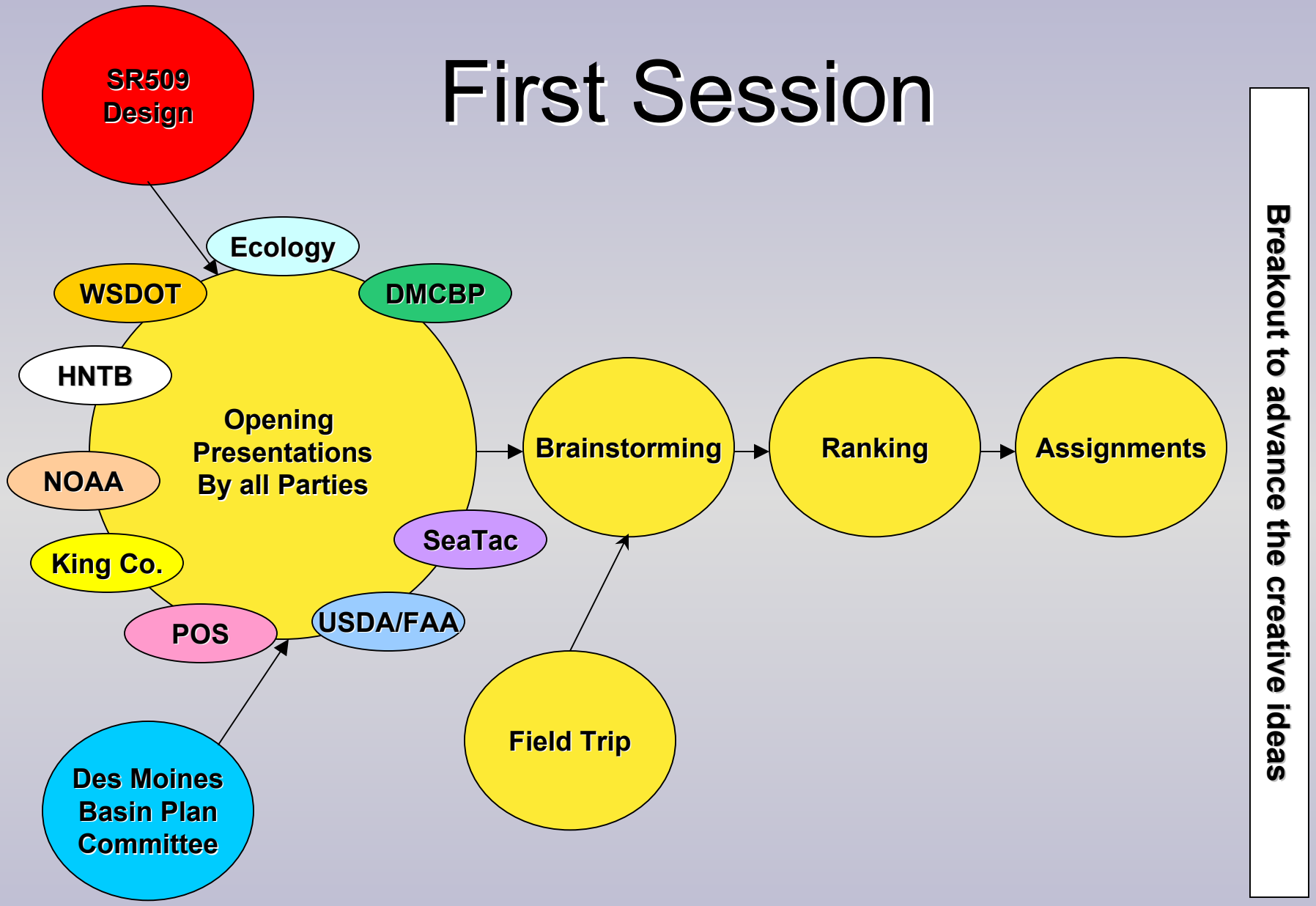
Great Basin Planning

- Quality basin analysis
- Taking full advantage of special conditions
- Defined recovery plan
- Advancing final design

Phase 2 – Function
Phase 3 - Creative Ideas

- Drew from broad design and regulatory agency experience
- Key people directly involved in the decision process
- Effective facilitation and trust-building among partners leads to open minds and creative ideas

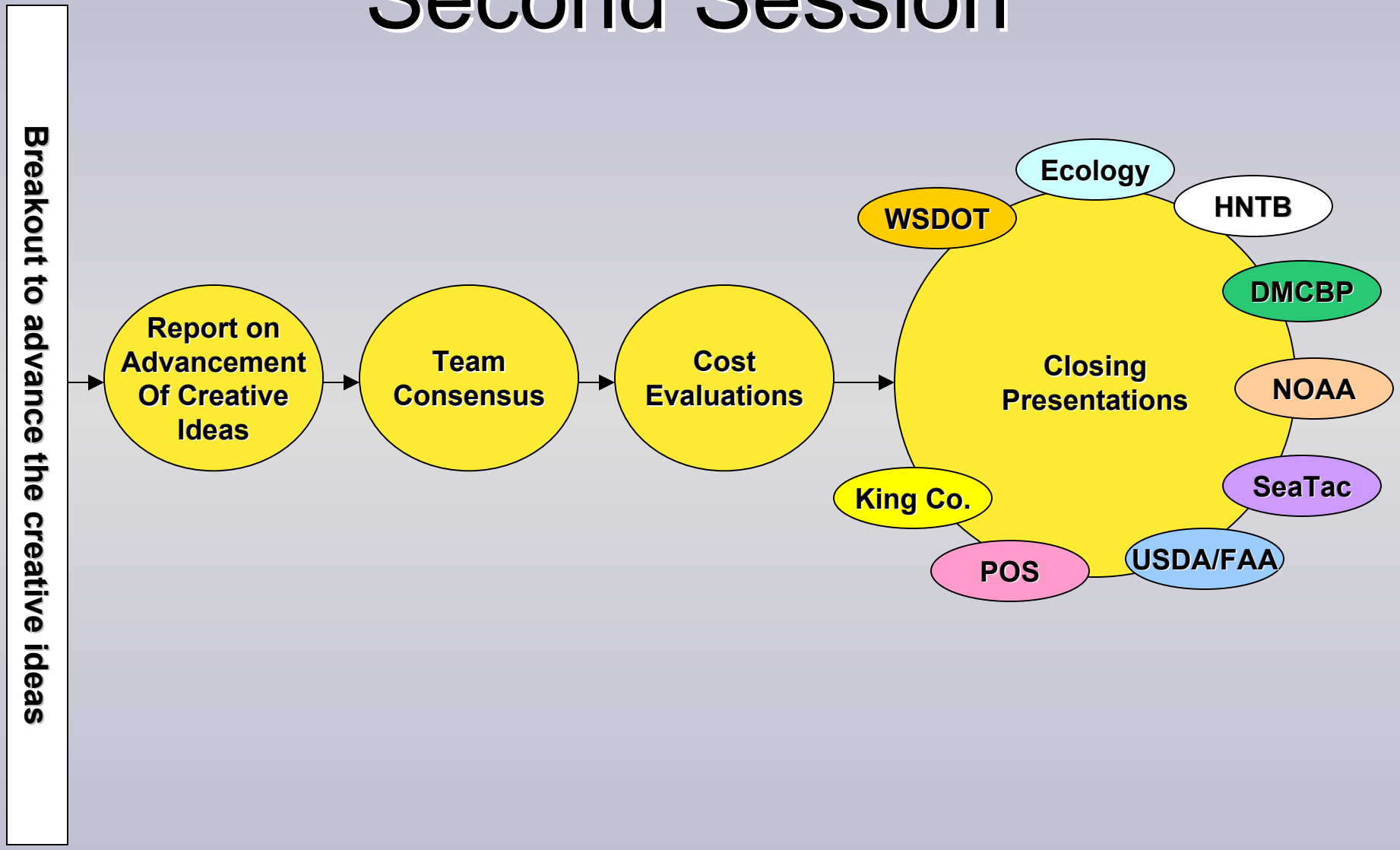
First Session



Creative Ideas

- Understand receiving water system
- Infiltration
- Modify the basin plan concept
- Minimize wildlife attraction
- Take advantage of opportunities
- Utilize emerging technologies

Second Session



Phase 4 - Evaluation and Phase 5 - Development

Evaluation focuses on function

- Demonstrate resource protection
- Permitable
- Maximize benefit of transportation dollars

Development

- Effective watershed protection
- Best solution for the basin

Phase 6 - Presentation

- Created a win-win scenario
- Outcomes that were fair

Des Moines Creek Basin Plan

- Resulted in funding
- Illustrates benefit to other major developers in the basin
- Rewards for hard work

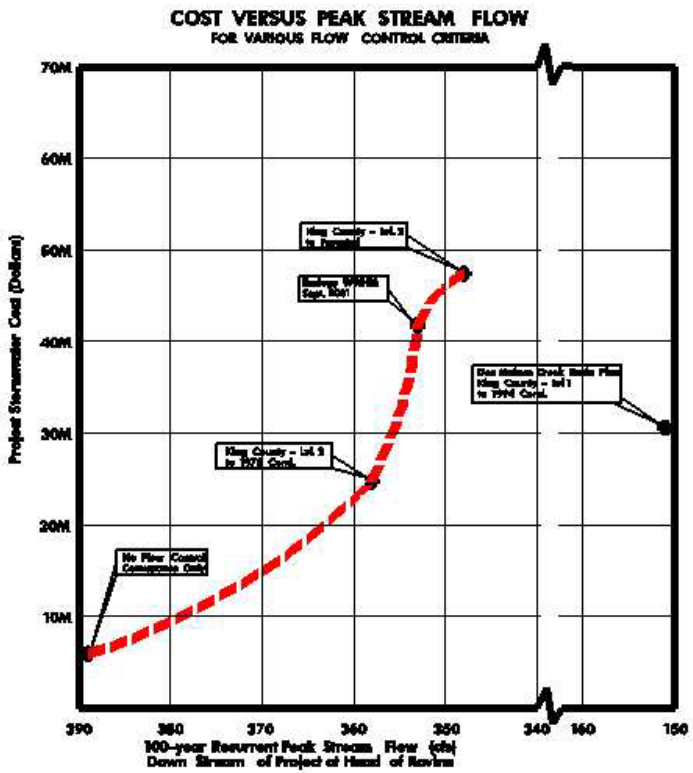
SR509 Corridor Extension Project

- Validated use of transportation funds
- Agencies recognized the benefits
- Could realize savings of over $15 million
- Success in context sensitive solutions

Where does it go from here?

- WSDOT is looking closer at basin plans
- Encourage early planning efforts
- Sets stage for opportunities in other basins
- Hope others take note
- Ecology approved alternative target flows
- Diverging from project based design approach
- Get back to protecting our natural resources

ESTIMATED COST AND BENEFITS OF PROJECT STORMWATER OPTIONS IN DES MOINES CREEK BASIN



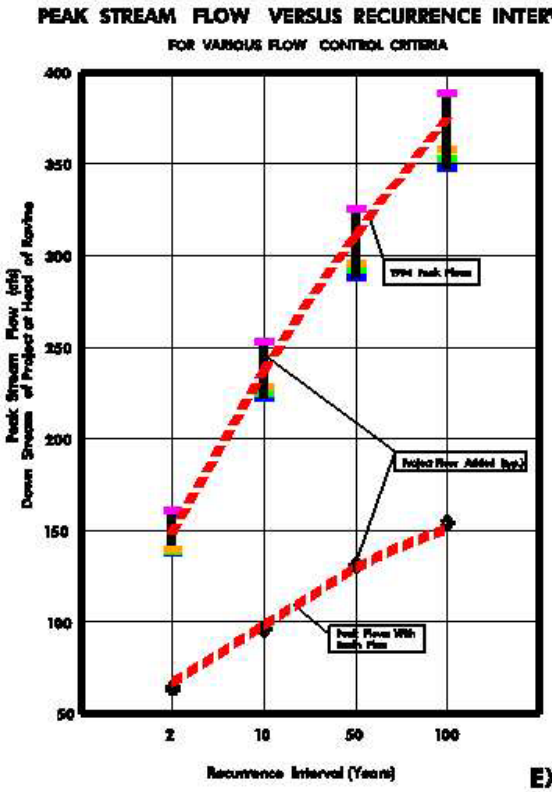


EXHIBIT 2

SR509: CORRIDOR COMPLETION /I-5 /SOUTH ACCESS ROAD

LEGEND

CORRIDOR BASED DESIGN APPROACH

BASIN PLAN DESIGN APPROACH

SOURCE: HNTB CORPORATION, OCTOBER 24, 2002 DRAFT