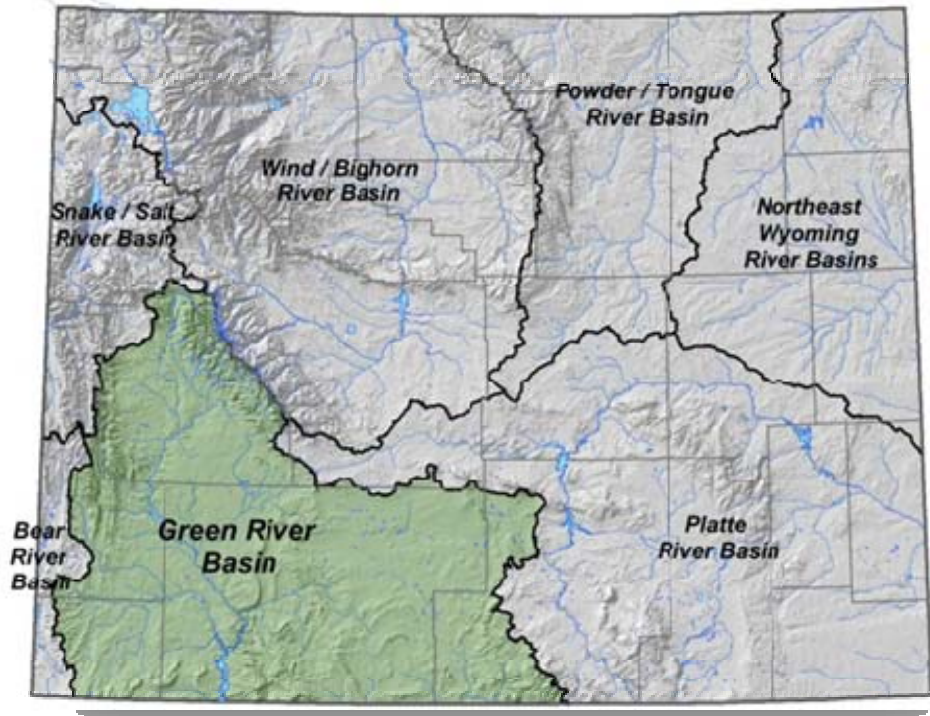


Green River Basin Plan II Update



WWC Engineers; Laramie WY

May 25, 2010

Green River Basin Plan II

<http://waterplan.state.wy.us/plan/green/green-plan.html>

- Technical Memoranda
- Internal Review
- Mid July
- 3 Week Public Review
- Comments (Chace Tavelli ctavel@wy.gov)




Green River Basin Plan II


- Population Projections
- Use / Projections
- Hydrology
- Available Water
- Web Tool (WRDS)
- Planning




Spreadsheet Index Gages

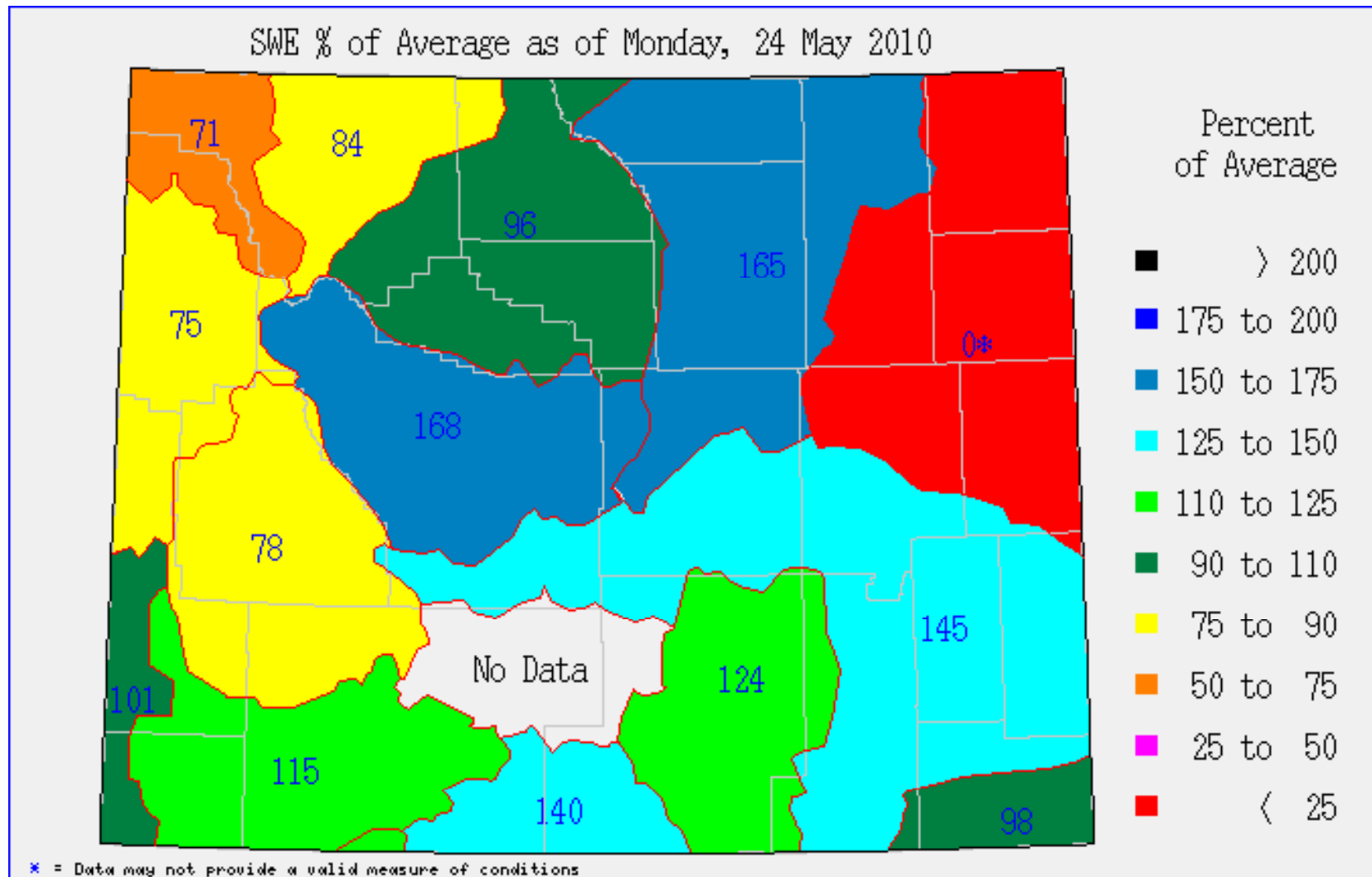
Gage ID / Name	8	9	9	9	9	9	9	9	9	9	9	0	0	0	0	0	0	0	0
	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7
0918850 Green River at Warren Bridge	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet
0919650 Pine Creek above Fremont Lake	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet
09210500 Fontenelle Creek near Herschler Ranch, near Fontenelle	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet
09213500 Big Sandy River near Farson	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet
09218500 Blacks Fork near Millburne	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet
09223000 Hams Fork below Pole Creek near Frontier	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet
09229500 Henry's Fork near Manila	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet
09253000 Little Snake near Slater, CO	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet

Wet year 

Normal Year 

Dry Year 

Basin SWE%



Web Tools

http://fms2.wrds.uwyo.edu/Website/Statewide/viewer.htm - Windows Internet Explorer provided by Yahoo!

http://fms2.wrds.uwyo.edu/Website/Statewide/viewer.htm

File Edit View Favorites Tools Help

water resources data system IMS

Help Climate Surface Water Groundwater

Full State Last View Drag Map

Data Tools Avg PPT

Publications

Well Data Off Depth Actual Yield MWBZ Top

Streams/Rivers is now the Active Layer

Zoom In

start

http://waterplan.wrds.uwyo.edu/tpw/ - Windows Internet Explorer provided by Yahoo!

http://waterplan.wrds.uwyo.edu/tpw/

File Edit View Favorites Tools Help

Water resources data system

Wyoming Framework Water Plan - Chapter 1 - INTRO...

Citizen Business Government Visitor Useful Water Links

WYOMING WATER PLAN

Search the Water Plan Search powered by Google

Table of Contents

EXPAND ALL COLLAPSE ALL

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- Opportunities
- Project Funding
- Basin Plans
- Planning Recommendations

WYOMING FRAMEWORK WATER PLAN - CHAPTER 1 - INTRODUCTION

Section 1.1 OVERVIEW

This Wyoming Framework Water Plan presents a statewide perspective on water resources, compiled from the results of a seven-basin planning process performed by the [Wyoming Water Development Commission \(WWDC\)](#). This Framework Water Plan presents summary information on:

- The **Setting** chapter presents basic physical information about Wyoming, current economic and social conditions, and an outline of the institutional constraints on water use.
- The **Resources** chapter characterizes Wyoming's total water supply, including information on where the resources are located and their quality.
- The **Use** chapter quantifies how Wyoming is using its water resources in both the depleting and non-depleting water use sectors.
- The **Projections** chapter provides estimates of the future water needs of the state, for the depleting and non-depleting water use sectors.
- The **Availability** chapter presents estimates of the amounts and locations of unused water resources that are available to meet projected needs. Unused water resources are those that are physically and legally available over and above existing uses.
- Finally, the **Opportunities** chapter summarizes information regarding opportunities for meeting the projected water needs of Wyoming. These opportunities may provide a starting point for existing and future water users seeking to address water supply deficits.

In addition to presenting information on water resources of the state, this document covers two other important subjects:

Wyoming Water Development Commission - 6920 Yellowtail Road - Cheyenne, Wyoming 82002 - Ph. (307) 777-7626 - Fax (307) 777-6819

start

Planning

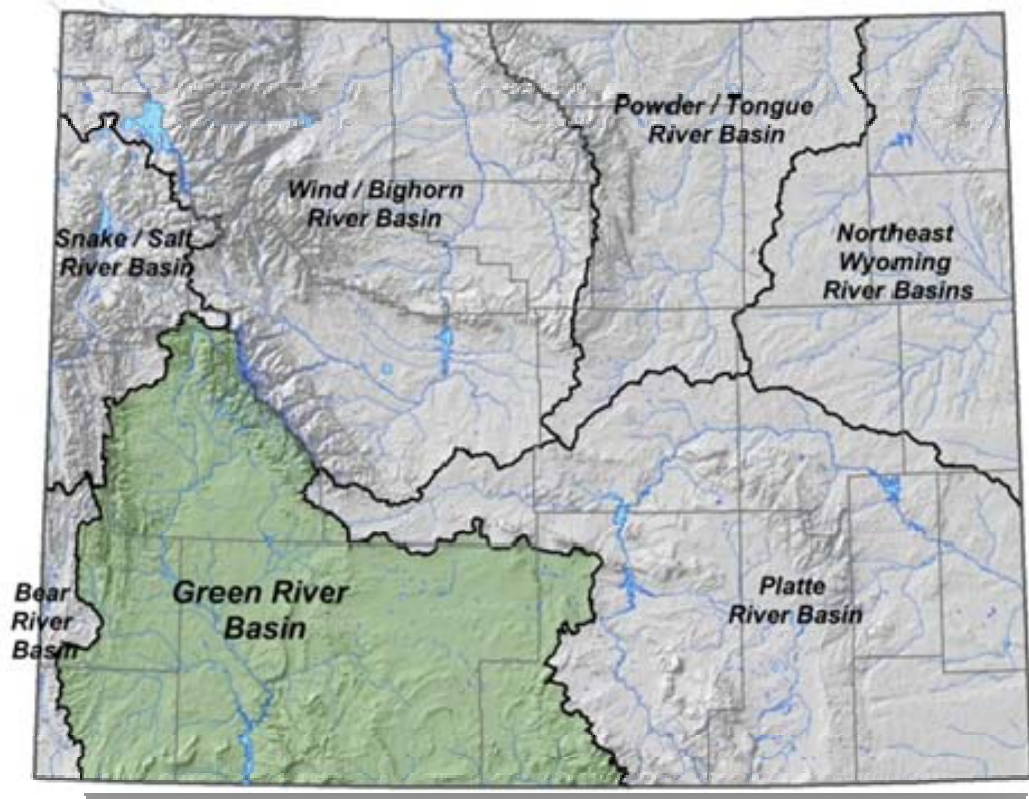
- Data needs
- Watershed Planning / Municipal Master Plans
- Weather Modification
- Development of DSS
- Riparian areas
- Glaciers



Questions



Green River Decision Support System (DSS) Feasibility Study Update



May 25, 2010

Green River DSS

Water Resource Engineers

- Leonard Rice Engineers (Erin Wilson)
 - URS Corporation (Ken Knox)
- States West
- June 2009
- November 2010



Green River DSS History

Wyoming's desire to have a better and more precise understanding of the water supply and water use in the Green River Basin.

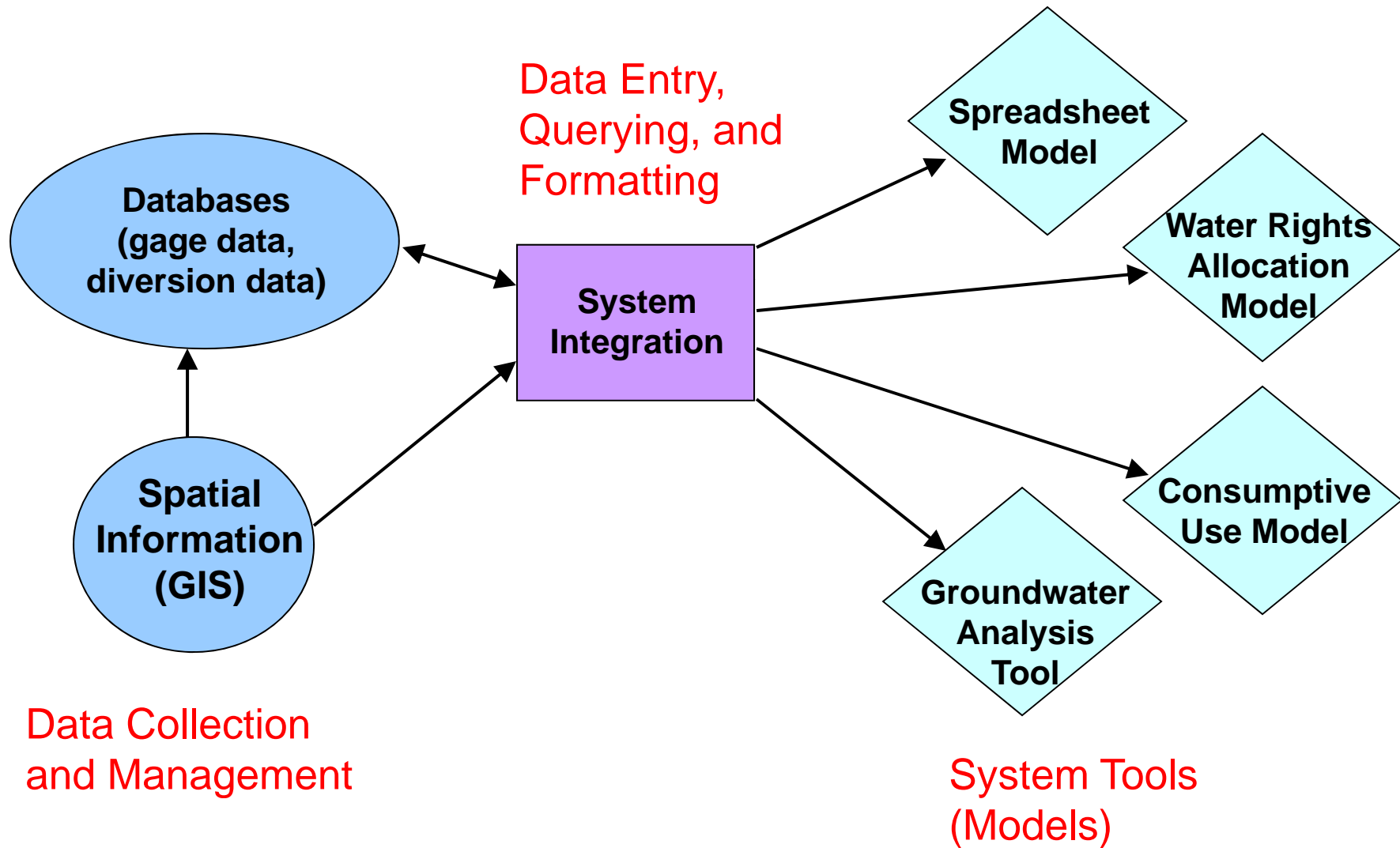


Green River DSS Purpose

- Identify
 - Data and Tools
 - System Integration
 - Recommendation
 - Cost
 - Schedule

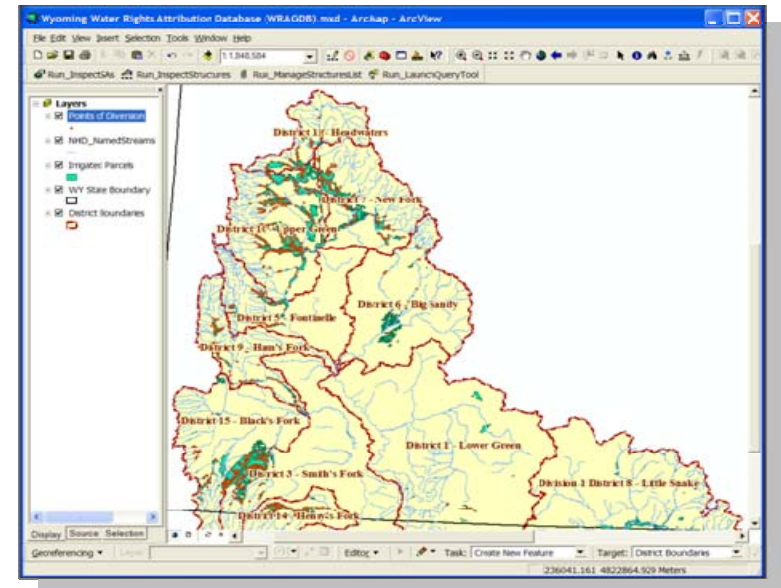
Will not develop any tools or data

What is a Decision Support System?



Green River DSS Data

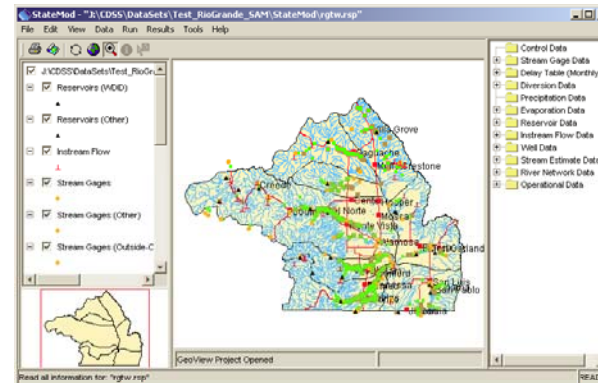
- Format and Design of Data Management System Considering:
 - Software currently used by state Agencies, and staff capabilities
 - Integration into existing SEO Water Rights Database and Acreage GeodataBase
 - Interfaces that allow for easy access to data in varying formats



DSS Models

Consumptive Use Model

- Determine Current Crop Use and Identify Shortages
- Estimate New Irrigation Demands



Surface Water Model

- Allocate Water to Meet Demands Based on Water Rights
- Determine *Why* Demands are Shorted
- Identifies *Where* and *When* Water is Available for Future Development

System Integration

- Custom Data Entry Forms with Quality Controls
- Data Editing Forms with “Permission” Controls
- Data Querying Forms Allowing Queried Data to be Viewed, Printed, and Graphed
- Data Extraction and Formatting for Input to DSS Components

Service Area Attributes

objectid: 567451

- Service Area ID: 100103

- Water Division and District: Division: 4 District: 10

- Data Source: 826E.jpg

- Service Area Size: SA Acreage 999.0 Irrigated Acreage 861.2

- Notes: Original irrigated area, no map date

- Associated Water Rights:

WRID	Type	Structure	STRDiv	STRDist
<input type="radio"/> 252077	1	F. W. Armstrong Ditch	4	10

Type 1 - "Original", Type 2 = "Supplemental", Type 3 = "Secondary"

From SEO WRDB

WRID	Permit No.	Facility Name	Acreage	WDiv	WDist	WRStatus	Priority Date	Use (BU)
252077	P826E	F. W. Armstrong Ditch {EnL of}		4	10	ADJ	5/10/1902	IRR

Buttons: Save & Close, Cancel, Next, Modify Selected WR Type or Structure, Add New WR Association, Remove selected WR Association

Service Area 1 of 9 Selected

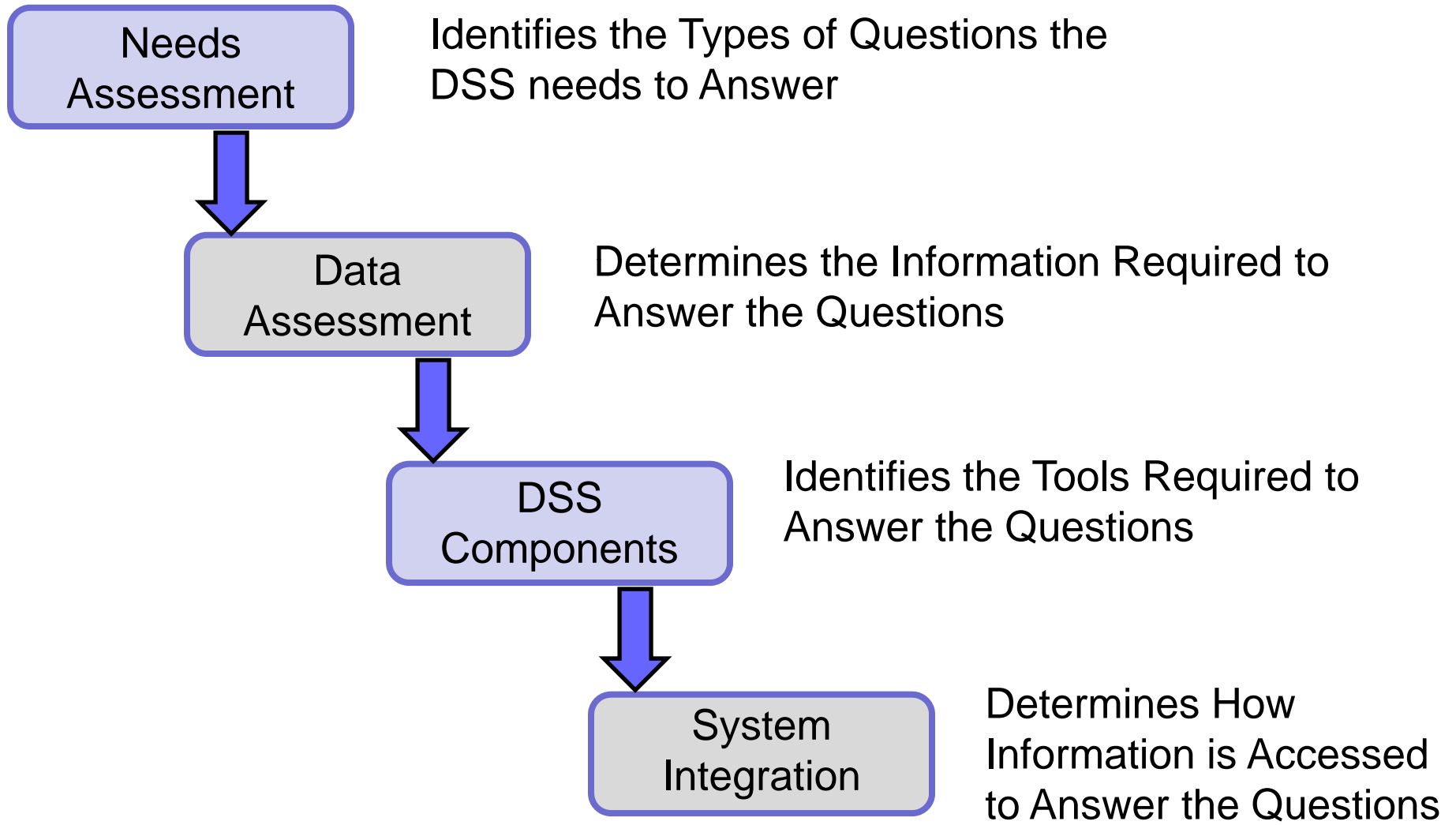
(Changes will be saved on move to next)

(Changes made with these buttons will be saved even when leaving form by Cancel button)

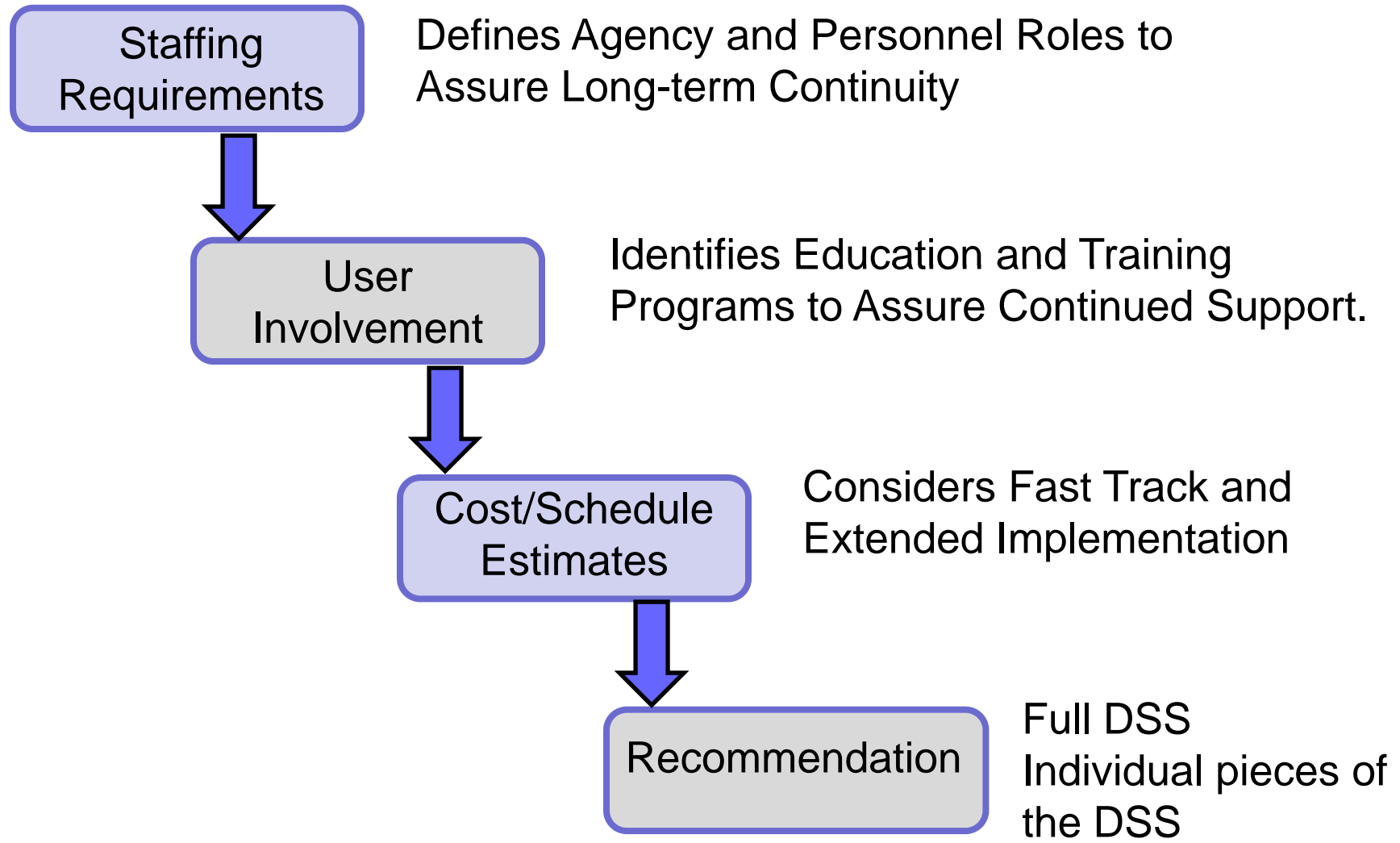
DSS Potential

- Determine Consumptive Uses & Losses for Colorado River Compact Requirements
- Better Estimate Available Water
- Define Purpose and Needs for Water Development Projects (Storage)
- Help SEO Administration
- Determine System Reaction to Prolonged Drought or Climate Change

Green River DSS Feasibility Approach



Green River DSS Feasibility Approach



DSS Study Progress To Date

- 11 Formal Meetings
 - SEO
 - WWDO
 - UW
 - Consultants

- Research/ Writing Stage



DSS Expectations

- One Recommendation
 - Data Needs
 - Tools
 - Cost Estimates
 - Staffing Recs.
 - Approach to Building DSS

Decision Makers



Questions

