



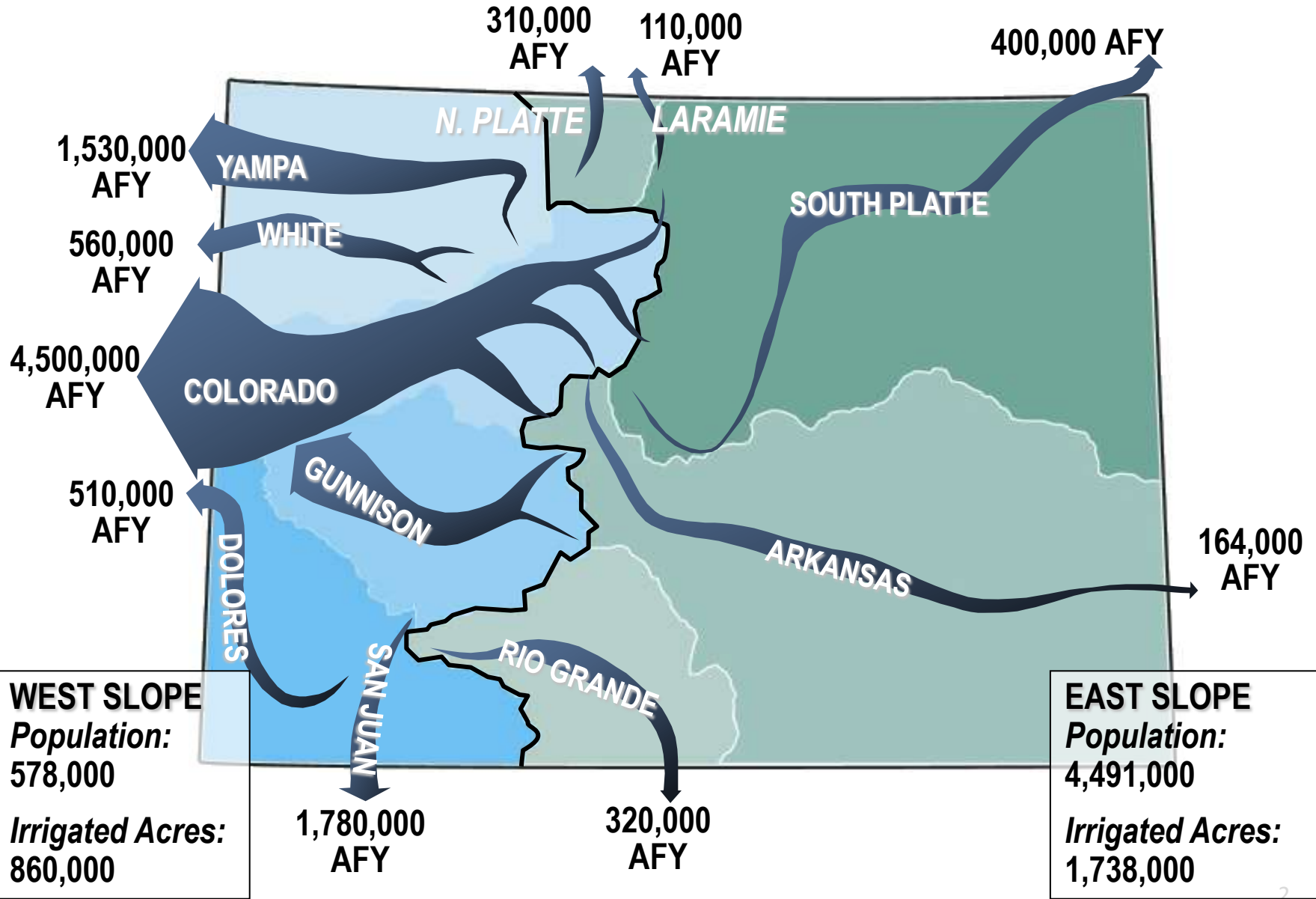
# **High Level SWSI Update**

## **Colorado WaterWise Workshop**



**September 24, 2010**

# Colorado Population, Irrigated Acres & Flows



# Technical Reports – Components of SWSI 2010

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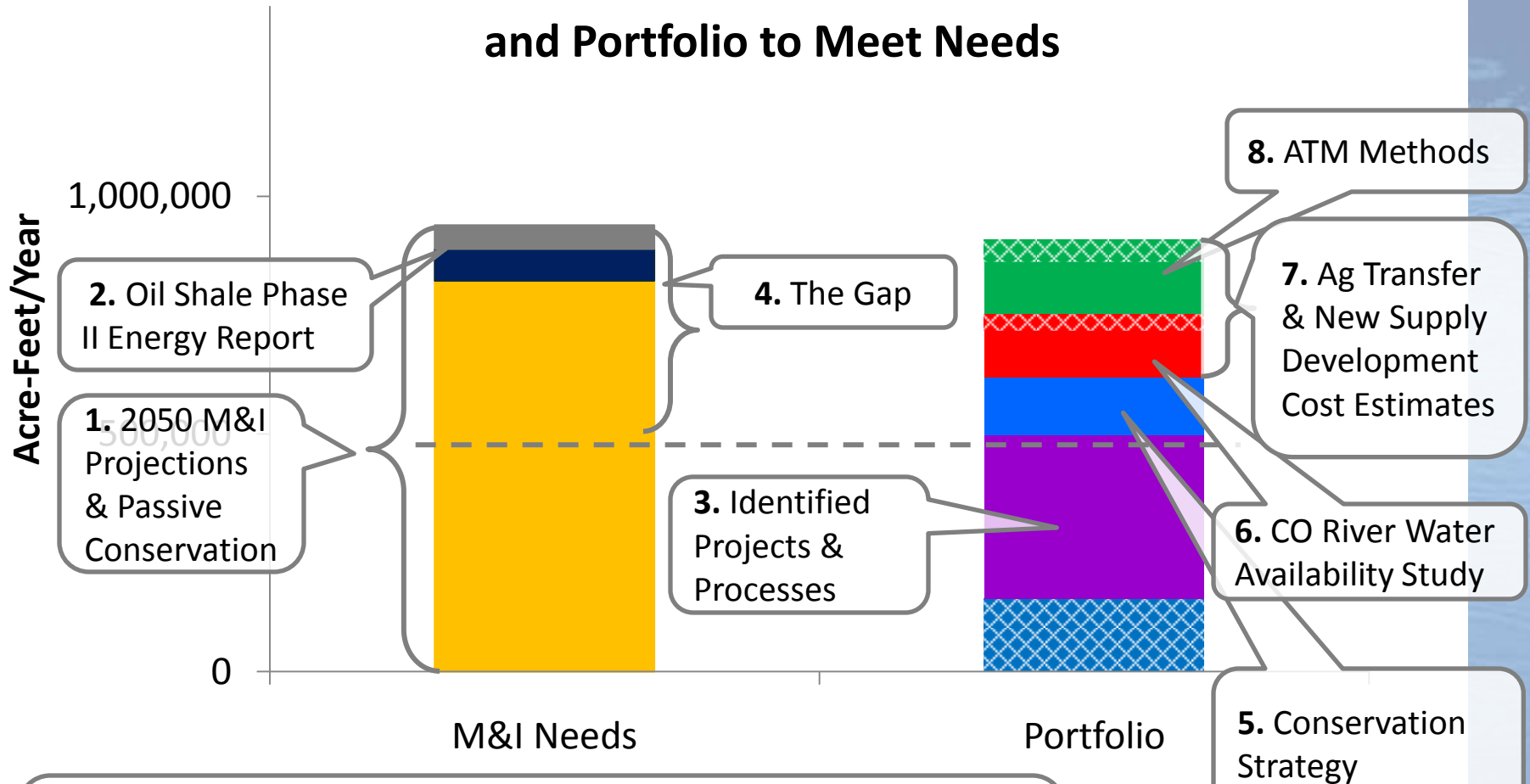
- **2050 M&I Water Use Projections**– final
- **Energy Study Phase 2 Revised Water Use Scenarios Memo** – final (pending Y-W Approval)
- **2050 Municipal & Industrial Gap Analysis** – draft
- **Reconnaissance Level cost Estimates for Ag & New Supply Strategy Concepts**– final
- **Ag Demands/Alternative Transfer Methods** – draft
- **Nonconsumptive:**
  - **Watershed Flow Evaluation Tool Pilot Study**– final
  - **NCNA Focus Mapping (Phase 1 )**– final
  - **NCNA Phase 2** – draft
- **Conservation Products:** *Discussed by Kevin Reidy*
- **IBCC Recommendations (Portfolios and Strategies)** – draft scheduled for December
  - **Density Memo** – draft (to be used as appendix)
- **2010 Statewide Water Supply Initiative (SWSI)** - January 2011
- **Basin-specific Reports** – 1<sup>st</sup> Quarter 2011

# DRAFT Reports for Public Comment

- State of Colorado Current and 2050 Agricultural Demands
- Alternative Agricultural Transfer Methods Grant Program Summary of Key Issues
- Nonconsumptive Needs Assessment Phase II Update
- 2050 Municipal and Industrial Gap Analysis

# Reports in IBCC/Portfolio Context

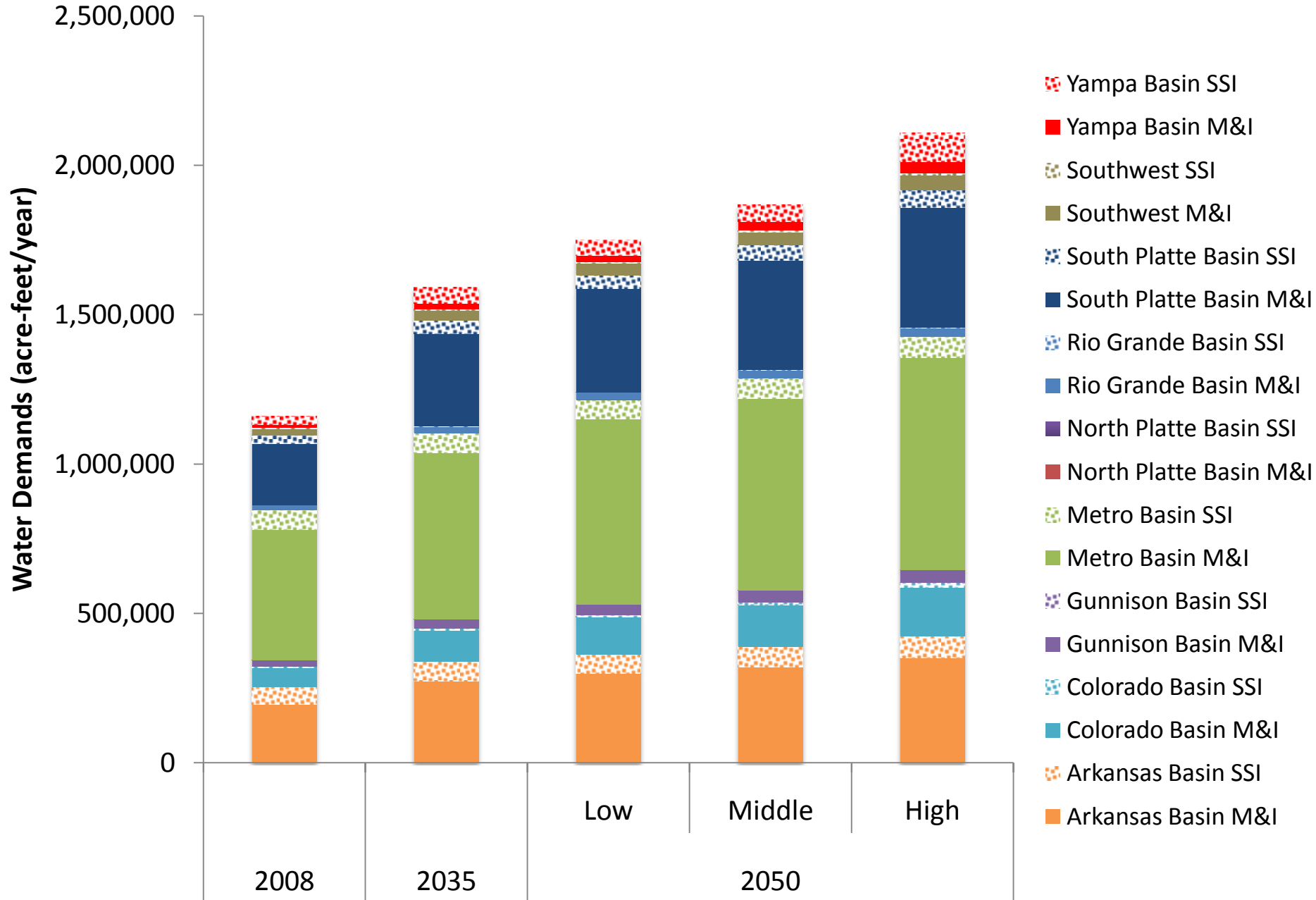
## State of Colorado 2050 M&I Needs and Portfolio to Meet Needs



### Other Needs:

- 9. Nonconsumptive Needs
- 10. Agricultural Needs:

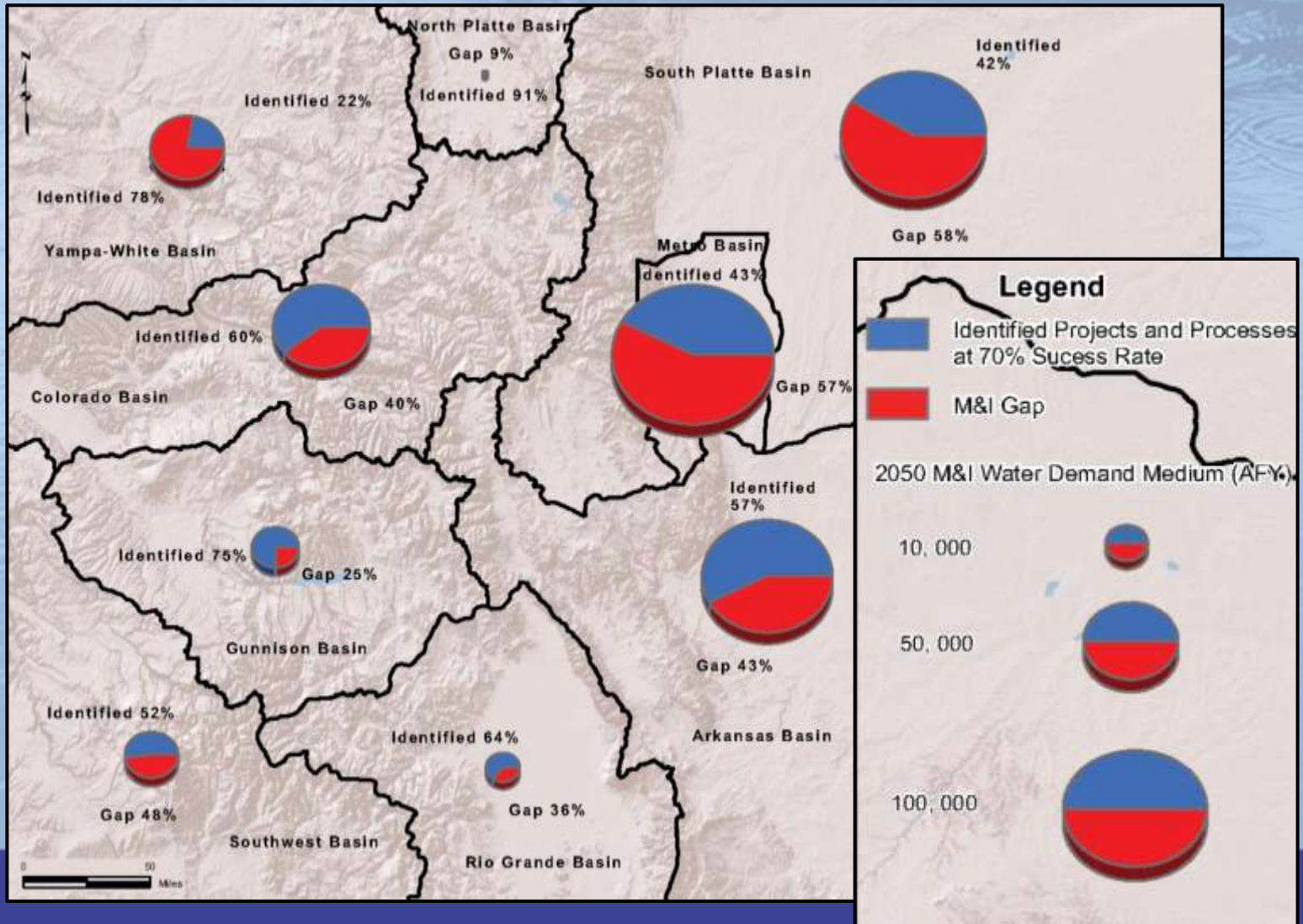
# Statewide 2050 M&I and SSI Demand



# Components of M&I/SSI Gap Analysis

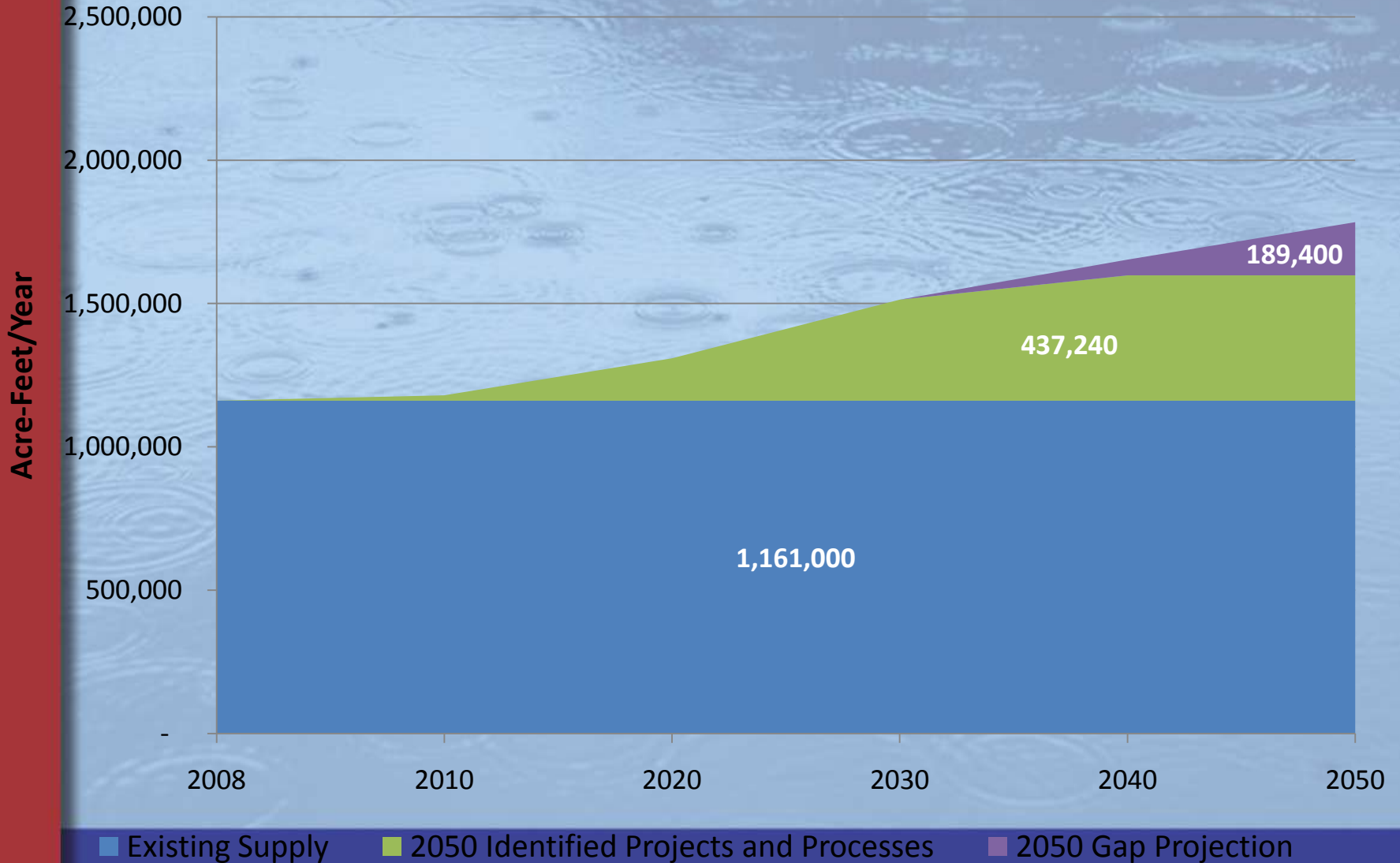
- 2050 M&I/SSI Demands
  - Assume high passive conservation
  - Calculate demand increase above current conditions (2008)
- Estimate yield of IPPs
  - Water provider interviews
  - SWSI Phase 1
  - NEPA project documentation
  - Other sources
- $M\&I/SSI\text{ Gap} = \text{Demand Increase} - \text{IPPs}$

# 2050 M&I/SSI Gap Analysis – Medium Gap Scenario

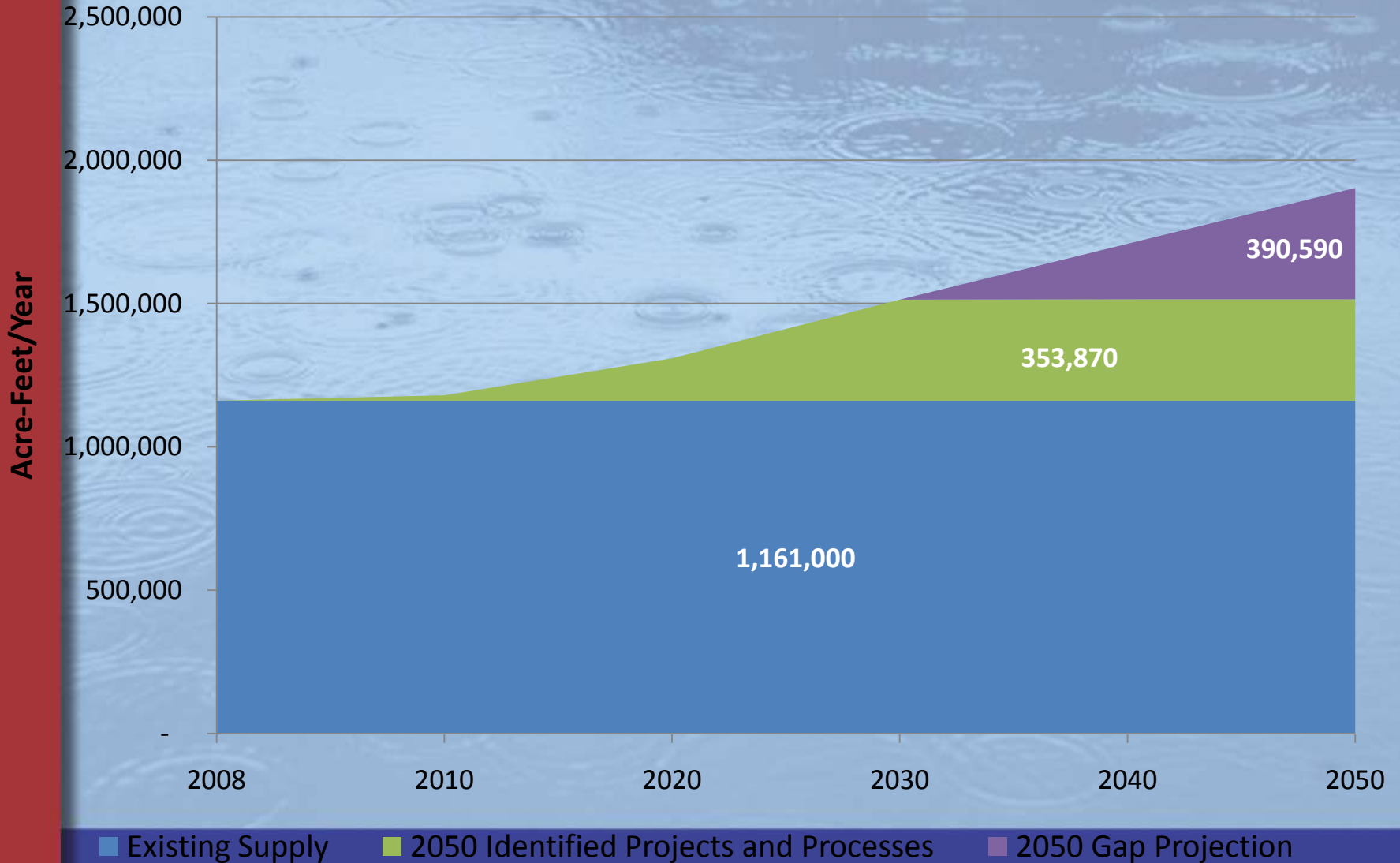




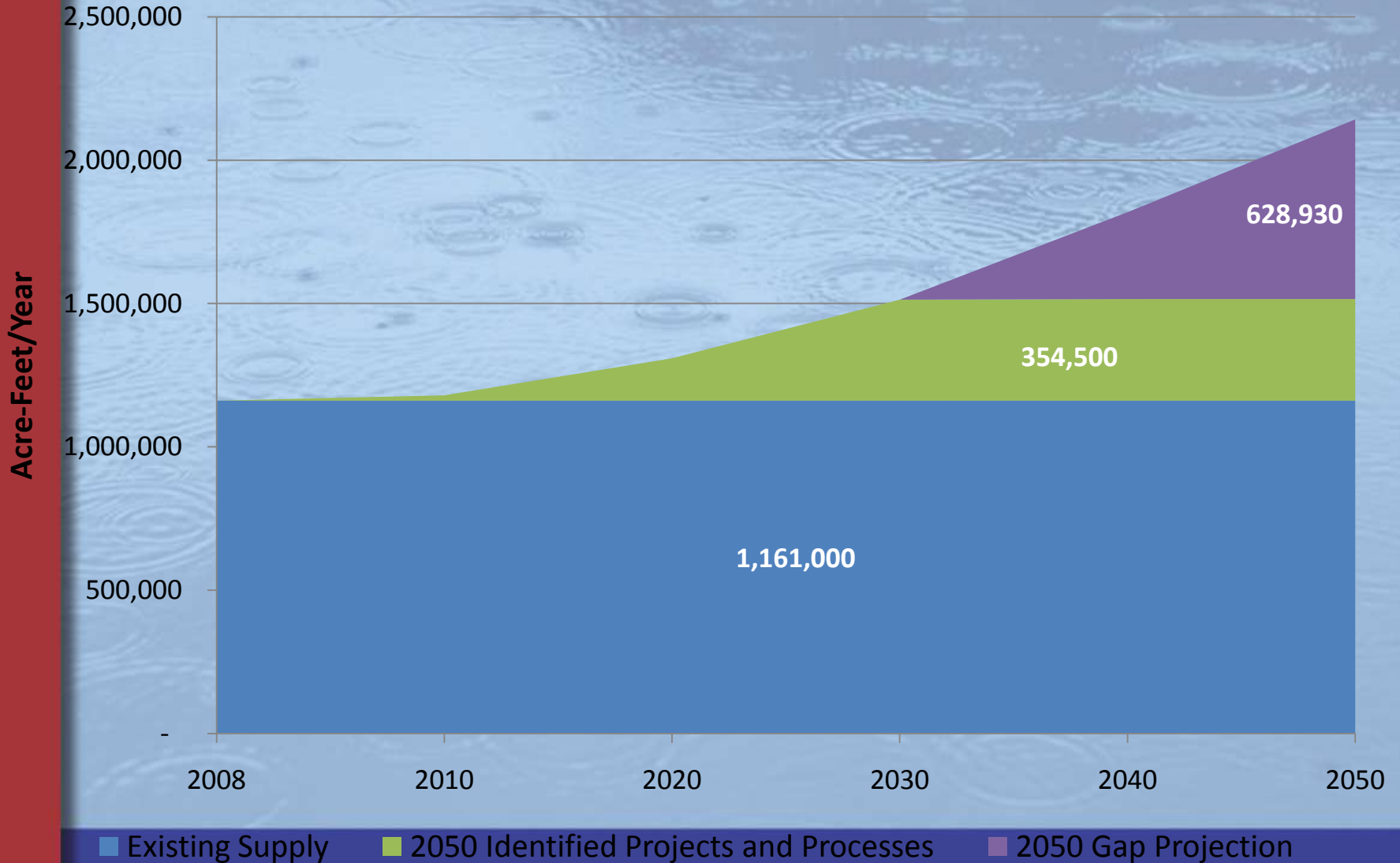
# Statewide M&I and SSI Gap Summary Low Scenario (IPPs at 100% Yield)



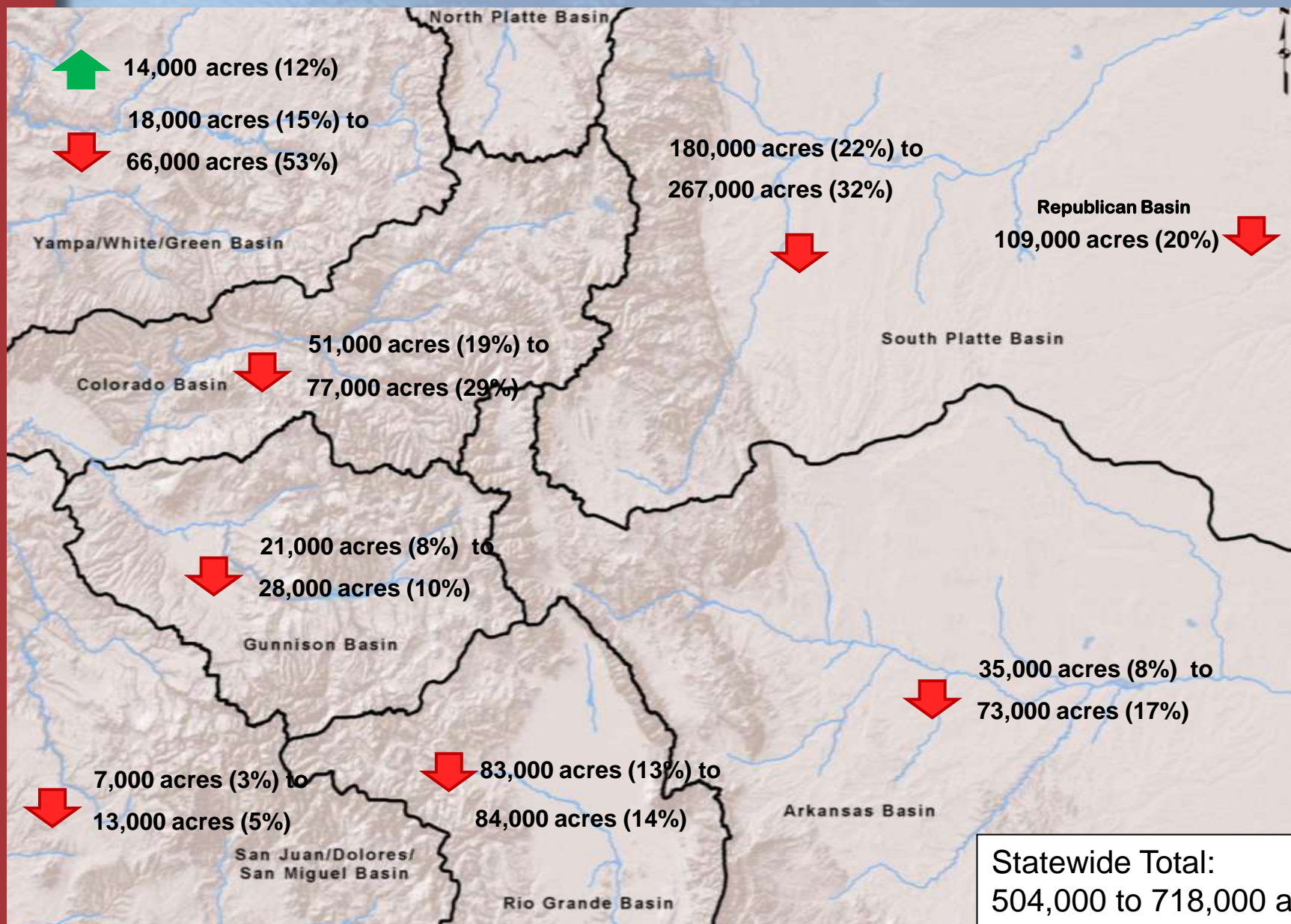
# Statewide M&I and SSI Gap Summary Medium Scenario (IPPs at 72% Yield)



# Statewide M&I and SSI Gap Summary High Scenario (IPPs at 60% Yield)

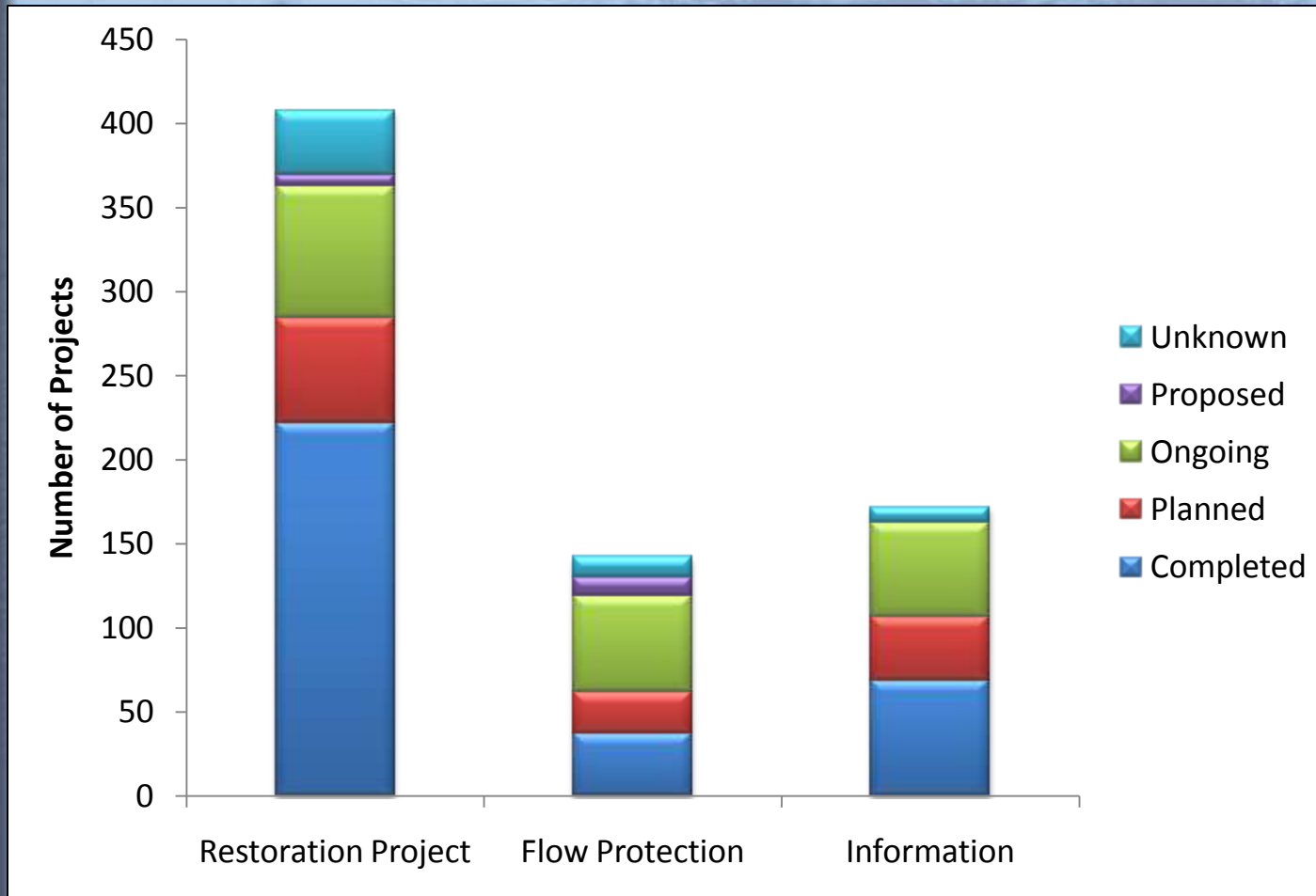


# 2050 Changes in Irrigated Acres



Statewide Total:  
504,000 to 718,000 acres  
15 to 20 percent

# Statewide Summary of Nonconsumptive Projects and Methods Status



# Basin Needs Decision Support System (BNDSS)

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Version: 0.92

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### Providers + [Create New](#)

	Name	Type	Buildout Year	Approved	Last Updated
<a href="#">Edit</a>   <a href="#">Details</a>	HILLCREST		0	No	2/12/2009 2:28 PM
<a href="#">Edit</a>   <a href="#">Details</a>	HOLLY HILLS		0	No	2/12/2009 2:28 PM
<a href="#">Edit</a>   <a href="#">Details</a>	Hot Sulphur Springs	Municipality	0	No	4/6/2009 9:24 PM
<a href="#">Edit</a>   <a href="#">Details</a>	Hotchkiss	Municipality	0	No	4/6/2009 7:41 PM
<a href="#">Edit</a>   <a href="#">Details</a>	KEN-CARYL		0	No	2/12/2009 2:28 PM
<a href="#">Edit</a>   <a href="#">Details</a>	Lake City	Municipality	0	No	4/6/2009 7:47 PM
<a href="#">Edit</a>   <a href="#">Details</a>	LAKEHURST		0	No	2/12/2009 2:28 PM
<a href="#">Edit</a>   <a href="#">Details</a>	LAKEWOOD		0	No	2/12/2009 2:28 PM
<a href="#">Edit</a>   <a href="#">Details</a>	Las Animas	Municipality	0	No	3/13/2009 4:41 PM
<a href="#">Edit</a>   <a href="#">Details</a>	Left Hand Water District		0	No	2/12/2009 2:28 PM
<a href="#">Edit</a>   <a href="#">Details</a>	Little Thompson Water District		0	No	5/11/2009 4:39 PM

Details
Related Projects
Data
?

Time Series		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<a href="#">Edit</a>   <a href="#">Delete</a>	demand/GPCD/observed/Water Conservation Plan Draft 7007														
<a href="#">Edit</a>   <a href="#">Delete</a>	demand/GPCD/estimated/cdm														
<a href="#">Edit</a>   <a href="#">Delete</a>	population/persons/observed/	118300	121300	123700	125500	125800	126900	127800							

# Basin Needs Decision Support System (BNDSS)

The screenshot displays the BNDSS software interface, which is divided into several windows:

- TS Tool - Time Series - Table:** This window shows a table of time series data. The columns are DATE, ts1-demand, Demand, ACF, ts1-supply, Supply, ACF, ts1-gap, Gap, and ACF. The data spans from 2029 to 2050.
- TS Tool - Time Series - Graph:** This window displays a line graph of the time series data. The Y-axis is labeled ACF and ranges from 0.0 to 6.0. The X-axis is labeled Year and ranges from 2000 to 2050. The graph shows three distinct time series: ts1-demand (red line), ts1-supply (blue line), and ts1-gap (green line). The demand and supply series show a similar pattern of increasing and then decreasing values, while the gap series remains relatively constant.
- Command Window:** This window shows the commands used to generate the time series data. The commands are:

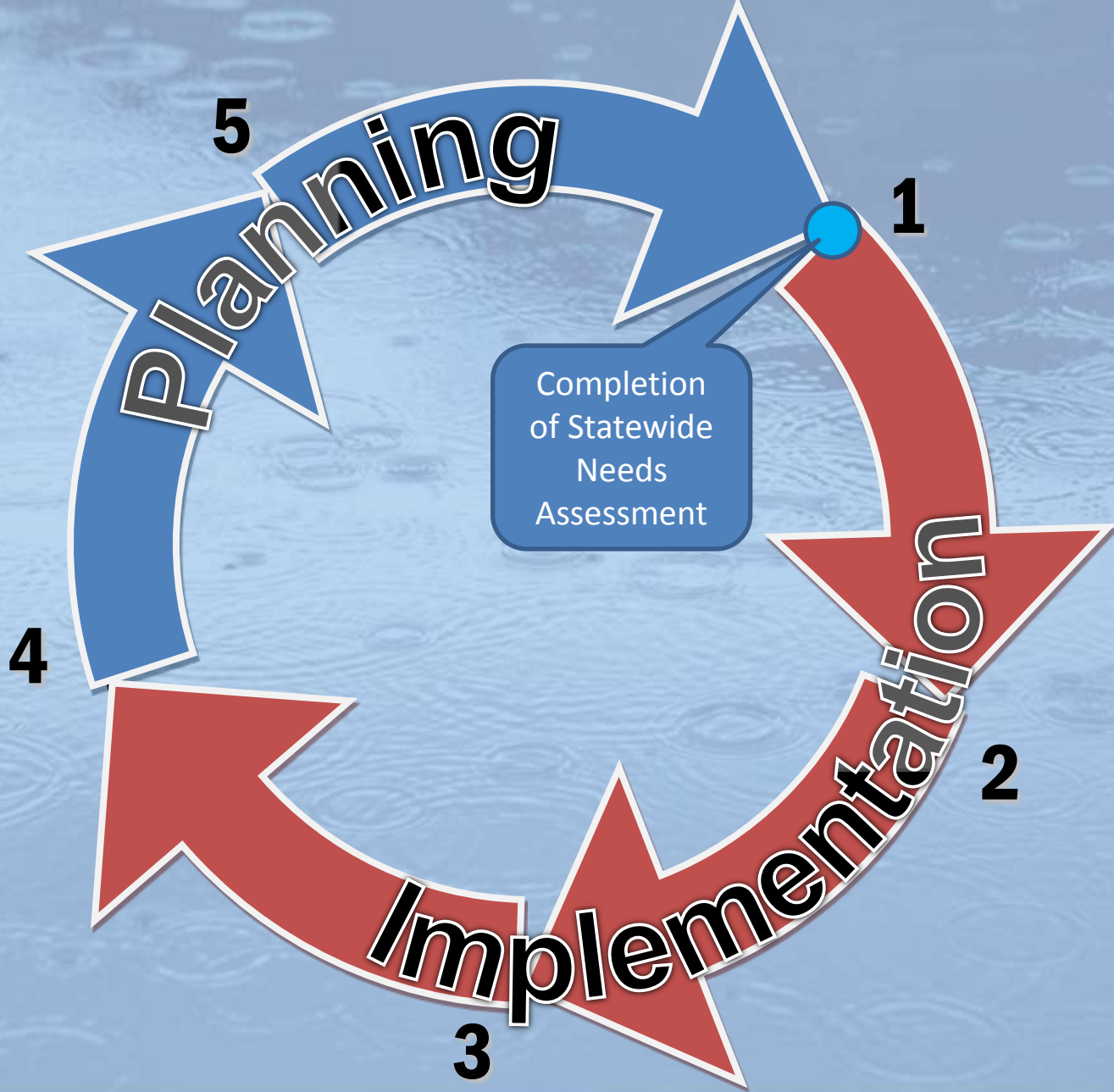
```
2 # Currently this just tests to make sure no errors occur.
3 # May automate the test more if output products are generated (HTML?)
4 TS ts1-demand = NewPatternTimeSeries(NewTSID="ts1..Demand..Year", SetStart="2000", S
5 TS ts1-supply = NewPatternTimeSeries(NewTSID="ts1..Supply..Year", SetStart="2000", S
6 TS ts1-gap = NewTimeSeries(NewTSID="ts1..Gap..Year", SetStart="2000", SetEnd="2050",
7 Add(TSID="ts1-gap", AddTSList=AllMatchingTSID, AddTSID="ts1-demand", HandleMissingIn
8 Subtract(TSID="ts1-gap", SubtractTSList=AllMatchingTSID, SubtractTSID="ts1-supply",
9 #
```
- Results Window:** This window shows the results of the commands, including a tree view of the time series data. The tree view shows a top-level label, a second-level label, and another second-level label, each with its own set of time series data.

# SWSI Recommendations

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1. Ongoing Dialogue Among all Water Interests
2. Track and Support the Identified Projects and Processes
3. Develop a Program to Evaluate, Quantify and Prioritize Environmental and Recreational Water Enhancement Goals
4. Work Towards Consensus Recommendations on Funding Mechanisms for Environmental and Recreational Enhancements
5. Create a Common Understanding of Future Water Supplies
6. Develop Implementation Plans Towards Meeting Future Needs
7. Assess Potential New State Roles in Implementing Solutions
8. Develop Requirements for Standardized Annual M&I Water Use Data Reporting





# Five Year Planning Cycle

# Questions?



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Water Supply Planning Section

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