



## Colorado's Water Supply Future



# South Platte Forum Jeopardy: Water Resources Planning

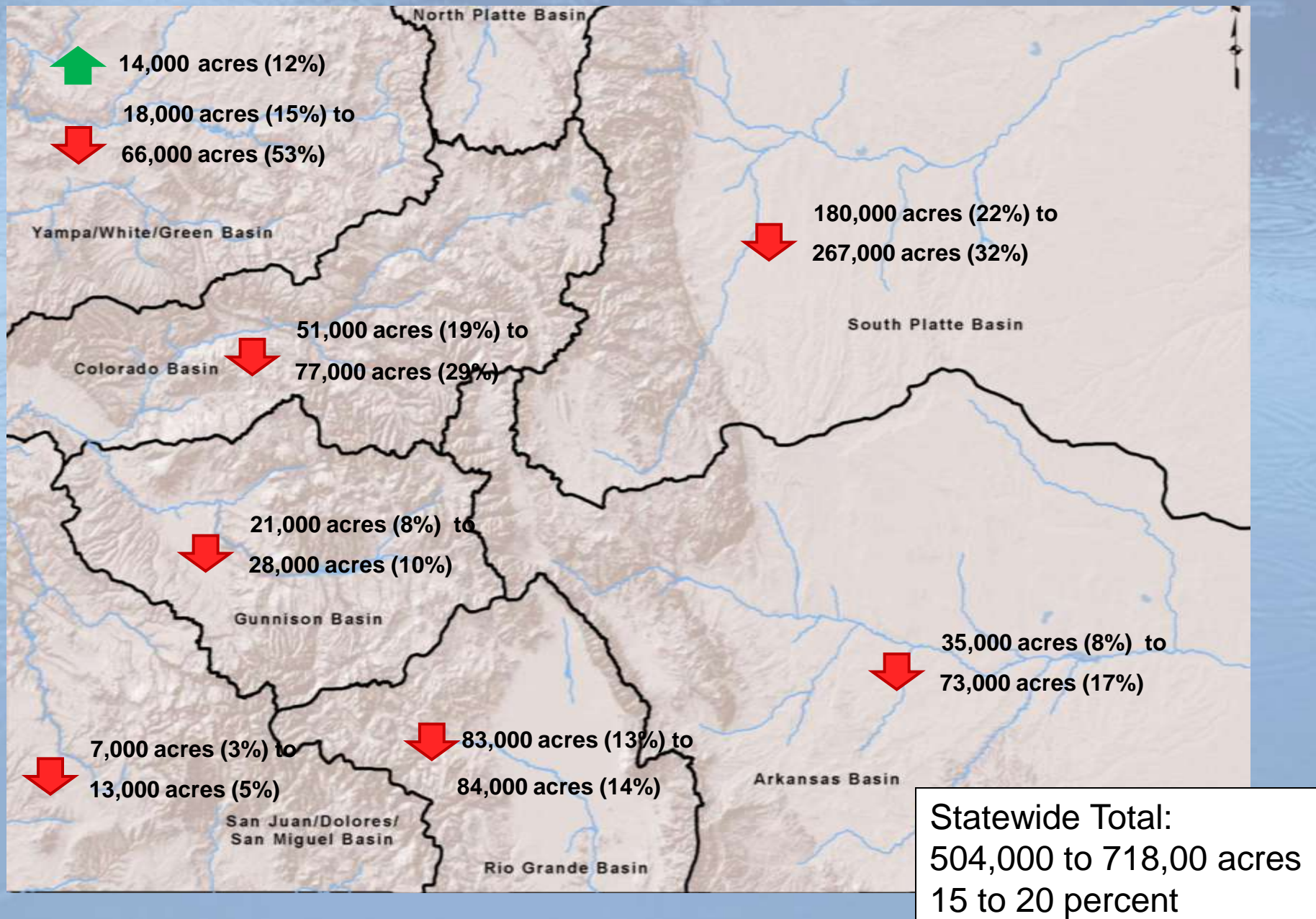
**Eric Hecox**

**October 20, 2010**

# *Colorado's Competing Water Needs*

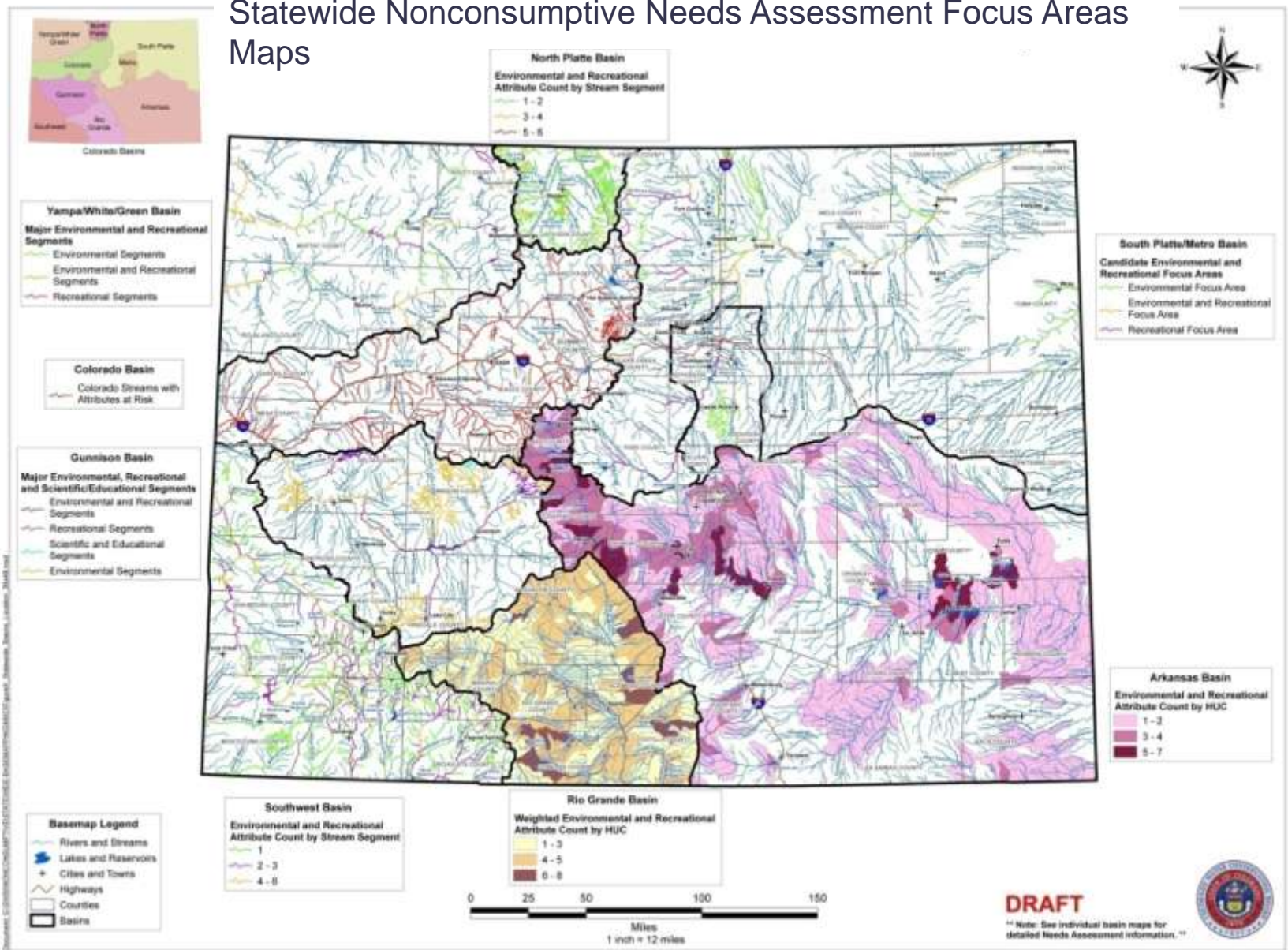


# 2050 Changes in Irrigated Acres

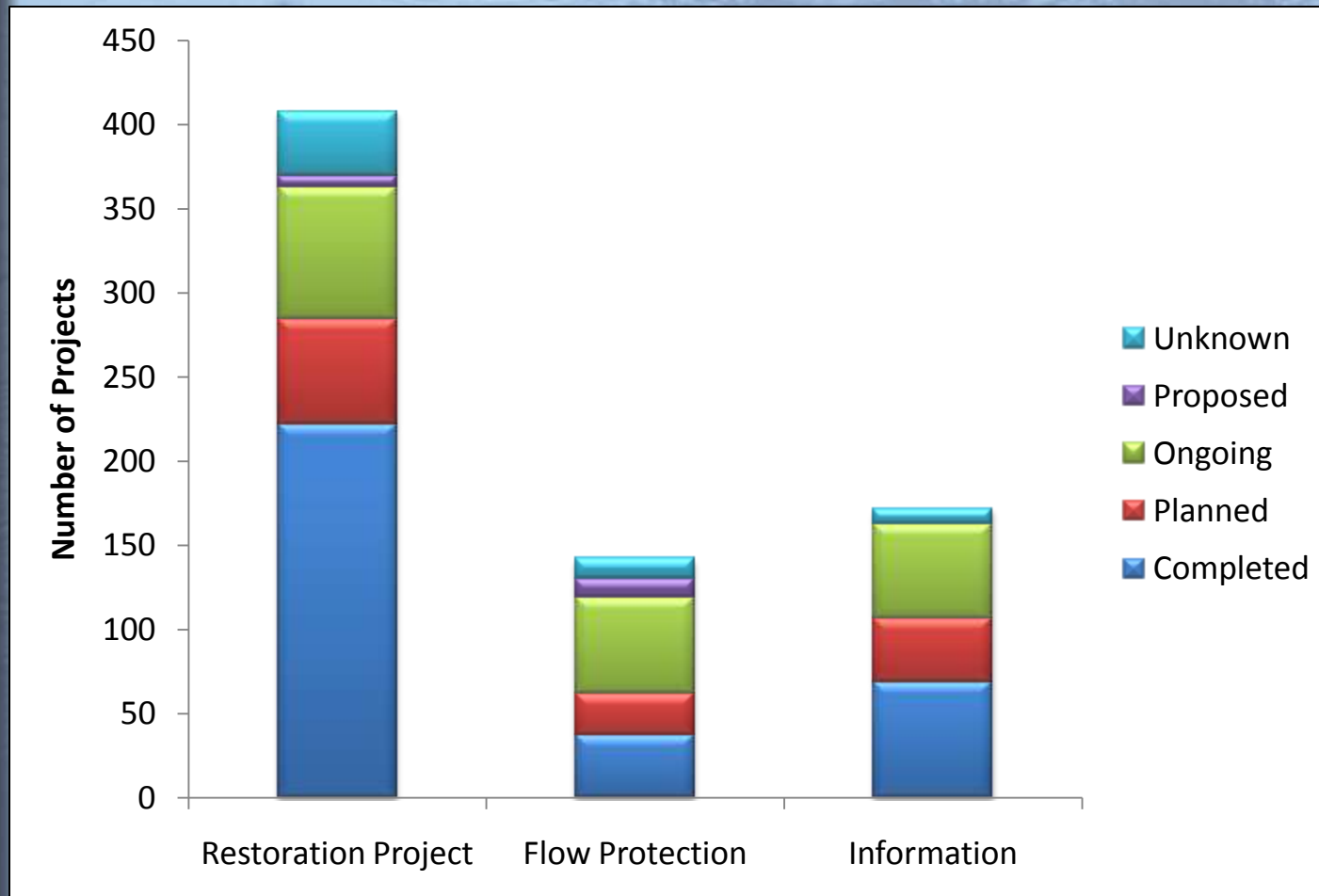


# Competing Needs for Water – Nonconsumptive

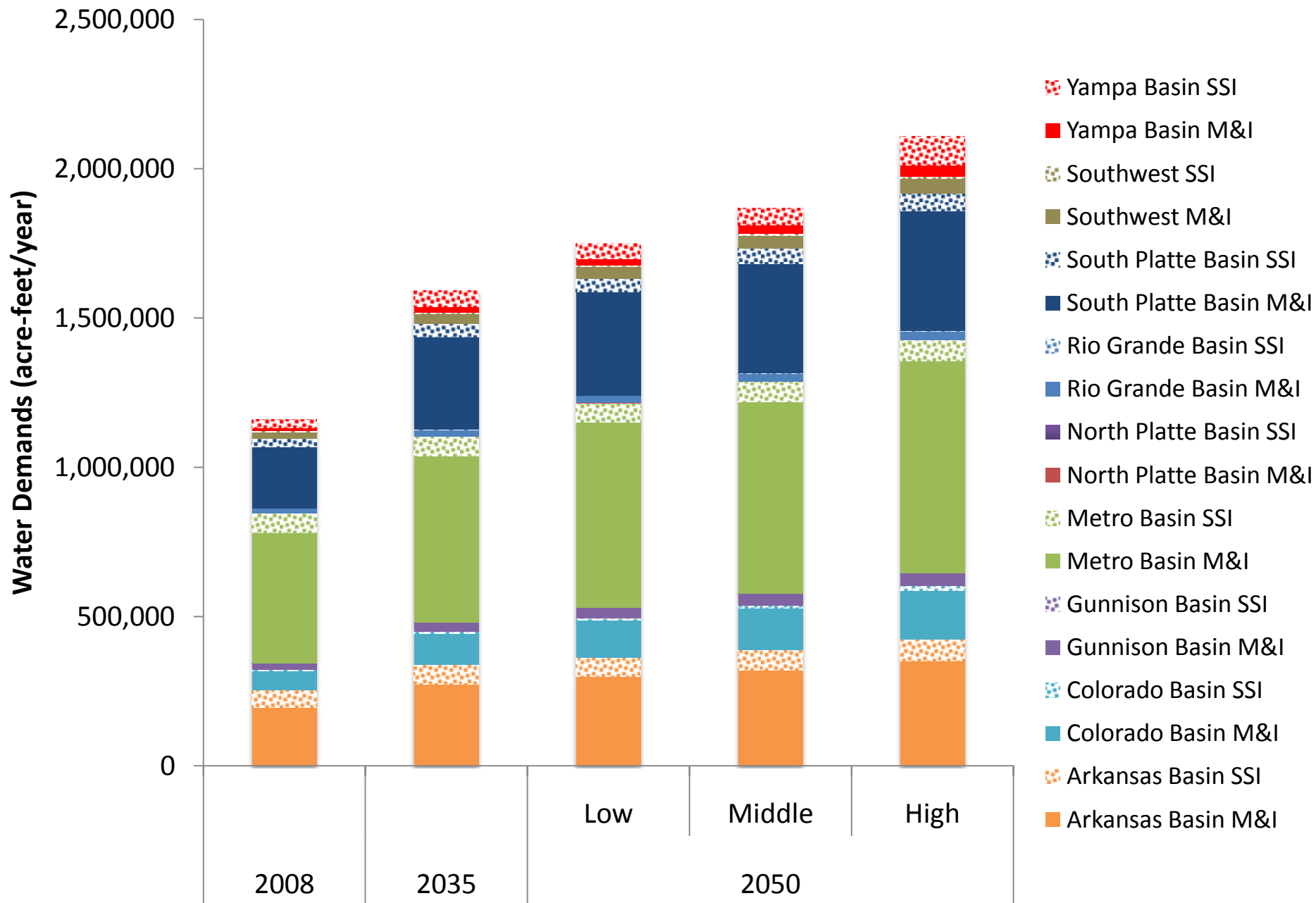
## Statewide Nonconsumptive Needs Assessment Focus Areas Maps



# Statewide Summary of Nonconsumptive Projects and Methods Status



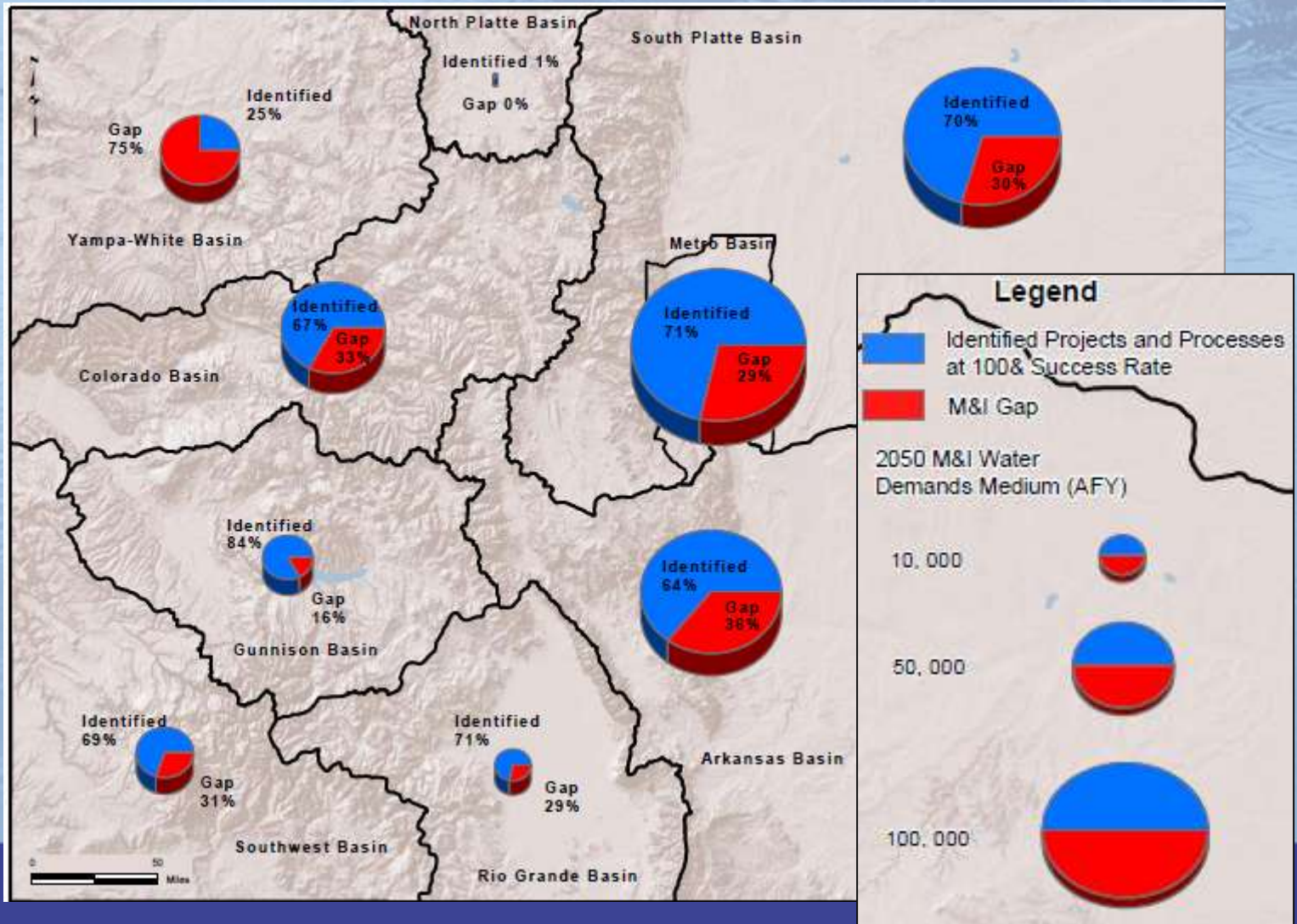
# Statewide 2050 M&I and SSI Demand



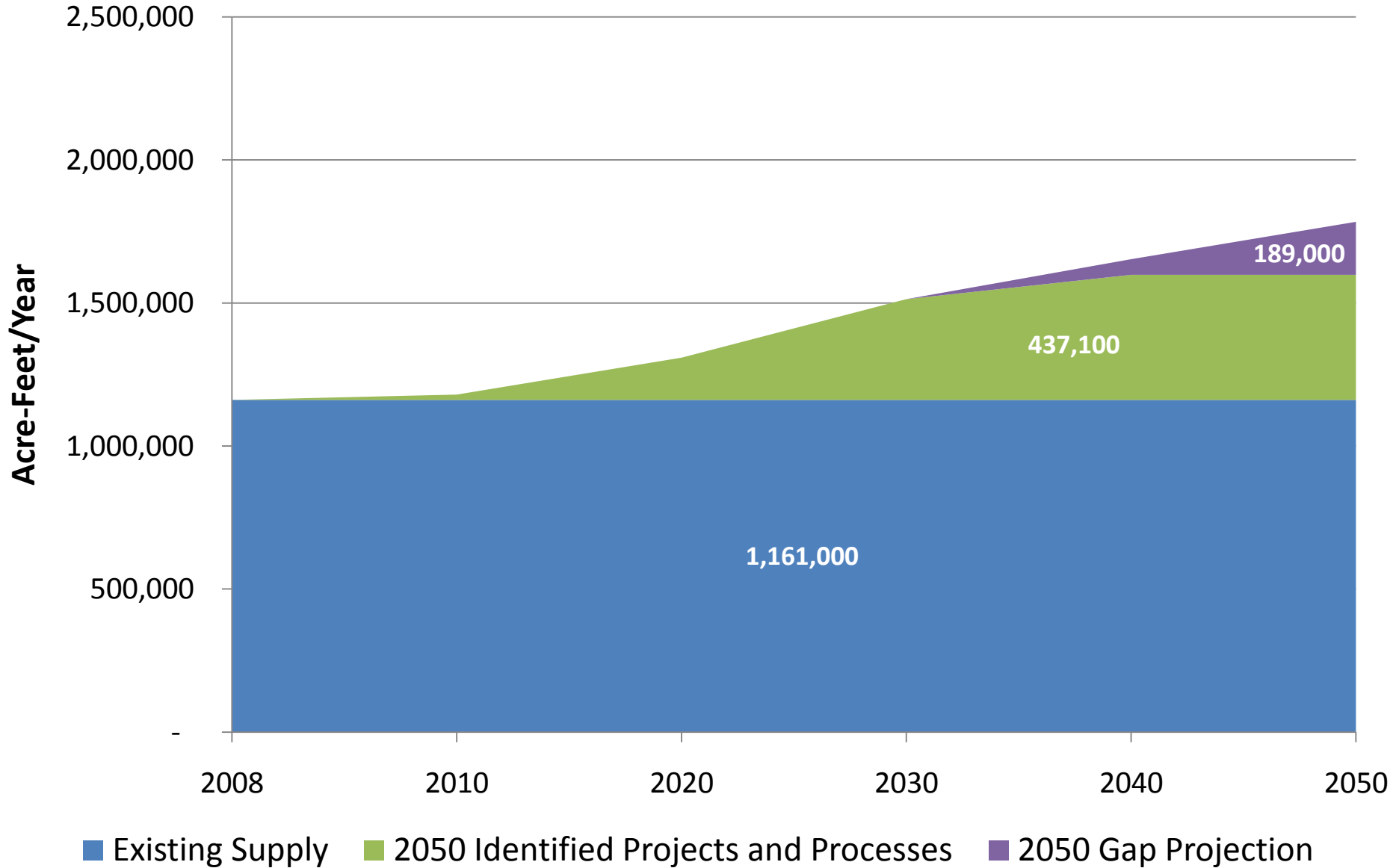
# Components of M&I/SSI Gap Analysis

- 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
- $M\&I/SSI\ Gap = Demand\ Increase - IPPs$

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

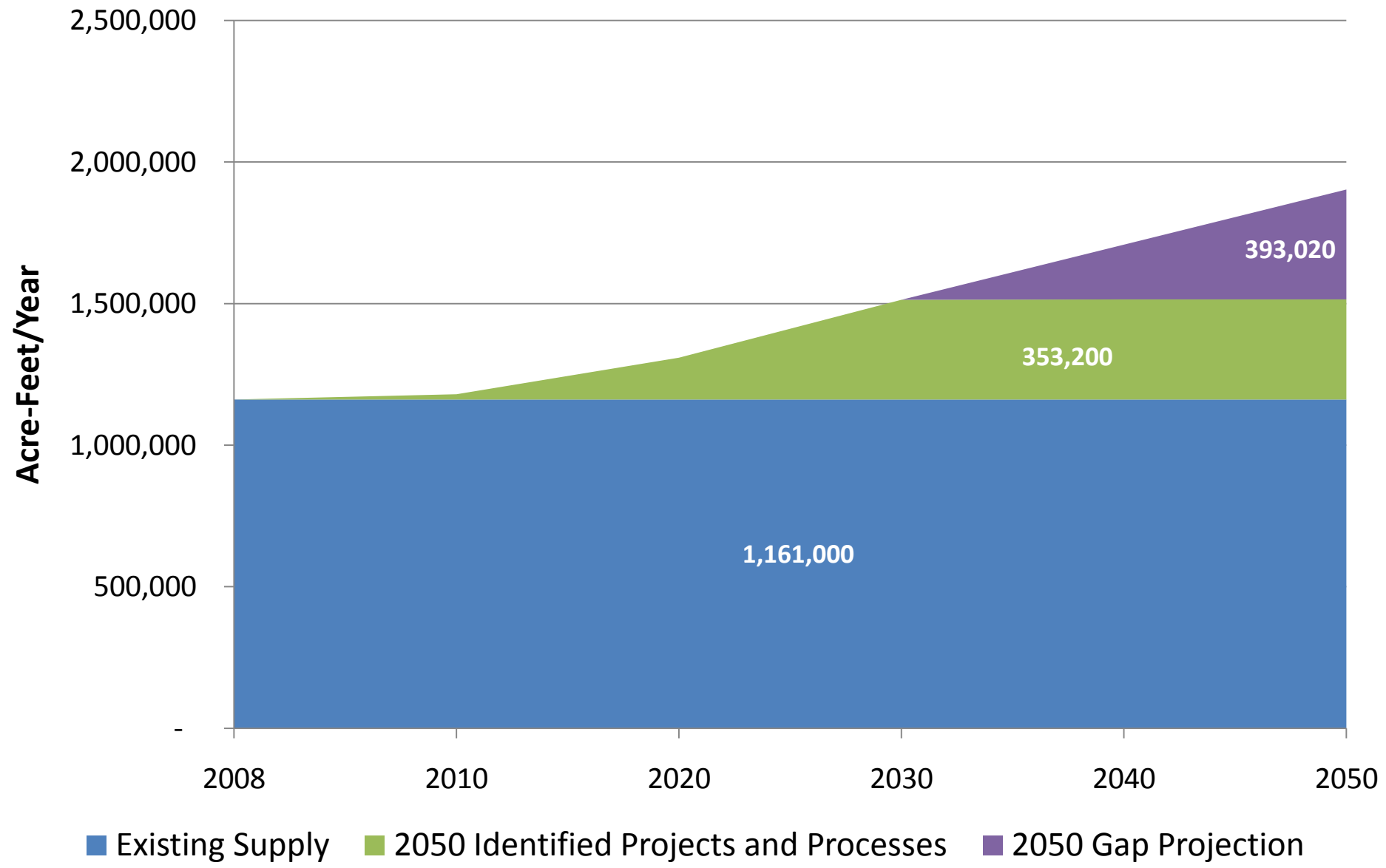


# Statewide M&I and SSI Gap Summary Low Scenario

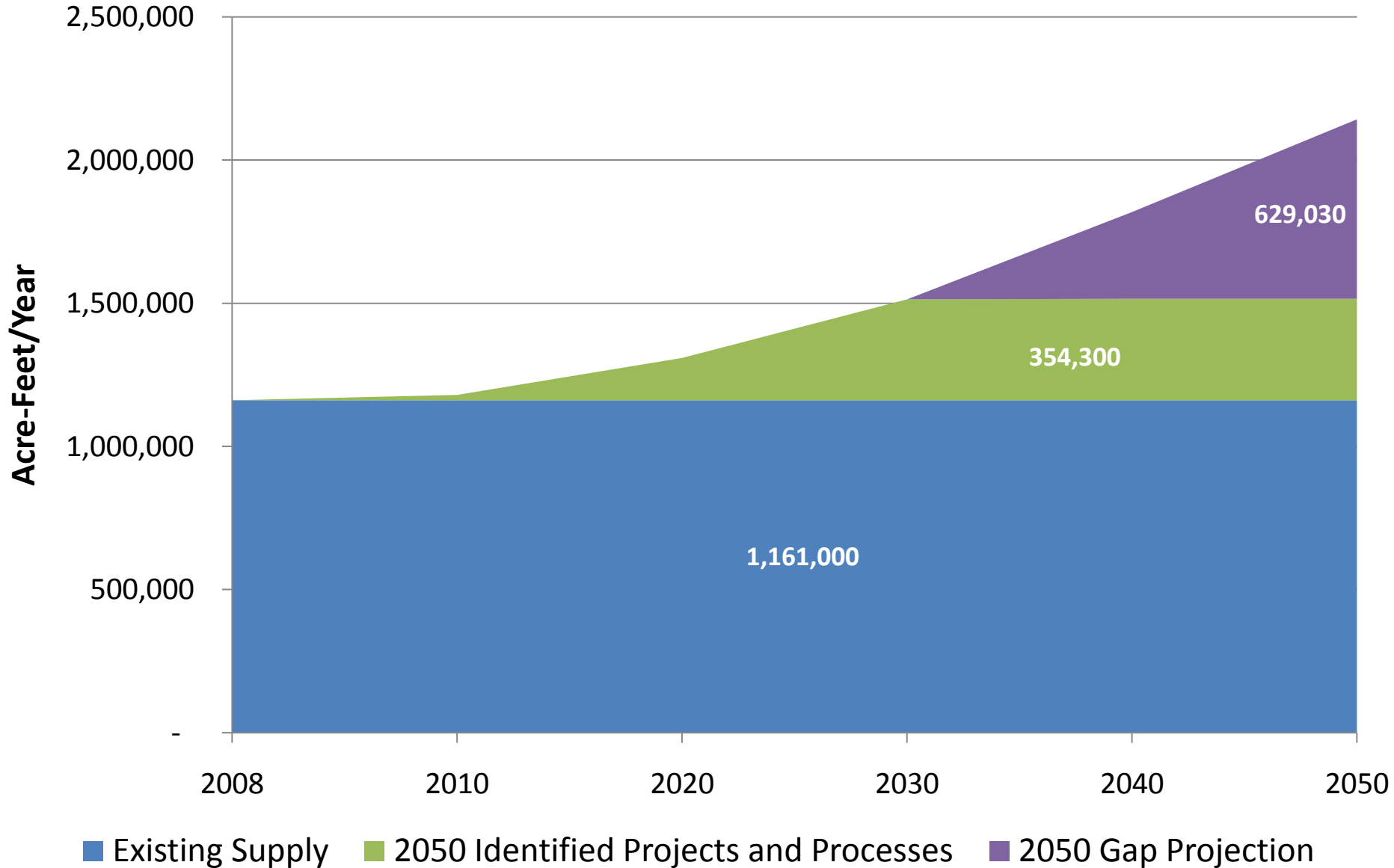


# Statewide M&I and SSI Gap Summary

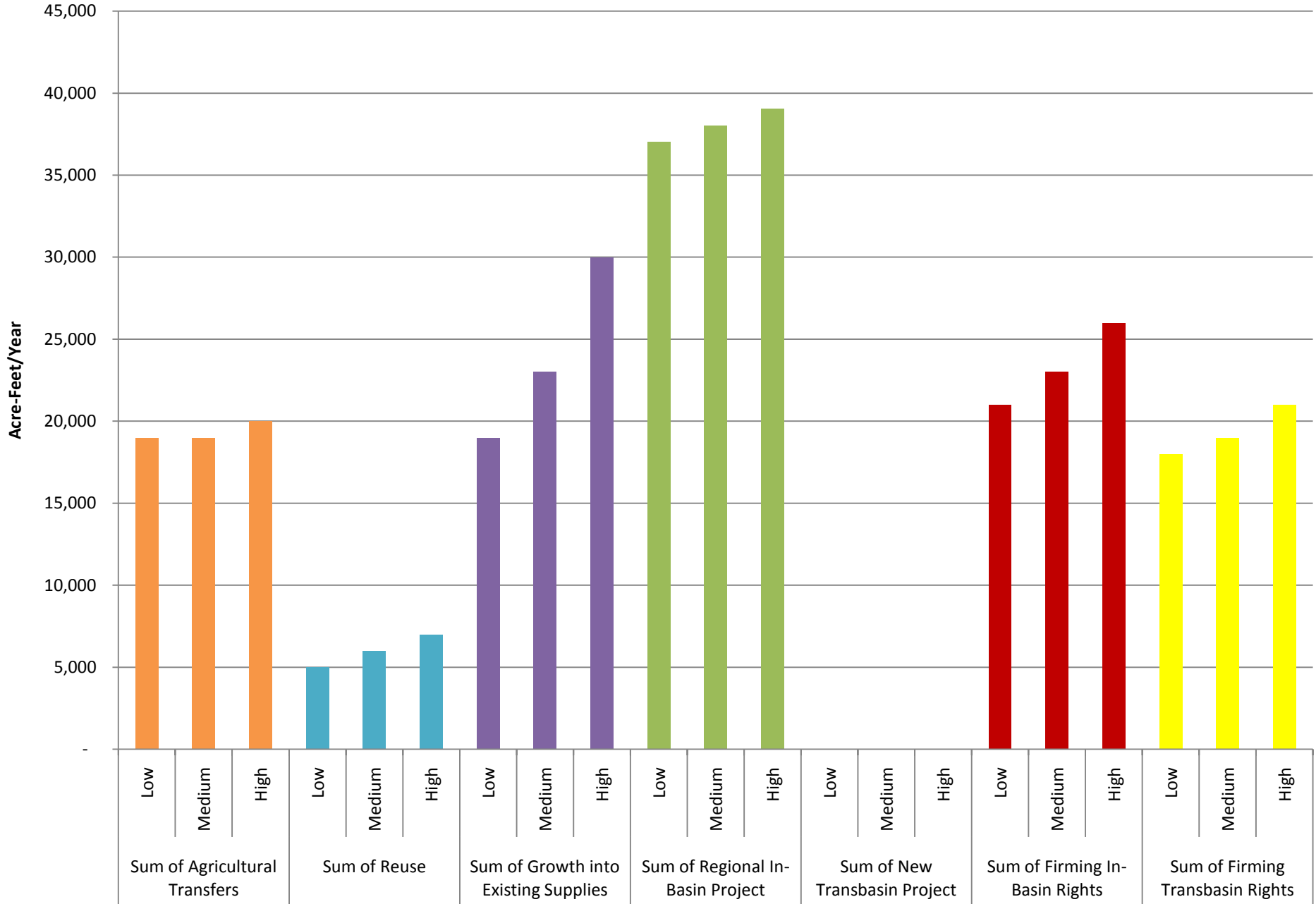
## Medium Scenario



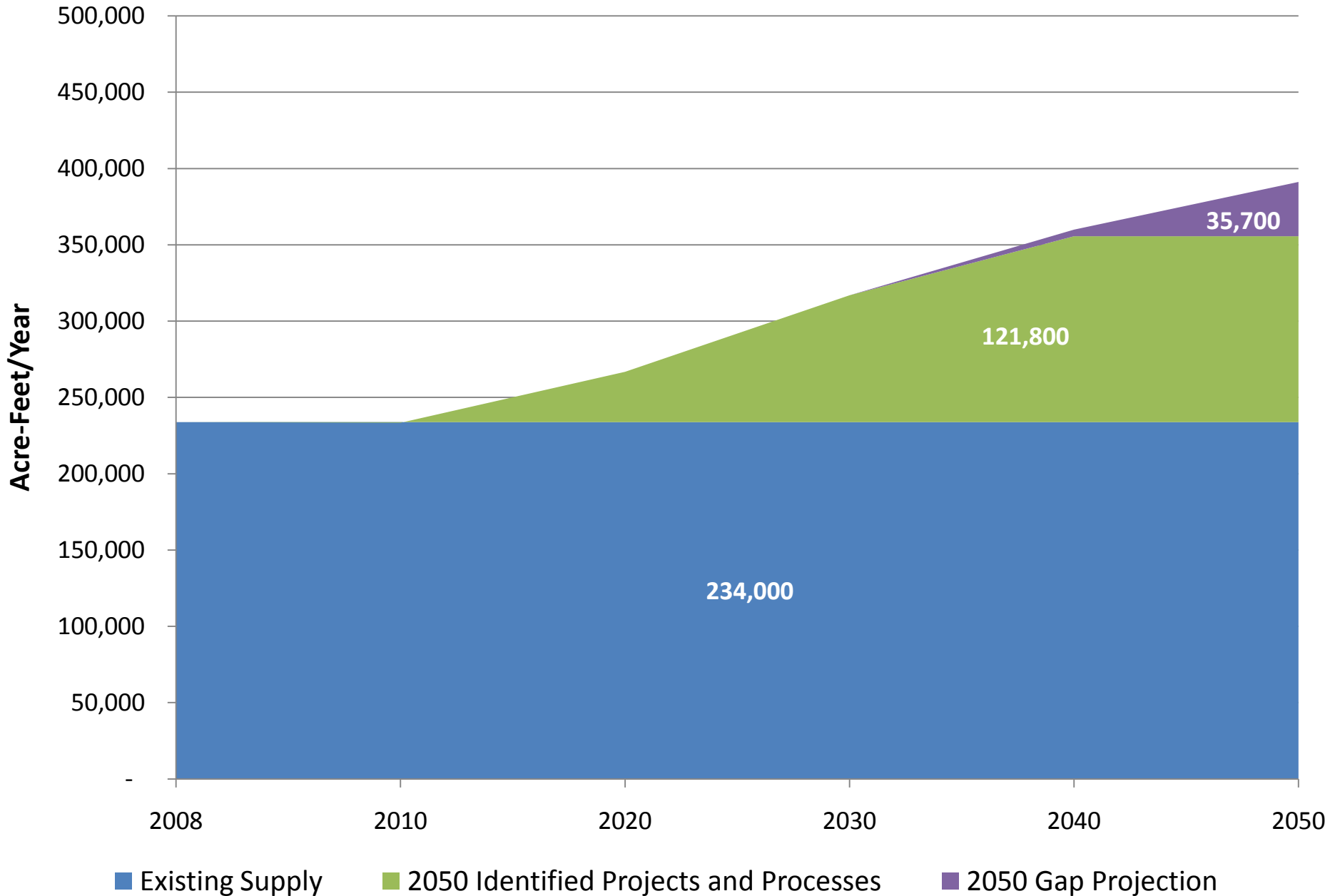
# Statewide M&I and SSI Gap Summary High Scenario



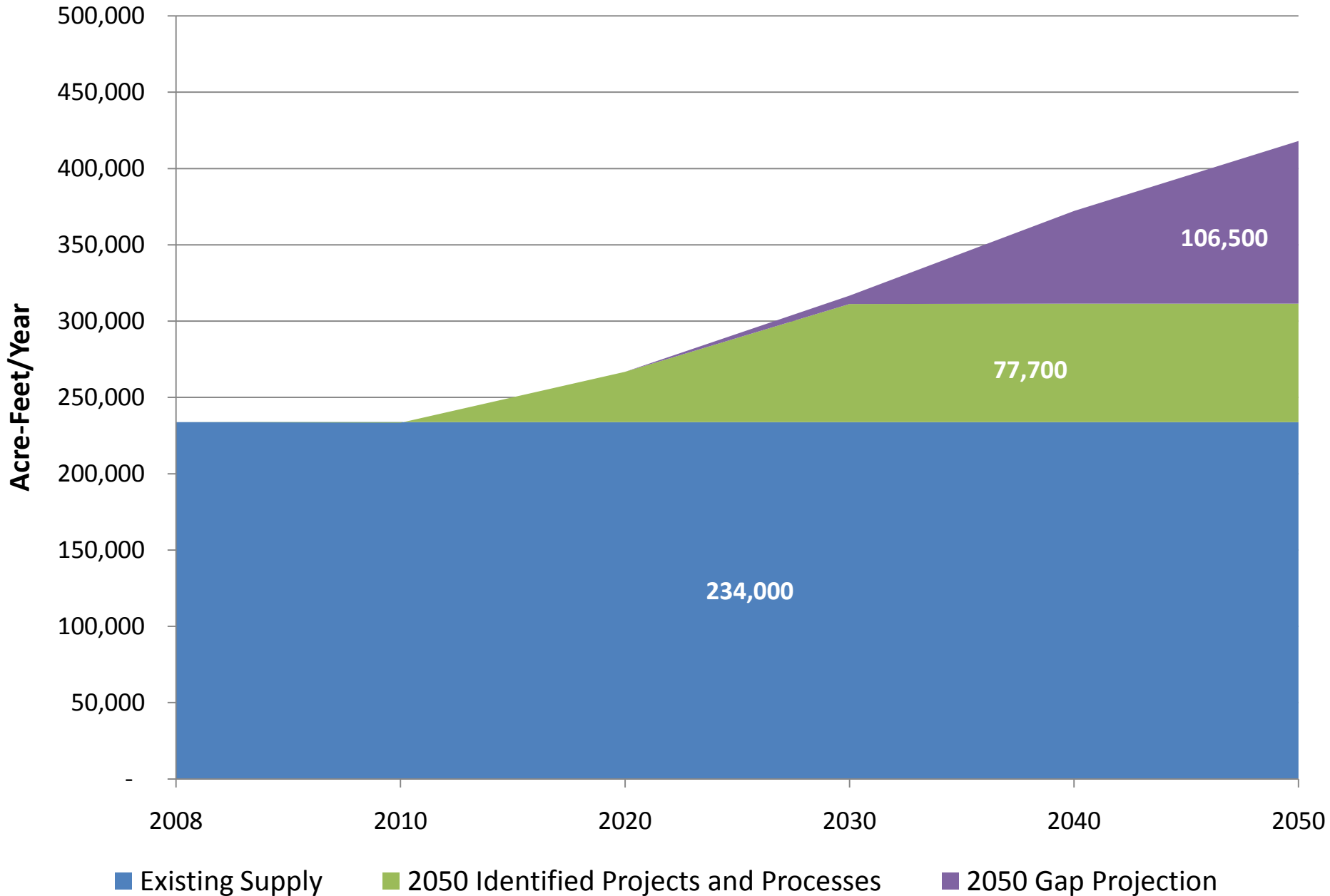
# South Platte - Summary of IPP Categories



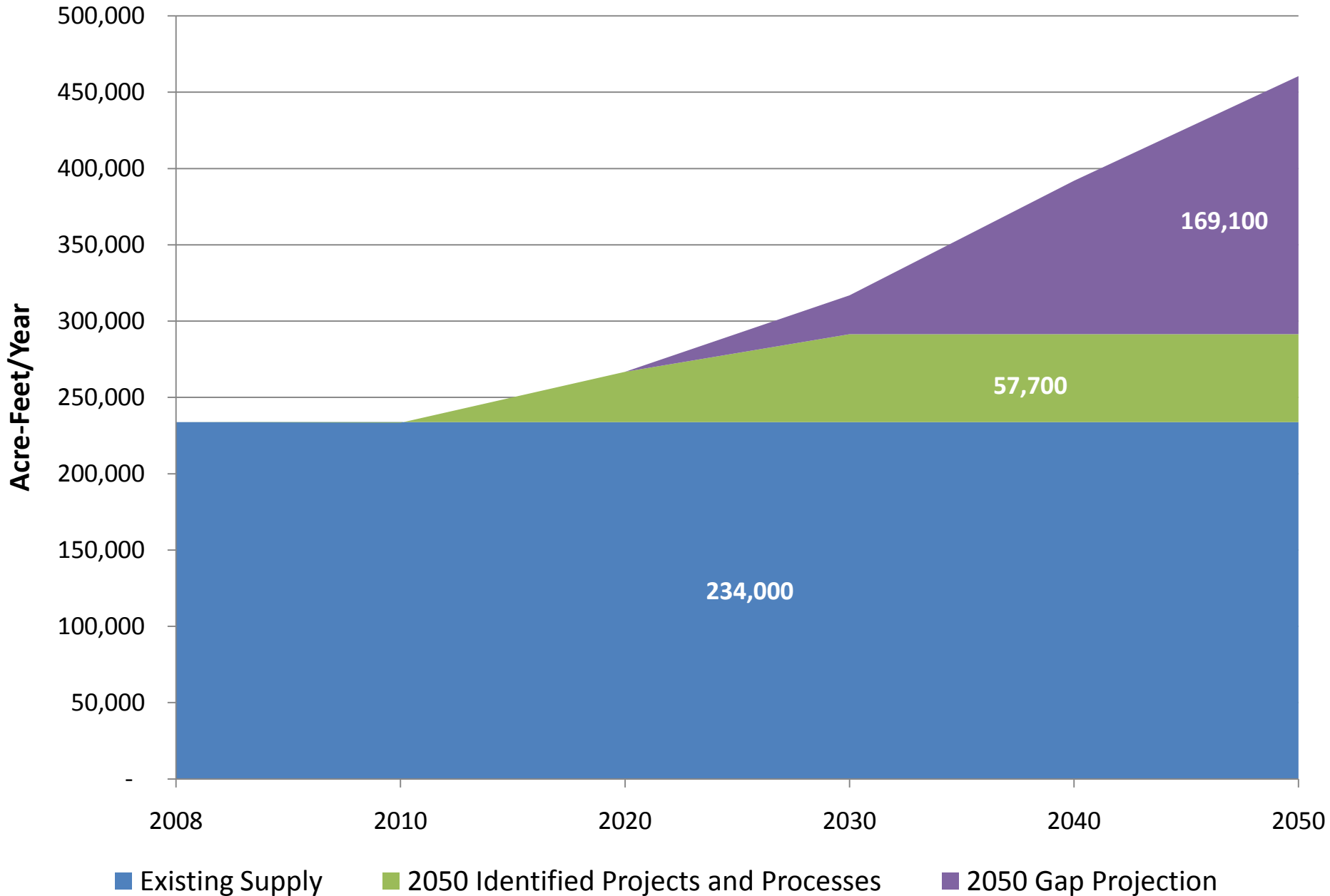
**Figure 2-30 South Platte Basin M&I and SSI Gap Summary Low Scenario  
(IPPs at 100% Yield)**



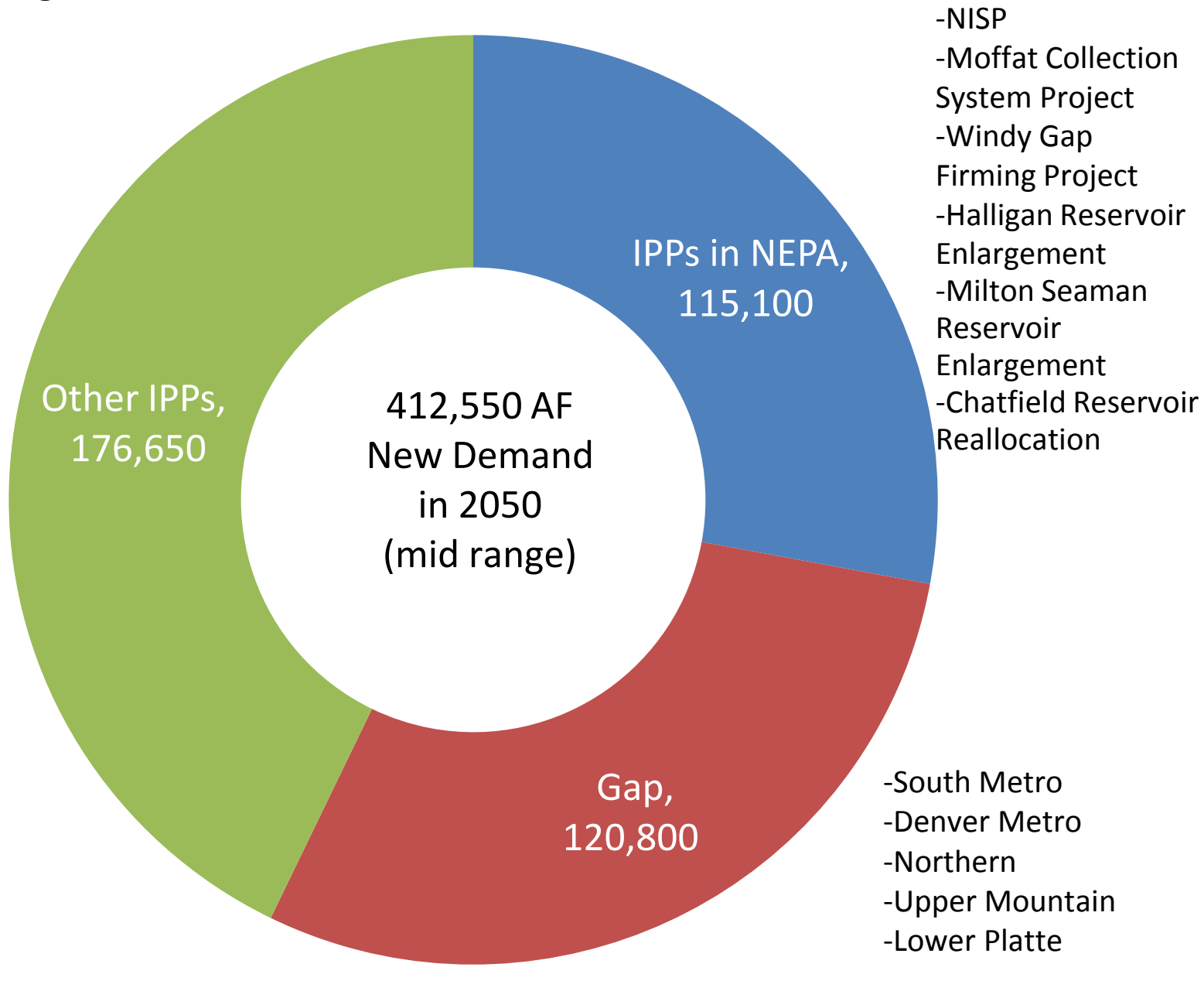
**Figure 2-31 South Platte Basin M&I and SSI Gap Summary Medium Scenario  
(IPPs at 60% Yield)**



**Figure 2-32 South Platte Basin M&I and SSI Gap Summary High Scenario  
(IPPs at 40% Yield)**



**Figure 3-7. South Platte Basin and Metro 2050 New Demand**



# *SWSI 2010 Update*



# List of Reports

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- **2050 M&I Water Use Projections**– final
- **Energy Study Phase 2 Revised Water Use Scenarios Memo** – final
- **M&I Gap Analysis** – draft comments by Nov. 1st
- **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:**
  - **SWSI Conservation Levels Analysis** – final
  - **Evaluation of Passive Savings**– final
  - **Guidebook of Best Management Practices for Municipal Water Conservation in Colorado**– final
  - **M&I Conservation Strategies** – draft with TAG
- **Portfolios and Strategies** – draft scheduled for September
  - **Density Memo** – draft completed and will be appendix for portfolios memo
- **Final 2010 SWSI Report** – January 2011

# *Current Planning Activities*

# Development of Portfolios and Evaluation of Water Supply Strategies

- During 2008, Colorado's water community embarked on a visioning process to address the following questions:
  - If we let Colorado's water supply continue to evolve the way it is now, what will our state look like in 50 years?
  - Is that what we want it to look like?
  - If not, what can and should we do about it?



# IBCC/CWCB Visioning Process

## Basic Conclusions

- The status quo approach to water supply will not lead to a desirable future for Colorado
  - Status Quo = Significant loss of irrigated acres
  - If not the Status Quo then what?
- Colorado will need a range of demand side and supply side strategies
- We need to work together to examine the trade-offs, risks, and uncertainties associated with different strategies and combination of strategies

# First observation

- Large-scale dry-up of irrigated agriculture has major adverse economic impacts
- Dry-up of ag lands also has major environmental impacts
- This is the default solution, but is not a good option for solving all of our needs



# Second observation

- Success of IPPs is important to meeting the gap
- To the extent they are not successful, other options will have to take their place (ag dry-up seems to be the most likely candidate)



# Identified Projects and Processes (IPPs)

- IPPs are project or planning processes that have been identified by the water provider
- Water providers are actively pursuing or relying on these projects or plans
- IPPs can include:
  - Agricultural transfers
  - Growth into existing supplies
  - Reuse of existing or future consumable water supplies
  - New water supply projects



# Third observation

- Water Conservation will be counted on to reduce existing and future water demands.
- Conservation is a significant component of all the portfolios we are examining
- Additional water conservation efforts are crucial, but will not alone be enough



# Fourth observation

- We need a closer connection and better coordination between land use planning and water supply planning
- This should happen at the local gov't level



# Fifth observation

- Developing new water supplies in the Colorado River basin for use on both the east and west slope will reduce ag transfers
- To achieve this, we need cooperation between the West Slope and the East Slope
- This will result only if we have ongoing dialogue and some mechanism for cooperation
- IBCC and Roundtables with CWCB's support are meeting this need



# Draft SWSI 2010 Mission Statement

Colorado faces a shortage of water for meeting the state's consumptive and nonconsumptive water needs. Meeting Colorado's future water supply needs will require a mix of local water projects and plans, M&I conservation, reuse, agricultural transfers (traditional and alternative), and the development of new water supplies. No single strategy will meet Colorado's future water needs, and all strategies need to be pursued concurrently.

CWCB will help Colorado maintain an adequate water supply for its citizens and the environment through a mix of solutions.

# **Questions and/or further detail**

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