

Attachment A: Participants in Various Stakeholder Groups

South Platte Regional Water Development Concept / SPROWG

Task Force Members

90 Members as of February 28, 2020

First Name	Last Name	Organization
Alper	Rich	CSU CCC
Anglund	Erik	Anadarko
Baumgartner	Rod	Henrylyn Ditch Company
Beck	Darren	HR Green
Belanger	Laura	Western Resources Advocates
Benak	Matt	Castle Rock Water
Berryman	Alan	SPWRAP
Biggs	Barbara	Metro Basin Roundtable
Black	Courtney	Interra
Bliss	Matt	Dinatale Water
Borgers	Sarah	City of Westminster
Bovee	Brett	WestWater Research, LLC
Brosemer	Donna	Greeley
Buechner	Stephen	DiNatale Water Consultants
Burk	Abby	Audubon
Castle	Anne	Univ of Colo Getches Center
Chambers	Sean	City of Greeley
Citron	Aaron	TNC
Conovitz	Pete	Colorado Parks & Wildlife
Courtney	Beorn	Element Water Consulting
Cronin	Sean	SVLHWCD
Daniel	Deb	RRWCD
Darling	Lisa	SMWSA
Davenhill	Casey	Colorado Watershed Association
Davis	Alex	Aurora Water
DeAngelis	Corey	DWR Division 1
Doherty	Todd	Western Water Partnership
Dwyer	Blaine	HDR
Dye	Greg	CDM Smith
Eckhardt	Frank	CCWCD
Fendt	Lindsay	Aspen Journalism
Frank	Joe	LSPWCD
Funk	Alex	CWCB
Gearhart	Mary	City of Greeley
Gerk	Bruce	South Platte Basin Roundtable
Gerstle	Pia	City of Thornton
Godbout	Craig	CWCB
Graves	Rob	Morning Fresh Dairy
Gustafson	Cole	City of Greeley

South Platte Regional Water Development Concept / SPROWG

Task Force Members

90 Members as of February 28, 2020

First Name	Last Name	Organization
Hall	Jim	Northern Water
Hannes	Danielle	W.W. Wheeler
Hartman	Fay	American Rivers
Howard	Larry	SPBRT
Hunt	Emily	City of Thornton
Iglesias	Chris	Windy Hill Water
Jackson	Brian	Environmental Defense Fund
Jewell	Dawn	Aurora Water
Johnson	Greg	CWCB
Knox	Ken	Knox Water (for HenryLyn)
Kolanz	John	Otis, Bedingfield & Peters
Kopytkovskiy	Marina	Parker Water and Sanitation District
Kuhn	Josh	Conservation Colorado
La	Jojo	CWCB
LaVanchy	Wesley	St Vrain Lakes Metropolitan District
Leach	Dale	Telesto Solutions Inc.
Lytle	Bruce	Lytle Water Solutions
Marsicek	Rick	Denver Water
Matlosz	Alan	George K. Baum
Mesner	Erin	City and County of Broomfield
Miller	Bart	Western Resources Advocates
Miller	Shane	LCWCD
Miller	Shane	Logan County Water Conservancy District
Moyer	Amy	DNR
Mumm	Jason	FCS Group
Nickum	Dave	Trout Unlimited
Parachini	Dick	Interested Citizen
Parker	Andrea	AECOM
Peters	Bob	Denver Water
Pitt	Jennifer	Audubon
Pruznick	Mike	FCLWD
Ray	Randy	Central Colorado WCD
Ris	Lauren	CWCB
Robinson	F. Lee	Windy Hill Water
Roudebush	Jason	Ducks Unlimited
Sands	Russ	CWCB
Sharn	James	Martin Marietta
Shimmin	Mike	SPBRT
Shippy	Arista	Dinatale Water

South Platte Regional Water Development Concept / SPROWG

Task Force Members

90 Members as of February 28, 2020

First Name	Last Name	Organization
Smith	MaryLou	CSU
Sobieski	Kara	WWG
Topper	Ralf	USGS Retired
Varra	Garrett	SP BRT/Varra Companies
Walker	Susan	Harvey Economics
Werbylo	Kevin	Headwaters Corporation
Williams	Lacey	South Platte/Metro Roundtables
Wind	Allyn	LP&B / Pioneer
Witwer	Jim	Davis, Graham, & Stubbs
Wohlgenant	Tim	For the Love of CO
Wombacher	Bill	Ryley Carlock Applewhite
Yahn	Jim	North Sterling Irrigation

South Platte Regional Water Development Concept / SPROWG

Advisory Committee Members

14 Members as of February 28, 2020

First Name	Last Name	Organization
Belanger	Laura	Western Resources Advocates
Cronin	Sean	SVLHWCD
Darling	Lisa	SMWSA
Davenhill	Casey	Colorado Watershed Association
Frank	Joe	LSPWCD
Gerk	Bruce	South Platte Basin Roundtable
Hall	Jim	Northern Water
Jewell	Dawn	Aurora Water
Kopytkovskiy	Marina	Parker Water and Sanitation District
Parachini	Dick	Interested Citizen
Peters	Bob	Denver Water
Sobieski	Kara	WWG
Varra	Garrett	SP BRT/Varra Companies
Yahn	Jim	North Sterling Irrigation

South Platte Regional Water Development Concept / SPROWG

Municipal and Industrial Work Group Members

Last Name	First Name	Organization
Anglund	Erik	Anadarko
Belanger	Laura	Western Resources Advocates
Brosemer	Donna	Greeley
Chambers	Sean	City of Greeley
Cronin	Sean	SVLHWCD
Darling	Lisa	SMWSA
Davis	Alex	Aurora Water
Frank	Joe	LSPWCD
Godbout	Craig	CWCB
Hall	Jim	Northern Water
Howard	Larry	SPBRT
Hunt	Emily	City of Thornton
Jewell	Dawn	Aurora Water
Kopytkovskiy	Marina	Parker Water and Sanitation District
Leach	Dale	Telesto Solutions Inc.
Mumm	Jason	FCS Group
Parachini	Dick	Interested Citizen
Peters	Bob	Denver Water

Agricultural Work Group Members

Last Name	First Name	Organization
Baumgartner	Rod	Henrylyn Ditch Company
Cronin	Sean	SVLHWCD
Daniel	Deb	RRWCD
Eckhardt	Frank	CCWCD
Frank	Joe	LSPWCD
Funk	Alex	CWCB
Gerk	Bruce	South Platte Basin Roundtable
Hall	Jim	Northern Water
Jackson	Brian	Environmental Defense Fund
Parachini	Dick	Interested Citizen
Peters	Bob	Denver Water
Ray	Randy	Central Colorado WCD
Shimmin	Mike	SPBRT
Wind	Allyn	LP&B / Pioneer
Yahn	Jim	North Sterling Irrigation

Environmental and Recreational Work Group Members

Last Name	First Name	Organization
Belanger	Laura	Western Resources Advocates
Citron	Aaron	TNC
Conovitz	Pete	Colorado Parks & Wildlife
Cronin	Sean	SVLHWCD
Frank	Joe	LSPWCD
Hartman	Fay	American Rivers
Jackson	Brian	Environmental Defense Fund
La	Jojo	CWCB
Werbylo	Kevin	Headwaters Corporation

Communications Work Group Members

Last Name	First Name	Organization
Cronin	Sean	SVLHWCD
Darling	Lisa	SMWSA
Davenhill	Casey	Colorado Watershed Association
Frank	Joe	LSPWCD
Gerk	Bruce	South Platte Basin Roundtable
Williams	Lacey	South Platte/Metro Roundtables

Attachment B: Guiding Principles

Guiding Principles for Development of SPROWG

April 20, 2019

Principles describing what SPROWG *is*:

1. SPROWG will advance the goals of the South Platte/Metro Basin Implementation Plan (BIP) and Colorado's Water Plan. Specifically, SPROWG will be based on and expand the BIP and the Conceptual Future In-Basin Multipurpose Project described in Section 4.6.2. It is envisioned to include infrastructure such as reservoirs, pipelines, pump stations, canals, diversion structures, water treatment plants, and aquifer storage and recovery facilities, and it will seek to maximize the use of available exchange potential in the South Platte River to minimize long-term operational costs. It will operate within Colorado's water law and prior appropriation system.
2. The SPROWG concept intends to provide at least 50,000 acre-feet of yield to meet part of the projected municipal and industrial water supply project gap in the South Platte basin quantified in Colorado's Water Plan (note that the yield estimate may be refined during project development). A significant portion of this yield is targeted for smaller but rapidly growing communities along the I-25, Highway 85 corridor between Denver and Greeley and also larger communities in the Denver Metro area and northern Colorado. The project will also explore providing supplies to smaller communities east of Greeley.
3. The SPROWG concept intends to meet a portion of the agricultural gap identified in the BIP and in Colorado's Water Plan.
4. The SPROWG concept will identify and incorporate strategies to address environmental and recreational needs in parallel with closing a portion of the supply gaps.
5. The SPROWG concept intends to enhance the ability to conduct alternative water transfers, thus reducing the need for traditional buy-and-dry transfers in the South Platte basin. Alternative water transfer strategies and amounts will be informed by agricultural water user preferences and input from local communities.
6. The SPROWG concept will utilize different sources of water available in the South Platte basin and manage them conjunctively to achieve an overall reliable yield beyond what an individual source could produce. The sources of water include unappropriated surface water (a.k.a. free river), water derived from alternative transfers, excess recharge credits, reusable supplies, and groundwater from the Denver Basin (if needed) and other aquifers.
7. The SPROWG concept is intended to help water supply organizations and water users in the South Platte basin continue long-standing efforts to maximize the use of in-basin supplies.
8. The SPROWG concept intends to improve integration of water quality and quantity planning and management activities as identified in the Colorado Water Plan and South Platte Basin Implementation Plan.

Principles describing what SPROWG *is not*:

9. The SPROWG concept is not intended to be a substitute for existing or planned projects. It is a new concept for addressing water supply needs in the South Platte Basin beyond what will be met with existing or planned projects (often referred to Identified Projects and Processes or IPPs).
10. The SPROWG concept is not intended to be used to deliver water developed from the permanent dry up of irrigated lands in the South Platte basin.
11. The SPROWG concept is not intended to store supplies from an existing or new transmountain diversion project (though it will provide a means to utilize unused reusable return flows from transmountain diversions).

The Guiding Principles describe the framework for developing the SPROWG concept. The Principles may be modified as the project progresses. They are not presented in any specific order or priority.

Attachment C: Fact Sheet

South Platte Regional Opportunities Water Group (SPROWG) Study

Fact Sheet

SPROWG Study Findings

- The study validated previous findings that the SPROWG Concept is technically and financially feasible. Many facility configurations could meet concept objectives.
- Several potential organizational frameworks could be feasible, including a new water conservancy district, a private non-profit company, regional water authority, or interim organizations such as an intergovernmental agreement or memorandum of understanding.
- Conceptual capital cost estimates are competitive with other large regional water projects (\$18,400 to \$22,800 per acre-foot for raw water and \$33,600 to \$43,200 per acre-foot for treated water).
- Additional outreach is needed to inform potential participants, explore use of ATMs, and clarify environmental and recreation goals.

South Platte and Metro Basin Roundtables will include the SPROWG Concept in the South Platte Basin Implementation Plan Update. SPROWG Advisory Committee participants and other interested parties plan to seek additional funding to promote the SPROWG Concept to water users, conduct further technical studies, and advance organizational and financing options.

Guiding SPROWG Principles

A set of principles agreed to by stakeholders describes the characteristics of the SPROWG Concept.

SPROWG will:

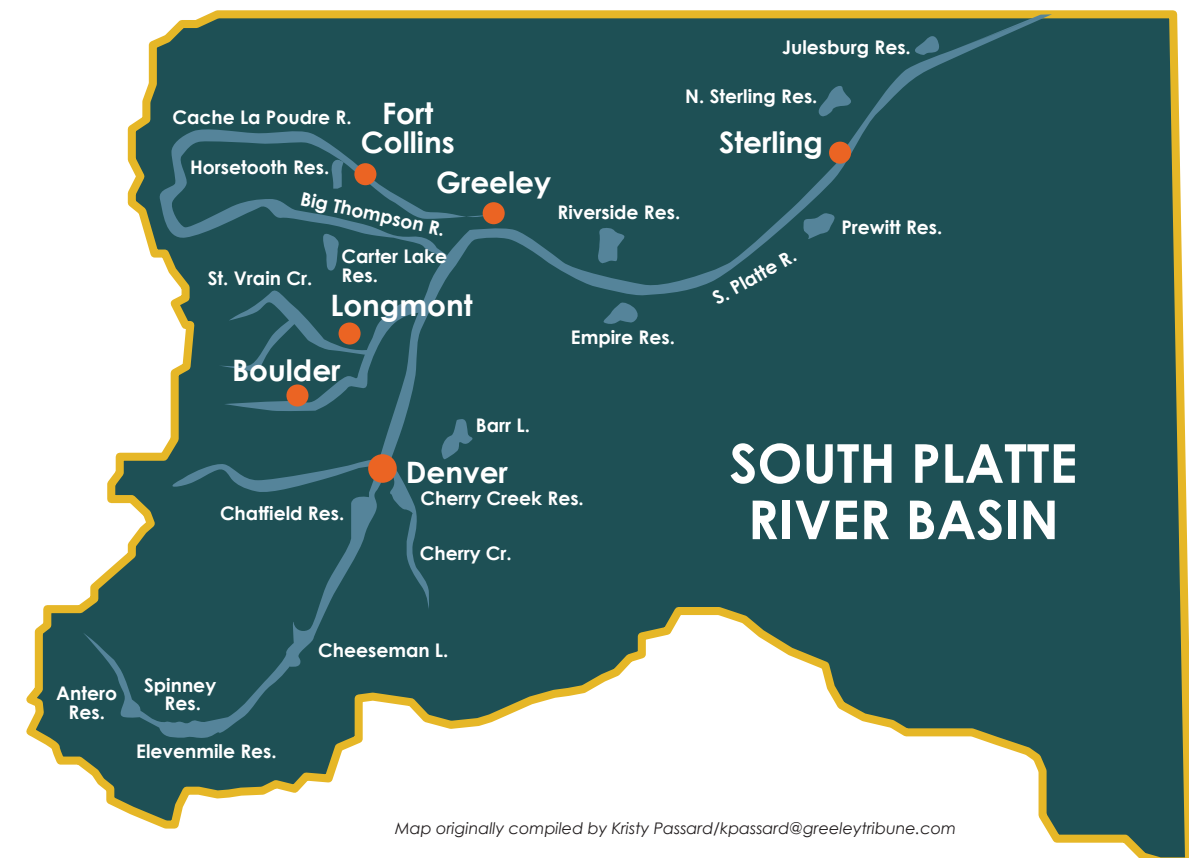
- Meet a portion of the municipal, industrial, and agricultural water supply gaps
- Address environmental and recreational needs in the basin
- Enhance the ability to conduct alternative water transfers or leases with agriculture
- Use multiple sources of available water (e.g. available river flows, existing reusable return flows, etc.)
- Maximize use of in-basin supplies
- Improve integration of water quality and quantity planning

SPROWG is not intended to:

- Be a substitute for existing or planned water projects
- Facilitate the permanent dry up of farmland in the basin
- Store supplies from an existing or new transmountain diversion project (though it will provide a means to utilize unused reusable return flows from transmountain diversions)

About the South Platte River Basin

The South Platte River originates in Colorado's Park County and flows for about 380 miles before reaching the Nebraska state line. The South Platte Basin (Basin) encompasses 23 counties and is home to approximately 3.8 million people, which includes the Denver Metropolitan area and growing northern Colorado communities such as Loveland, Greeley and Fort Collins. Seven of the 10 top agricultural producing counties in Colorado are in the Basin as well as recreational amenities for fishing, hiking, boating, skiing and visitors to state and national parks – all which contribute to the state's economy.



To learn more about the South Platte River and planning, please visit

www.southplattebasin.com.

Basin water managers rely on a network of facilities and a vast system of public and privately-owned water rights to provide water for their customers. Limited water supplies have resulted in long standing efforts by water managers and citizens to conserve and maximize the use of water in the river. It is estimated that river water is used seven times before it flows into Nebraska.

Identifying Needs and Solutions

The Basin is challenged with the greatest projected water supply gap of any of Colorado's river basins and home to most of the state's population, which is expected to grow from 3.8 million to 6 million people by 2050. The recently completed Analysis and Technical Update to Colorado's Water Plan projected a municipal and industrial supply gap in the Basin ranging from 185,000 to over 540,000 acre feet annually by the year 2050 depending on future demand and supply scenarios.

Diverse interests in the Basin are working to develop water supply and infrastructure projects that benefit municipal, industrial, agricultural, recreational and environmental considerations. The South Platte Basin Roundtable and Metro Basin Roundtable published the South Platte Basin Implementation Plan (SP BIP) which identified water demands and evaluated various strategies that could be used to meet the identified water supply gap. Included in the plan, a "Conceptual Future In-Basin Multipurpose Project" is identified as one strategy in which South Platte supplies can be used with the greatest potential benefit (SP BIP, Section 4.6.2). This conceptual project relies on developing several types of South Platte water supplies to meet multiple benefits.

In 2015, a group of Front Range water managers called the South Platte Regional Opportunities Work Group (SPROWG) began exploring strategies for advancing the "Conceptual Future In-Basin Multipurpose Project" described in the SP BIP. Their work resulted in a framework for developing collaborative water projects in the South Platte basin. In a parallel effort, the South Platte Storage Study, authorized by the Colorado General Assembly (HB 16-1256), evaluated the South Platte River between Kersey and the Nebraska state line for potential water storage that could meet the considerable water gap identified in Colorado's Water Plan. It found that on average, the South Platte River carries almost 300,000 acre-feet of water per year out of Colorado in excess of the amount needed to satisfy the South Platte River Compact with Nebraska.

SPROWG Concept Study

To further develop these concepts, the Colorado Water Conservation Board provided a grant to fund additional research to build on the work of the SPROWG group and the South Platte Storage Study.

A contractor team was selected in February 2019 and was led by an advisory committee comprised of members from the South Platte Basin Roundtable, the Metro Basin Roundtable, and other interested stakeholders. Additionally, a 90+ member task force, which was open to any interested stakeholder, provided input on the project. Meetings with the advisory committee and task force were held between March 2019 and February 2020. The study approach included gathering input from a broad and diverse group of stakeholders to ensure that all interests were heard and considered. A major part of the effort focused on outreach to municipal, industrial, agricultural, recreation and environmental interest groups. A final report was completed in February 2020.

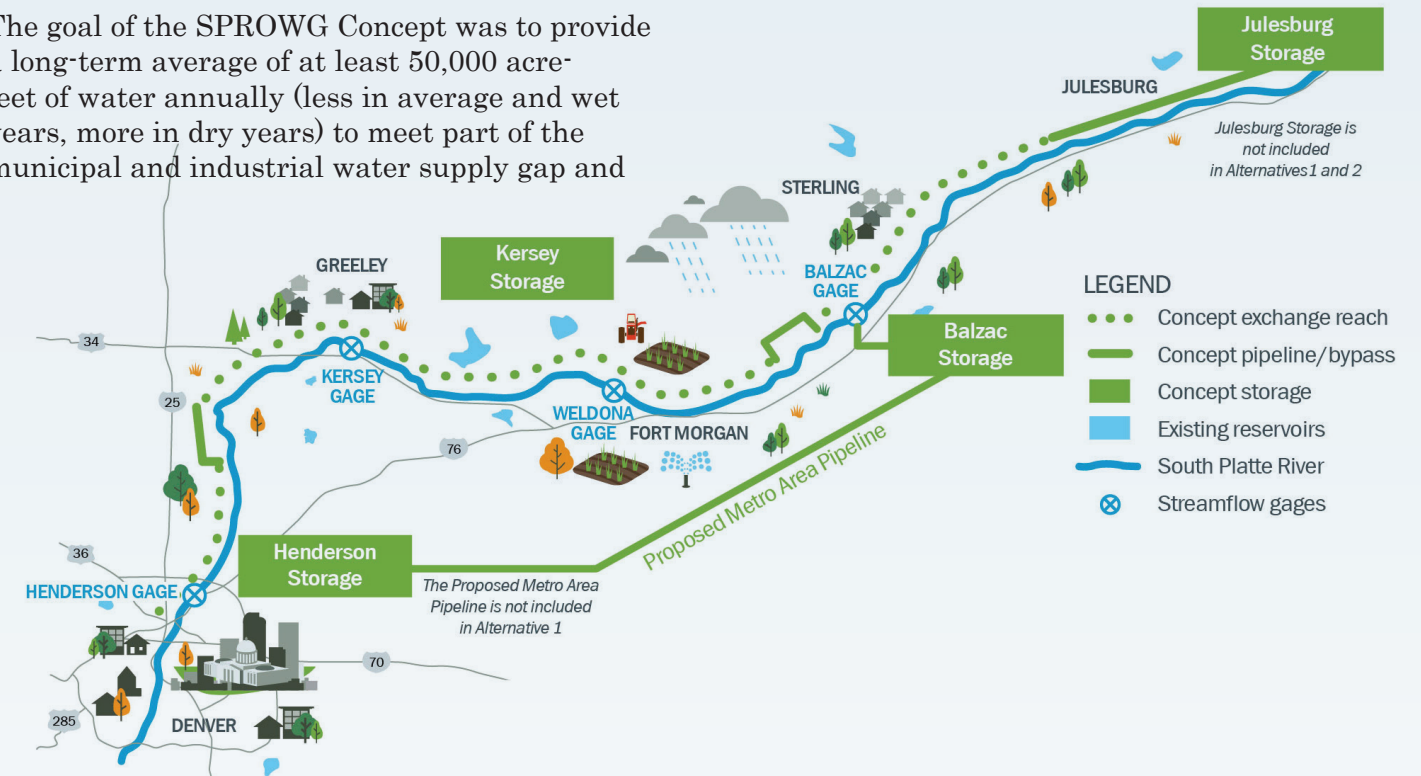
The SPROWG study investigated a holistic approach to meet diverse water needs in the Basin. Water supply concepts included multiple, operationally linked storage facilities (above and/or below ground) capable of holding more than 200,000 acre-feet of water in total at various locations between Denver and the state line. In addition, infrastructure was considered to transport the water to users within the South Platte Basin, and water treatment strategies were investigated. Potential organizational structures for developing and managing a regional water project were compared and contrasted.

SPROWG Concept Description

The study investigated four conceptual alternatives that were developed to explore a range of delivery goals and the infrastructure needed to meet the goals. The SPROWG Concept would store water that could be drawn from the unappropriated native flow, reusable return flows, and agricultural water derived from Alternative Transfer Methods (ATMs).

The goal of the SPROWG Concept was to provide a long-term average of at least 50,000 acre-feet of water annually (less in average and wet years, more in dry years) to meet part of the municipal and industrial water supply gap and

also additional supplies for the agricultural gap in the South Platte Basin. A significant portion is targeted for smaller rapidly growing communities along the I-25 and Highway 85 corridor between Denver and Greeley, larger communities in the metro Denver and northern Colorado, and smaller communities east of Greeley.



Alternative concepts included different storage volumes to meet a range of target demands. Water would be moved to demand areas using exchanges or a new pipeline from a potential reservoir just downstream of Fort Morgan to potential storage facilities at the northern end of the Denver Metropolitan area. Alternatives involving delivery of treated water to municipal participants assumed reverse osmosis treatment technology and brine disposal. Nonpoint source control measures were considered as companion strategies to improve source water quality. The chart below outlines the concepts evaluated and the differences between them.

SPROWG Concept Alternatives				
	Alternative 1 Refine the Initial Concept	Alternative 2 Balzac First	Alternative 3 Add Julesburg Storage	Alternative 4 Additional Delivery
Size of Infrastructure				
Henderson Storage (acre-ft)	45,000	40,000	40,000	85,000
Kersey Storage (acre-ft)	150,000	100,000	100,000	200,000
Balzac Storage (acre-ft)	25,000	75,000	75,000	95,000
Julesburg Storage (acre-ft)	-	-	8,000	29,000
Total Storage (acre-feet)	220,000	215,000	223,000	409,000
Balzac to Denver Pipeline Capacity (cfs)	-	30	30	30
Delivery Goals (wet and average years / dry years) - data in AF per year				
Total Municipal Delivery	42,000/82,000	45,000/85,000	50,000/90,000	65,000/115,000
Total Ag Delivery	3,000/10,000	3,000/10,000	8,000/22,000	14,000/35,000

Attachment D: Agenda for Advisory Committee Meetings



AND

Stantec
Leonard Rice Engineers
Sigler Communications
Doug Robotham
Holland & Hart

Meeting Agenda

1527 Cole Blvd, Suite 300
Lakewood, Colorado 80401

T: 303.239.5400
F: 303.239.5454

Prepared for: Lower South Platte Water Conservancy District
Project Title: South Platte Regional Water Development Study
Project No.: XXXXXXX

Purpose of Meeting: Advisory Committee Kickoff

Date: March 20, 2019

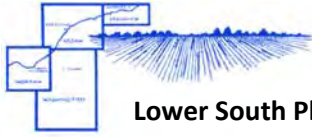
Meeting Location: Conference call

Time: 9:00 a.m.

Agenda Prepared by: Matt Lindburg, Brown and Caldwell

Agenda

1. Introductions
2. Brief review of project approach, schedule, and task assignments
3. Discuss “point person” for addressing questions from media and identify talking points
4. Review draft agenda for first Task Force meeting
5. Review current members of Working Groups – suggested additions or deletions?
6. Review preliminary list of entities to contact for outreach
7. Discuss security sensitivity for data collection activities
8. Discuss process for confirming/editing Guiding Principles



Lower South Platte Water
Conservancy District

Meeting Agenda



COLORADO
Colorado Water
Conservation Board
Department of Natural Resources

Prepared for: Lower South Platte Water Conservancy District

Project Title: South Platte Regional Water Development Concept Feasibility Study

Purpose of Meeting: Advisory Committee Meeting #2

Date: May 22, 2019

Meeting Location: Conference call

Time: 9:00 a.m.

Agenda Prepared by: Matt Lindburg
Brown and Caldwell

Agenda

1. Organizational Framework:
 - a. Report on progress
 - b. Review governance survey
 - c. Review the information to be discussed during the June 13th Task Force meeting
2. Review draft agenda for June 13th Task Force meeting
3. Revised Statement of Work for the South Platte Salinity Study
4. Guiding Principles: Discuss revisions
5. Communications Plan:
 - a. Discuss talking points document
 - b. Discuss fact sheet and get approval from committee on content so that design and formatting can move forward.
 - c. Discuss “rebranding” the SPRWDC
6. Outreach:
 - a. Review agenda and presentation topics for the May 30th and 31st Informational Meetings
 - b. Review input from M&I Work Group on contact list and survey
 - c. Review input from E&R Work Group on contact list and approach to outreach meetings
 - d. Review input from Agricultural Work Group on contact list and approach to outreach meetings

Next Advisory Committee meeting: July 24, 2019





Meeting Agenda

Prepared for: Lower South Platte Water Conservancy District

Project Title: South Platte Regional Opportunities Water Group Feasibility Study

Purpose of Meeting: Advisory Committee Meeting #3

Date: July 24, 2019

Meeting Location: Conference call

Time: 9:00 a.m.

Agenda Prepared by: Matt Lindburg
Brown and Caldwell

Agenda

1. Organizational Framework:
 - a. Organizational Framework Technical Memorandum I
 - b. Next steps
2. Communications Plan:
 - a. Discuss revisions to Key Messages document
3. Outreach:
 - a. Review input from M&I survey respondents
 - b. Review input from E&R outreach meetings
 - c. Review input from Agricultural outreach meetings
4. Review draft agenda for August 13th Task Force meeting
5. Review schedule and next steps

Next Advisory Committee meeting: September 18, 2019



Doug
Robotham



Meeting Agenda

Prepared for: Lower South Platte Water Conservancy District

Project Title: South Platte Regional Opportunities Water Group Feasibility Study

Purpose of Meeting: Advisory Committee Meeting #4

Date: September 18, 2019

Meeting Location: Conference call

Time: 9:00 a.m.

Agenda Prepared by: Matt Lindburg
Brown and Caldwell

Agenda

1. Communications Plan:
 - a. Report on outreach to media
 - b. Report on discussions with Colorado representatives in the Platte River Recovery Implementation Program
2. Organizational Framework:
 - a. Environmental/Recreation and Agriculture responses to survey
 - b. Discussion of selecting five potential frameworks
 - c. Next steps
3. Concept Refinement and Modeling:
 - a. Summary of M&I survey responses describing future water needs
 - b. Description of refinements to demands, infrastructure, and operations in each alternative
 - c. Next steps
4. Water Treatment Alternatives:
 - a. Summary of progress
 - b. Next steps
5. Review schedule and topics for Task Force meeting on October 10

Next Advisory Committee meeting: November 20, 2019





Meeting Agenda

Prepared for: Lower South Platte Water Conservancy District

Project Title: South Platte Regional Opportunities Water Group Feasibility Study

Purpose of Meeting: Advisory Committee Meeting #5

Date: November 20, 2019

Meeting Location: Leonard Rice / Conference call

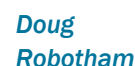
Time: 9:00 a.m.

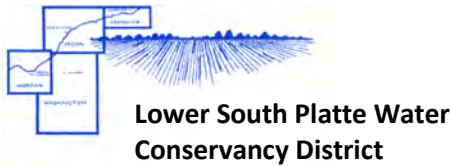
Agenda Prepared by: Matt Lindburg
Brown and Caldwell

Agenda

1. Parker WSD Long Term Water Planning Discussion
2. Communications Plan:
 - a. Review draft outline of Communications and Outreach Plan
3. Organizational Framework:
 - a. Discussion of progress and next steps
4. Concept Refinement and Modeling:
 - a. Description of current configuration of concept alternatives
 - b. Summary of modeling results and insights
 - c. Next steps
5. Water Treatment Alternatives:
 - a. Summary of progress
 - b. Next steps
6. Cost Estimates:
 - a. Discussion of progress, issues, and questions for the Advisory Committee
7. Project Report:
 - a. Discuss outline of Tech Memo describing outreach activities
8. Review schedule and topics for Task Force meeting on December 10:
 - a. Note: Follow up meeting with E/R stakeholders scheduled for November 22nd

Next Advisory Committee meeting: January 22, 2020





Meeting Agenda

Prepared for: Lower South Platte Water Conservancy District

Project Title: South Platte Regional Opportunities Water Group Feasibility Study

Purpose of Meeting: Advisory Committee Meeting #6

Date: January 22, 2020

Meeting Location: Conference call

Time: 9:00 a.m.

Agenda Prepared by: Matt Lindburg
Brown and Caldwell

Agenda

1. Water Treatment Alternatives:
 - a. Review results of the nonpoint treatment alternatives analysis

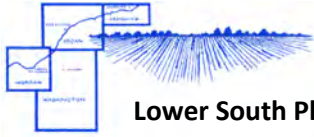
2. Project Report:
 - a. Review draft mock-up of proposed report format
 - b. Overview of the Final Report structure and text
 - c. Open discussion and Advisory Committee comments on the text
 - d. Review and discussion of Section 8: Recommendations

3. Review schedule and topics for Task Force meeting on February 13:
 - a. Note: A joint Metro and South Platte Basin Roundtable meeting is scheduled for February 11th, but we are planning to hold the Task Force meeting on the scheduled day (Feb 13) at Denver Water



*Doug
Robotham*

Attachment E: Agenda and Presentations for Task Force Meetings



Lower South Platte Water
Conservancy District

Meeting Agenda



COLORADO
Colorado Water
Conservation Board
Department of Natural Resources

Prepared for: Lower South Platte Water Conservancy District

Project Title: South Platte Regional Water Development Concept Feasibility Study

Purpose of Meeting: Task Force Kickoff

Date: April 3, 2019

Meeting Location: Northern Colorado Water Conservancy District
220 Water Ave
Berthoud, Colorado 80513

Time: 10:00 a.m.

Agenda Prepared by: Matt Lindburg, Brown and Caldwell
1527 Cole Blvd, Suite 300
Lakewood, Colorado 80401
303-239-54-00

Agenda

1. Introductions
2. Brief review of project background
3. Discuss Guiding Principles and process for confirming or editing
4. Expectations of the Task Force and subgroups
 - a. Task Force
 - b. Working Groups
 - c. Advisory Committee
5. Brief review of project approach, schedule, and task assignments
6. Discuss approach for outreach
 - a. Review steps in the process
 - b. Review list of entities for municipal, agricultural, and environmental outreach
 - c. Discuss the role of Working Group in outreach
7. Review proposed meeting schedule
8. Summarize near-term activities and topics for the next Task Force meeting



PROPOSED SCHEDULE FOR TASK FORCE AND ADVISORY COMMITTEE MEETINGS

Task Force meetings:

Meeting Number	Proposed Date	Proposed Topics
1	April 3, 2019	<ul style="list-style-type: none"> • Project kickoff • Planning for outreach with potential partners
2	June 13, 2019 (before Metro BRT)	<ul style="list-style-type: none"> • Description of organizational alternatives • Report on initial outreach activities with potential partners
3	August 13, 2019 (before SPBRT)	<ul style="list-style-type: none"> • Summary of findings from outreach activities • Description of potential project refinements
4	October 10, 2019 (before Metro BRT)	<ul style="list-style-type: none"> • Results of modeling project refinements • Description of treatment strategies
5	December 10, 2019 (before SPBRT) <i>May be rescheduled if December meeting is not held</i>	<ul style="list-style-type: none"> • Summary of cost estimate refinements • Description of outreach and education plan
6	February 13, 2020 (before Metro BRT)	<ul style="list-style-type: none"> • Presentation of draft-final report and discussion of Task Force comments (a draft report will be circulated to the Task Force in advance of this meeting)

Advisory Committee meetings:

Note: Advisory Committee meetings will be scheduled for Wednesdays at 9 am on the dates shown below.

- March 20, 2019
- May 22, 2019
- July 24, 2019
- September 18, 2019
- November 20, 2019
- January 22, 2020

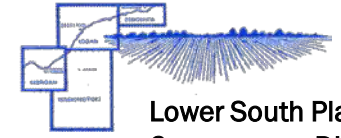


Doug
Robotham

TASK FORCE MEETING #1

South Platte Regional Water Development Concept Feasibility Study

April 3, 2019



Lower South Platte Water
Conservancy District

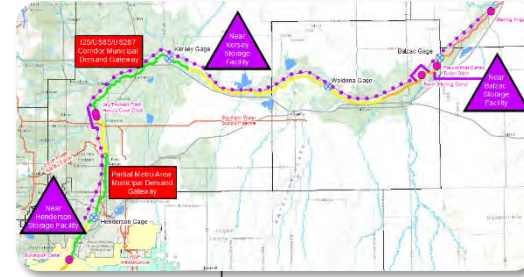


COLORADO
Colorado Water
Conservation Board
Department of Natural Resources





South Platte Basin Implementation Plan (SPBIP) described the original “Conceptual Future In-Basin Multipurpose Project” in Section 4.6.2



South Platte Regional Opportunities Working Group (SPROWG)

advanced the SPBIP concept and developed the initial SPRWDC

South Platte BIP Phase 2

Dec 2013 – April 2015

June 2015 – May 2018

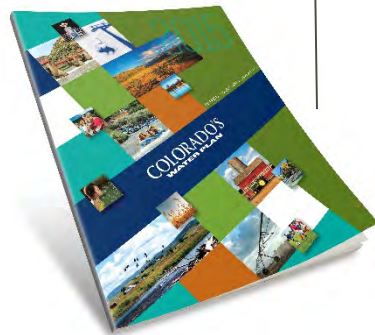
Date TBD

May 2013 – Nov 2015

Jan 2017 – Dec 2017

June 2018 – Oct 2018

Mar 2019 – Mar 2020



Colorado's Water Plan voiced the need for storage and collaborative projects



South Platte Storage Study (SPSS) identified potential South Platte River storage projects



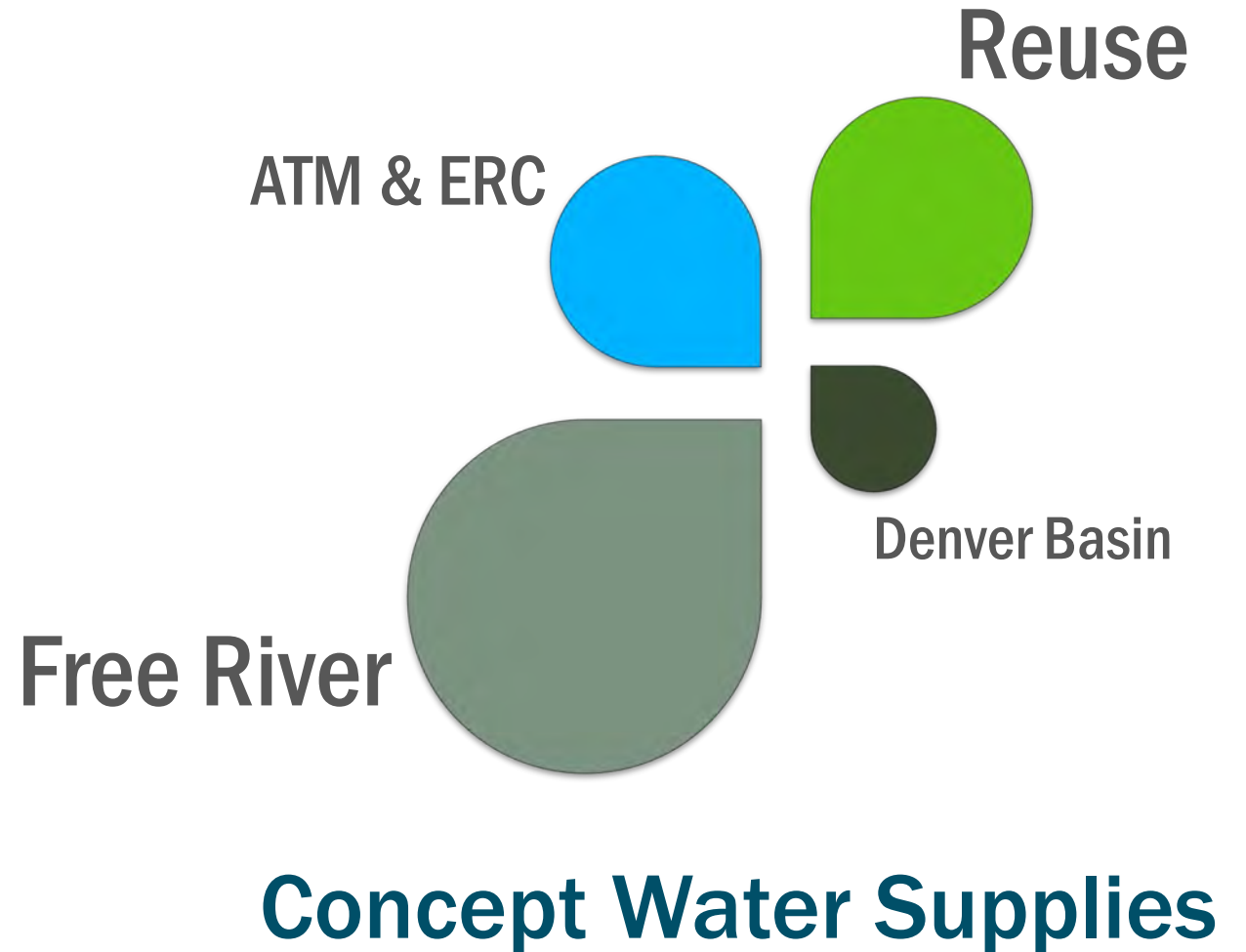
SPRWDC Task Force developed scope of study and grant application for feasibility study



SPRWDC Feasibility Study will conduct outreach, explore organizational alternatives, and refine the concept

Initial Concept Evaluation

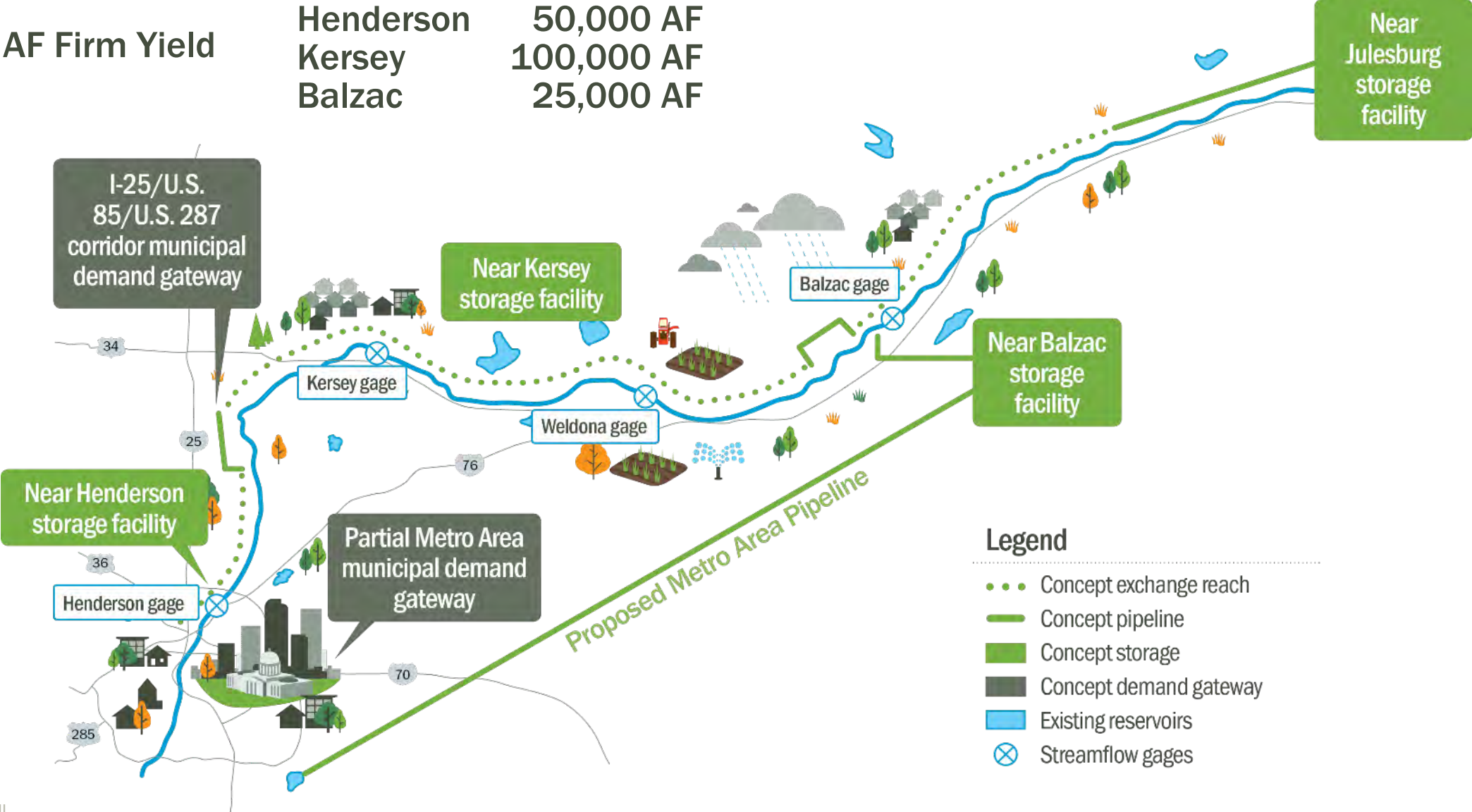
- Initially performed high-level analyses with reservoirs operating independently
- Gradually incorporated components to maximize use of water supplies:
 - Conjunctive reservoir operations
 - Additional infrastructure
 - Enhanced exchange capacity



Initial concept evaluation results:

50,000 AF Firm Yield

Storage:	
Henderson	50,000 AF
Kersey	100,000 AF
Balzac	25,000 AF

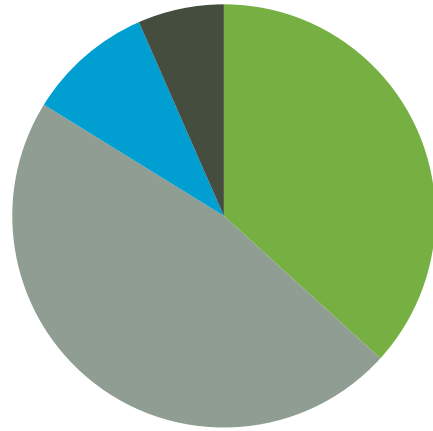


- Legend**
- Concept exchange reach
 - Concept pipeline
 - Concept storage
 - Concept demand gateway
 - Existing reservoirs
 - ⊗ Streamflow gages

Single Storage Facility Concept

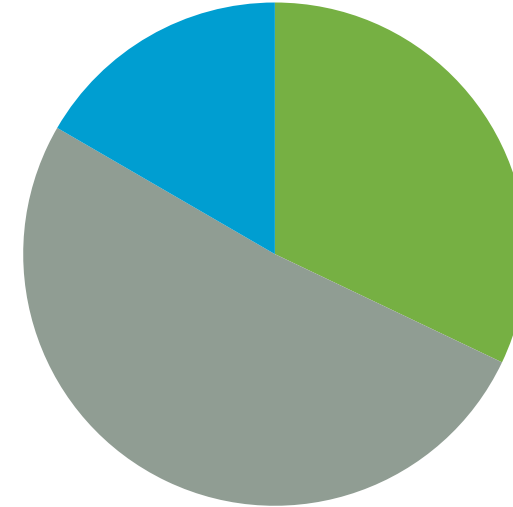
Three Storage Facilities Concept

Project Supplies

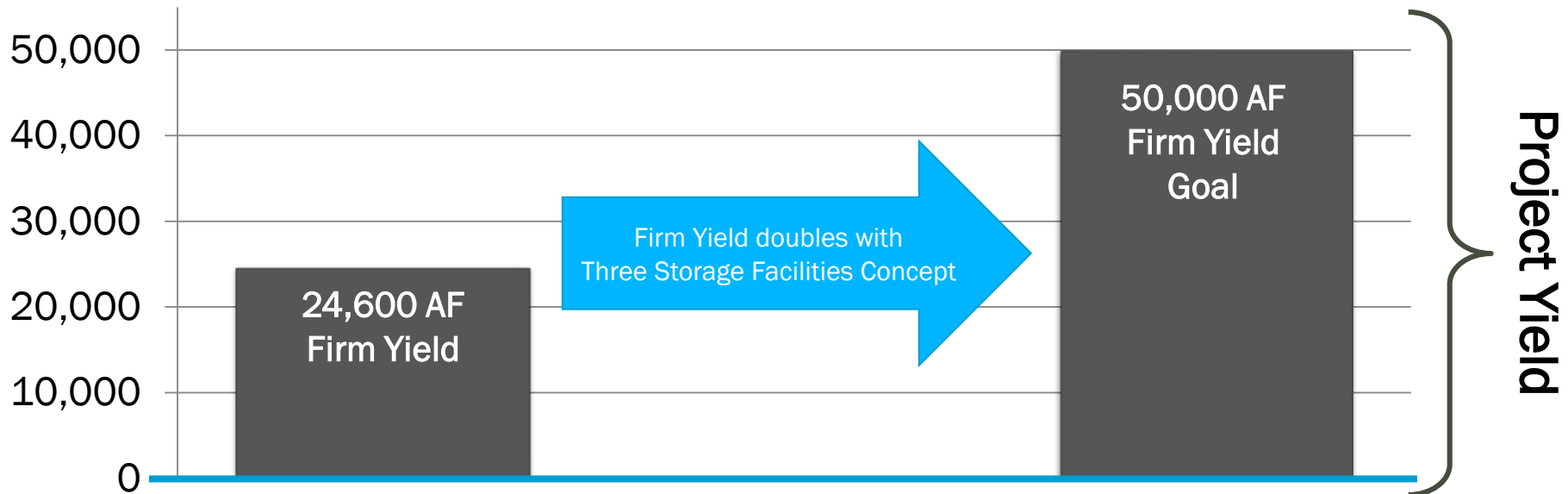


- Legally reusable supplies
- Free River
- ATMs/Excess recharge credits
- Denver Basin non-tributary ground water supplies

Total Supplies = 47,000 AF
Annually on Average



Total Supplies = 62,500 AF
Annually on Average



Guiding Principles



Principles describing what the SPRWDC *IS*

The Guiding Principles are in DRAFT form and are presented for discussion purposes only. The Principles will be refined as necessary based on feedback from the Task Force and other stakeholders during project development.

1. **The SPRWDC will advance the goals of the South Platte/Metro Basin Implementation Plan (BIP) and Colorado's Water Plan.** Specifically, the SPRWDC will be based on and expand the BIP and the Conceptual Future In-Basin Multipurpose Project described in Section 4.6.2.
2. The SPRWDC intends to provide at least **50,000 acre-feet of yield** to meet part of the projected municipal and industrial water supply project gap in the South Platte basin quantified in SWSI 2010 (note that the yield estimate may be refined during project development). **A significant portion of this yield is targeted for smaller but rapidly growing communities along the I-25, Highway 85 corridor between Denver and Greeley and also larger communities in the Denver Metro area and northern Colorado.** The project will also explore providing supplies to smaller communities east of Greeley.

Principles describing what the SPRWDC *IS*

The Guiding Principles are in DRAFT form and are presented for discussion purposes only. The Principles will be refined as necessary based on feedback from the Task Force and other stakeholders during project development.

3. The SPRWDC intends to meet a **portion of the agricultural gap** identified in the BIP and in Colorado's Water Plan.
4. The SPRWDC will identify and incorporate **strategies to address environmental and recreational needs** in parallel with closing a portion of the supply gaps.
5. The SPRWDC intends to **enhance the ability to conduct alternative water transfers**, thus reducing the need for traditional buy-and-dry transfers in the South Platte basin.

Principles describing what the SPRWDC *IS*

The Guiding Principles are in DRAFT form and are presented for discussion purposes only. The Principles will be refined as necessary based on feedback from the Task Force and other stakeholders during project development.

6. The SPRWDC will utilize different **sources of water** available in the South Platte basin and manage them conjunctively to achieve an overall reliable yield beyond what an individual source could produce. The sources of water include **unappropriated surface water** (a.k.a. free river), water derived from **alternative transfers, excess recharge credits, reusable supplies**, and Denver Basin groundwater (if needed).
7. The SPRWDC is intended to help water supply organizations and water users in the South Platte basin continue long-standing efforts to **maximize the use of in-basin supplies**.
8. The SPRWDC intends to improve integration of **water quality** and quantity planning and management activities as identified in the Colorado Water Plan and South Platte Basin Implementation Plan.

Principles describing what the SPRWDC *IS NOT*

The Guiding Principles are in DRAFT form and are presented for discussion purposes only. The Principles will be refined as necessary based on feedback from the Task Force and other stakeholders during project development.

9. The SPRWDC is **not** intended to be **a substitute for existing or planned projects**. It is a new concept for addressing water supply needs in the South Platte Basin beyond what will be met with existing or planned projects (often referred to Identified Projects and Processes or IPPs).
10. The SPRWDC is **not** intended to be used to deliver water developed from the **permanent dry up of irrigated lands** in the South Platte basin.
11. The SPRWDC is **not** intended to **store supplies** from an existing or new **transmountain diversion project** (though it will provide a means to utilize unused reusable supplies from transmountain diversions).

Comments and edits on the Guiding Principles

- Please email Matt Lindburg (Brown and Caldwell) by Friday, April 19th with initial comments or suggested edits at mlindburg@brwnncald.com

Expectations of the Task Force and Subgroups



- **Task Force**

- Stay informed
- Provide succinct feedback
- Talk to Advisory Committee members

- **Work Groups**

- Guidance and assistance on outreach
- Participate in outreach meetings
- Provide feedback on work products

- **Advisory Committee**

- Participate in bi-monthly calls
- Participate in Task Force meetings
- Provide direct guidance to consulting team
- Participate in outreach meetings
- Provide feedback on work products



Group membership

- Task Force
 - Currently 66 members
- Work Groups
 - Municipal/Industrial: 16 members
 - Agricultural: 15 members
 - Environmental and Recreational: 6 members
 - Communications: 5 members
- Advisory Committee
 - 14 members

Work Groups

Municipal and Industrial Work Group Members

Last Name	First Name	Organization
Anglund	Erik	Anadarko
Belanger	Laura	Western Resources Advocates
Brosemer	Donna	City of Greeley
Chambers	Sean	City of Greeley
Cronin	Sean	SVLHWCD
Darling	Lisa	SMWSA
Davis	Alex	Aurora Water
Frank	Joe	LSPWCD
Hall	Jim	Northern Water
Howard	Larry	SPBRT
Hunt	Emily	City of Thornton
Jewell	Dawn	Aurora Water
Kopytkovskiy	Marina	Parker Water and Sanitation District
Leach	Dale	Telesto Solutions Inc.
Parachini	Dick	Interested Citizen
Peters	Bob	Denver Water

Agricultural Work Group Members

Last Name	First Name	Organization
Baumgartner	Rod	Henrylyn Ditch Company
Cronin	Sean	SVLHWCD
Daniel	Deb	RRWCD
Eckhardt	Frank	Central Colorado WCD
Frank	Joe	LSPWCD
Funk	Alex	CWCB
Gerk	Bruce	South Platte Basin Roundtable
Hall	Jim	Northern Water
Jackson	Brian	Environmental Defense Fund
Parachini	Dick	Interested Citizen
Peters	Bob	Denver Water
Ray	Randy	Central Colorado WCD
Shimmin	Mike	SPBRT
Wind	Allyn	LP&B / Pioneer
Yahn	Jim	North Sterling Irrigation

Work Groups

Environmental and Recreational Work Group Members

Last Name	First Name	Organization
Belanger	Laura	Western Resources Advocates
Citron	Aaron	TNC
Conovitz	Pete	Colorado Parks & Wildlife
Cronin	Sean	SVLHWCD
Frank	Joe	LSPWCD
Jackson	Brian	Environmental Defense Fund

Communications Work Group Members

Last Name	First Name	Organization
Cronin	Sean	SVLHWCD
Davenhill	Casey	Colorado Watershed Association
Frank	Joe	LSPWCD
Gerk	Bruce	South Platte Basin Roundtable
Williams	Lacey	South Platte/Metro Roundtables

Advisory Committee

Last Name	First Name	Organization
Belanger	Laura	Western Resources Advocates
Cronin	Sean	SVLHWCD
Darling	Lisa	SMWSA
Davenhill	Casey	Colorado Watershed Association
Frank	Joe	LSPWCD
Gerk	Bruce	South Platte Basin Roundtable
Hall	Jim	Northern Water
Jewell	Dawn	Aurora Water
Kopytkovskiy	Marina	Parker Water and Sanitation District
Parachini	Dick	Interested Citizen
Peters	Bob	Denver Water
Sobieski	Kara	WWG
Varra	Garrett	SP BRT/Varra Companies
Yahn	Jim	North Sterling Irrigation

Approach, Assignments, and Schedule



Project Approach, Schedule, and Assignments

- Task 1: Concept Refinement



- Subtask 1.1: Organizational Framework/Institutional Structure



- Subtask 1.2: Municipal and Industrial Demands



- Subtask 1.3: Agricultural Demands and Supplies



- Subtask 1.4: Environmental and Recreational Demands



- Subtask 1.5: SPRWDC Refinement and Modeling

- Task 2: Infrastructure Issues



- Subtask 2.1: Water Treatment Strategies



- Subtask 2.2: Updated Cost Estimates

Project Approach, Schedule, and Assignments

- Task 3: Communication and Reporting



Stantec



- Subtask 3.1: Outreach and Education



- Subtask 3.2: Final Report

- Task 4: Project Coordination and Management

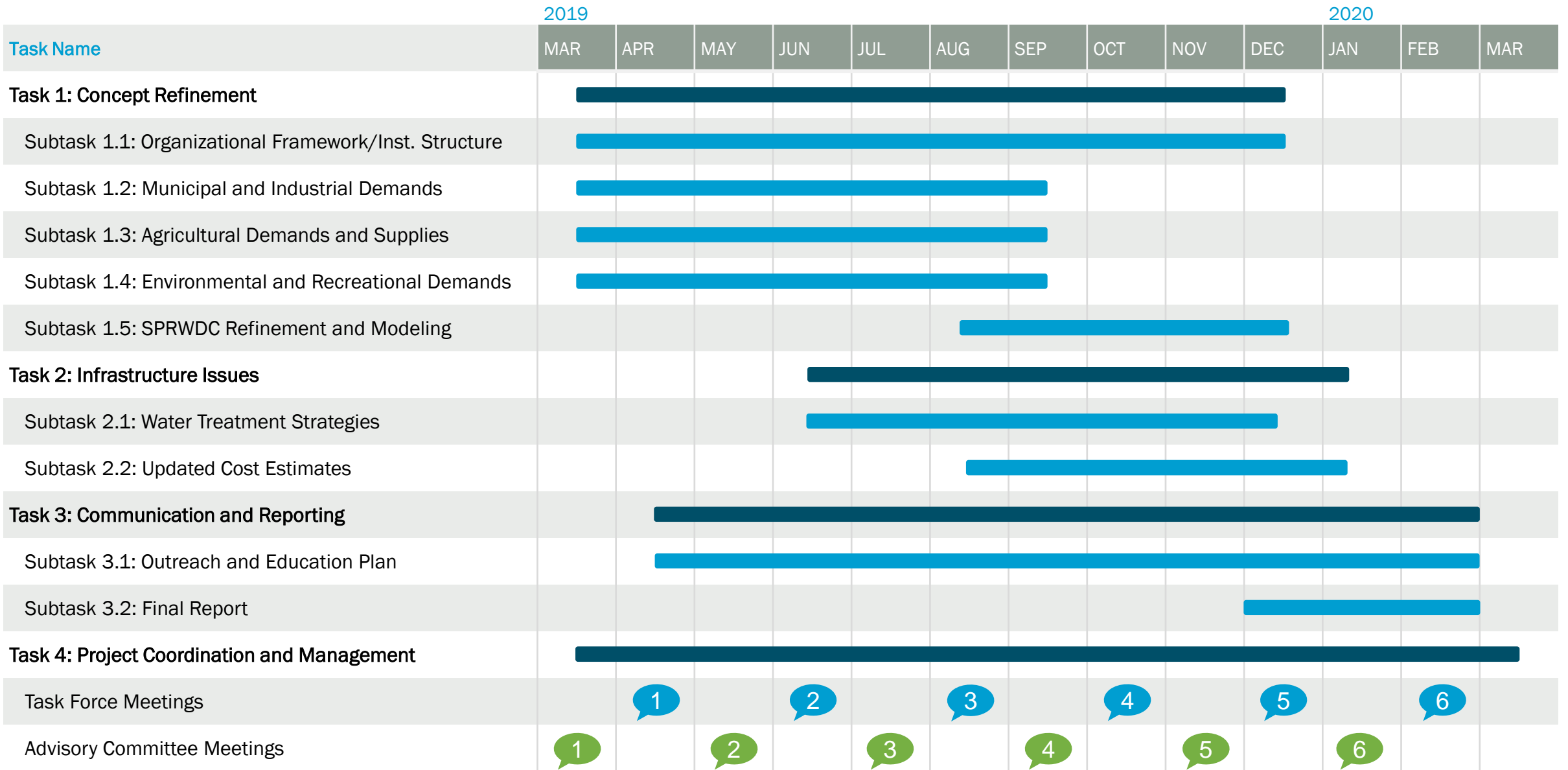


*Doug
Robotham*

- Subtask 4.1: Task Force



- Subtask 4.2: Project Management



Task Force meeting schedule and proposed topics

Meeting Number	Proposed Date	Proposed Topics
1	April 3, 2019	<ul style="list-style-type: none"> • Project kickoff • Planning for outreach with potential partners
2	June 13, 2019 (before Metro BRT)	<ul style="list-style-type: none"> • Description of organizational alternatives • Report on initial outreach activities with potential partners
3	August 13, 2019 (before SPBRT)	<ul style="list-style-type: none"> • Summary of findings from outreach activities • Description of potential project refinements
4	October 10, 2019 (before Metro BRT)	<ul style="list-style-type: none"> • Results of modeling project refinements • Description of treatment strategies
5	December 10, 2019 (before SPBRT) May be rescheduled if December meeting is not held	<ul style="list-style-type: none"> • Summary of cost estimate refinements • Description of outreach and education plan
6	February 13, 2020 (before Metro BRT)	<ul style="list-style-type: none"> • Presentation of draft-final report and discussion of Task Force comments (a draft report will be circulated to the Task Force in advance of this meeting)

Approach to Outreach



Municipal Outreach



Municipal Outreach

- The M&I outreach list currently includes:
 - 70 water providers
 - 10 industrial entities
- M&I entities by region:
 - 24 Denver Metro entities
 - 24 entities along the I-25/US 85/US 287 corridor
 - 7 entities in the Lower South Platte region
 - 13 entities in the Middle South Platte region
 - Other entities that have a wide reach (like the Colorado Rural Water Association)
- The list will be reviewed by the M&I Work Group
 - Work Group members will be encouraged to assist with outreach

Agricultural Outreach



**Summarize Existing
Information on
Agricultural Needs**



**Meet with Agricultural
Stakeholders to
Identify Needs and
Opportunities**

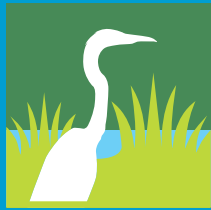


**Refine Concept
Based on Input**

Agricultural Outreach

- Outreach will take place via three meetings with agricultural water users
- Meetings will be held with entities in:
 - District 2 (Denver to Kersey)
 - Including tributaries (Districts 3, 4, 5, and 6)
 - District 1 (Kersey to Balzac)
 - District 64 (Balzac to state line)
- Each meeting will include 7 to 10 agricultural water users from each District
- The list of water users will be reviewed by the Agricultural Work Group.
 - Members of the Work Group will be encouraged to assist with outreach and attend the meetings

Environmental/Recreational Outreach



**Identify E&R
Attributes Likely to
Benefit**



**Meet with E&R
Stakeholders to
Identify Needs and
Opportunities**



**Identify Alignments
Between E&R Needs
and Regional
Strategies**

Environmental and Recreational Outreach

- Outreach will take place via three meetings with environmental and recreational representatives
- Each meeting will include 7 to 12 representatives of various environmental/recreational organizations, state/federal agencies, etc.
- The list of representatives will be reviewed by the Environmental/Recreational Work Group.
 - Members of the Work Group will be encouraged to assist with outreach and attend the meetings

Near-term Activities



Preparation for Outreach

- Work Groups to assist with finalizing lists of entities for outreach
 - Each Work Group member should identify a few entities for personal contact
- Research by consulting team:
 - Identify characteristics of successful regional water organizations
 - Identify key project benefits
 - Will work with the Communications Work Group and others
 - Compile existing information on ag. water needs, ATMs, etc.
 - Compile existing information on environmental and recreational attributes, opportunities, and needs
- Develop survey questions



Outreach activities

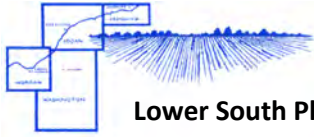
- Municipal/Industrial
 - Invite entities in early May, Work Group members follow up on invitation
 - Develop survey questions by early May, Work Group members to review questions
 - Hold informational meeting(s) in late May
 - Review plan for informational meeting with Advisory Committee in mid-May
 - Conduct survey immediately thereafter during June
- Agricultural and Environmental/Recreational
 - Invite entities in early May, Work Group members follow up on invitation
 - Develop approach to meetings in early May, Work Group members to review approach
 - Conduct meetings in June

Topics for Next Task Force Meeting

- Description of organizational alternatives
- Report on initial outreach activities with potential partners
- Next Task Force meeting scheduled for June 13th (before the Metro BRT meeting)
 - Will send out meeting location, agenda, etc. at a later date.



Thank you.
Questions?



Lower South Platte Water
Conservancy District

Meeting Agenda



COLORADO
Colorado Water
Conservation Board
Department of Natural Resources

Prepared for: Lower South Platte Water Conservancy District

Project Title: South Platte Regional Water Development Concept Feasibility Study

Purpose of Meeting: Task Force Meeting #2

Date: June 13, 2019

Meeting Location: Aurora Municipal Center
15151 E. Alameda Parkway
Aurora, Colorado 80012

Time: 1:00 p.m.

Agenda Prepared by: Matt Lindburg, Brown and Caldwell
1527 Cole Blvd, Suite 300
Lakewood, Colorado 80401
303-239-5400

Agenda

1. Introductions
2. Overview of activities since the last Task Force meeting
3. Review revisions to Guiding Principles
4. Organizational Framework
 - a. Review study objectives, expected outcomes, and approach
 - b. Description of potential organizational alternatives and their characteristics
 - c. Review of the survey questions that are being used to gather information from stakeholders
 - d. Questions, comments, and discussion
5. Update on outreach activities
 - a. Describe the Fact Sheet
 - b. Report on the Informational Meetings on May 30th and 31st
 - c. Discuss next steps on outreach to municipal and industrial stakeholders
 - d. Discuss current and upcoming outreach with agricultural stakeholders
 - e. Discuss current and upcoming outreach with environmental and recreational stakeholders
6. Summarize near-term activities and topics for the next Task Force meeting



PROPOSED SCHEDULE FOR TASK FORCE AND ADVISORY COMMITTEE MEETINGS

Task Force meetings:

Meeting Number	Proposed Date	Proposed Topics
1	April 3, 2019	<ul style="list-style-type: none"> • Project kickoff • Planning for outreach with potential partners
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6	February 13, 2020 (before Metro BRT)	<ul style="list-style-type: none"> • Presentation of draft-final report and discussion of Task Force comments (a draft report will be circulated to the Task Force in advance of this meeting)

Advisory Committee meetings:

Note: Advisory Committee meetings will be scheduled for Wednesdays at 9 am on the dates shown below.

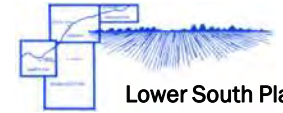
- March 20, 2019
- May 22, 2019
- July 24, 2019
- September 18, 2019
- November 20, 2019
- January 22, 2020



Doug
Robotham

TASK FORCE MEETING #2

South Platte Regional Opportunities Water Group (SPROWG) Feasibility Study



Lower South Platte Water
Conservancy District

June 13, 2019



Activities Since Last Task Force Meeting

- Revised Guiding Principles
- Researched Organizational Frameworks
- Prepared for and Conducted Outreach Activities
- Other happenings
 - Task Force has expanded to 80
 - Advisory Committee meeting on May 22
 - Name change: SPROWG (2.0)
 - South Platte Regional Opportunities Water Group



Revisions to Guiding Principles



Principles describing what SPROWG *IS*

The Guiding Principles describe the framework for developing the SPROWG concept. The Principles may be modified as the project progresses. They are not presented in any specific order or priority.

1. **SPROWG will advance the goals of the South Platte/Metro Basin Implementation Plan (BIP) and Colorado's Water Plan.** Specifically, SPROWG will be based on and expand the BIP and the Conceptual Future In-Basin Multipurpose Project described in Section 4.6.2. It is envisioned to include infrastructure such as reservoirs, pipelines, pump stations, canals, diversion structures, water treatment plants, and aquifer storage and recovery facilities, and it will seek to maximize the use of available exchange potential in the South Platte River to minimize long-term operational costs. It will operate within Colorado's water law and prior appropriation system.

Principles describing what SPROWG *IS*

The Guiding Principles describe the framework for developing the SPROWG concept. The Principles may be modified as the project progresses. They are not presented in any specific order or priority.

2. The SPROWG concept intends to provide at least **50,000 acre-feet of yield** to meet part of the projected municipal and industrial water supply project gap in the South Platte basin quantified in Colorado's Water Plan (note that the yield estimate may be refined during project development). **A significant portion of this yield is targeted for smaller but rapidly growing communities along the I-25, Highway 85 corridor between Denver and Greeley and also larger communities in the Denver Metro area and northern Colorado.** The project will also explore providing supplies to smaller communities east of Greeley.

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4. The SPROWG concept will identify and incorporate **strategies to address environmental and recreational needs** in parallel with closing a portion of the supply gaps.
5. The SPROWG concept intends to **enhance the ability to conduct alternative water transfers**, thus reducing the need for traditional buy-and-dry transfers in the South Platte basin. Alternative water transfer strategies and amounts will be informed by agricultural water user preferences and input from local communities.

Principles describing what SPROWG *IS*

The Guiding Principles describe the framework for developing the SPROWG concept. The Principles may be modified as the project progresses. They are not presented in any specific order or priority.

6. The SPROWG concept will utilize different **sources of water** available in the South Platte basin and manage them conjunctively to achieve an overall reliable yield beyond what an individual source could produce. The sources of water include **unappropriated surface water** (a.k.a. free river), water derived from **alternative transfers, excess recharge credits, reusable supplies**, and groundwater from the Denver Basin (if needed) and other aquifers.
7. The SPROWG concept is intended to help water supply organizations and water users in the South Platte basin continue long-standing efforts to **maximize the use of in-basin supplies**.
8. The SPROWG concept intends to improve integration of **water quality** and quantity planning and management activities as identified in the Colorado Water Plan and South Platte Basin Implementation Plan.

Principles describing what SPROWG *IS NOT*

The Guiding Principles describe the framework for developing the SPROWG concept. The Principles may be modified as the project progresses. They are not presented in any specific order or priority.

9. The SPROWG concept is **not** intended to be **a substitute for existing or planned projects**. It is a new concept for addressing water supply needs in the South Platte Basin beyond what will be met with existing or planned projects (often referred to Identified Projects and Processes or IPPs).
10. The SPROWG concept is **not** intended to be used to deliver water developed from the **permanent dry up of irrigated lands** in the South Platte basin.
11. The SPROWG concept is **not** intended to **store supplies** from an existing or new **transmountain diversion project** (though it will provide a means to utilize unused reusable return flows from transmountain diversions).


Organizational Framework



SPROWG 2.0 Task 1: Concept Refinement

Subtask 1.1: Organizational Framework/Institutional Structure

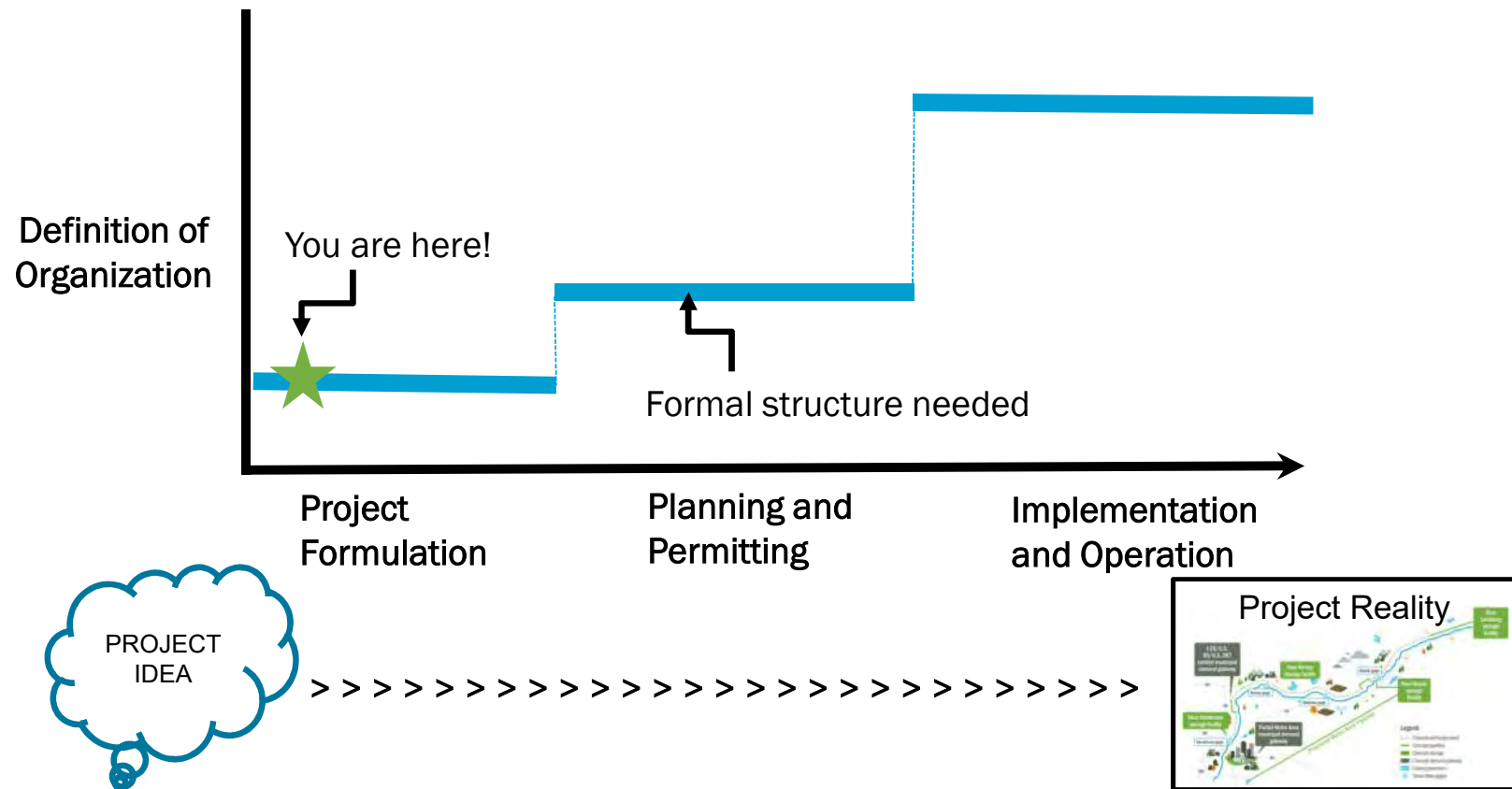
1. Study Objectives
2. Study Approach
3. Identified Organizational Characteristics/Examples
4. Review Related Survey Questions



Organizational Framework

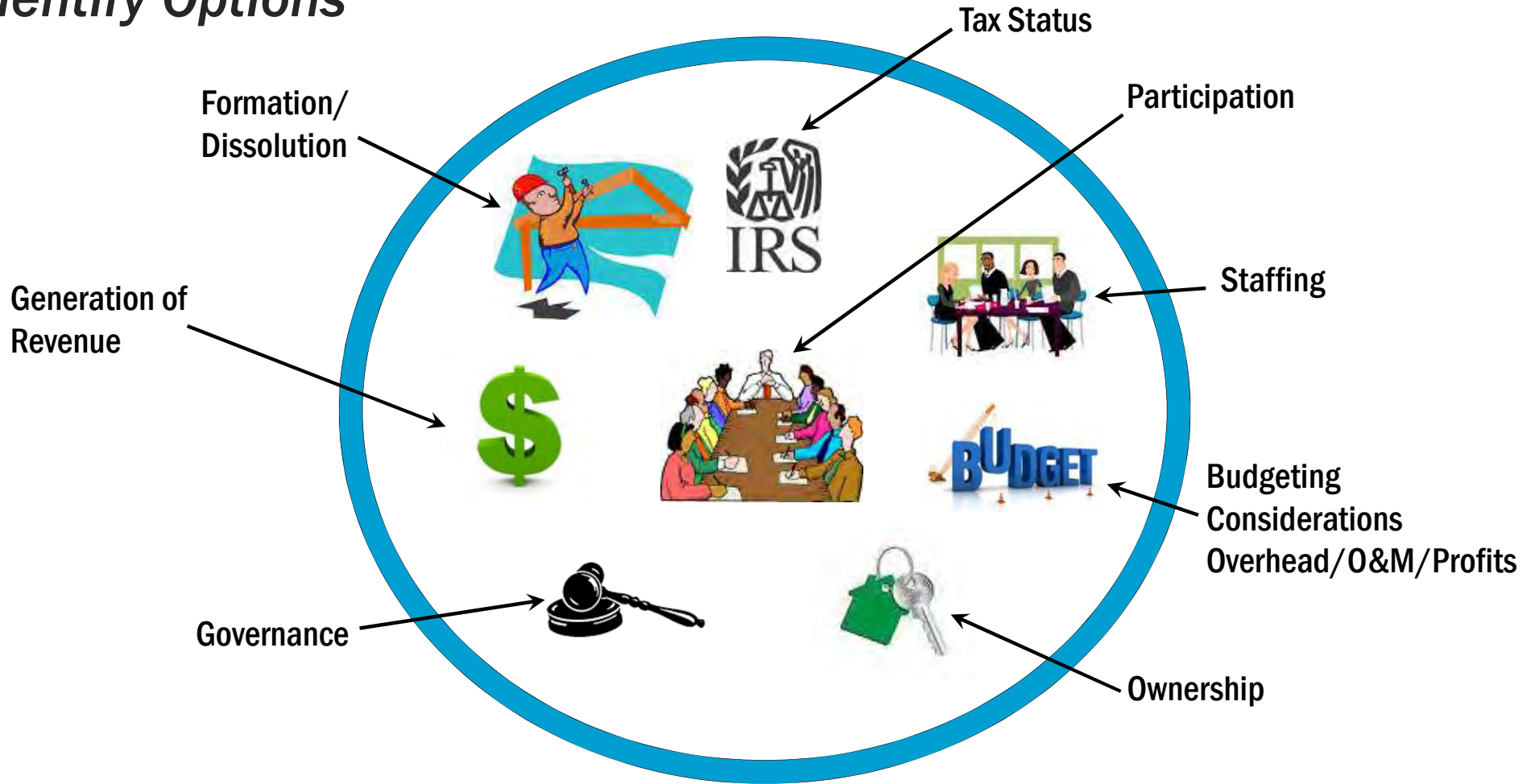
Study Objectives

Selecting and Organizational Framework is a *Process*



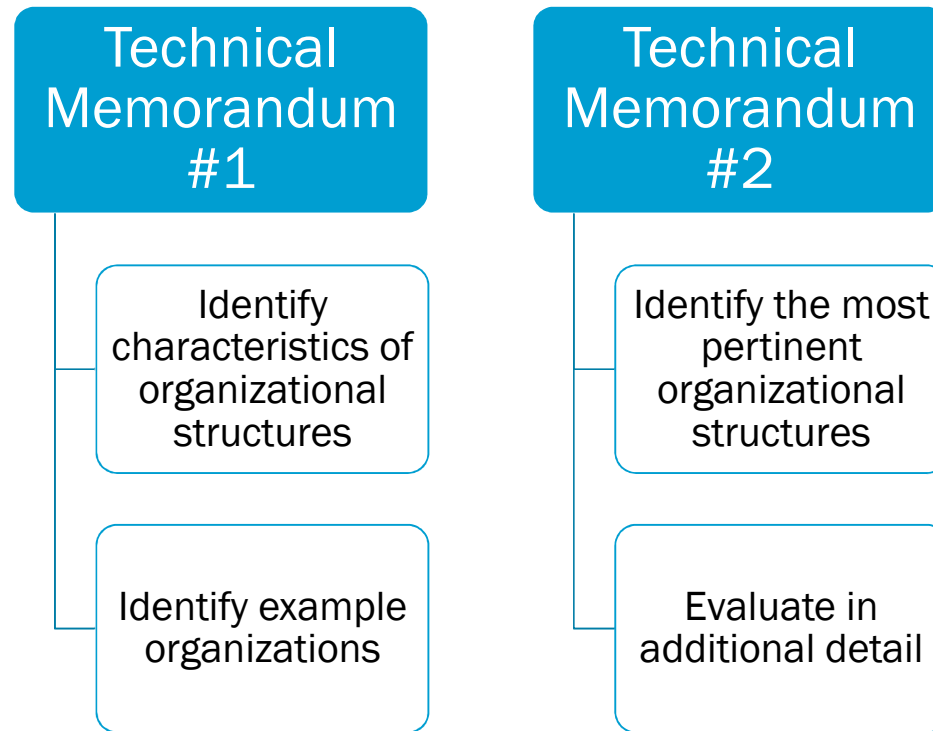
SPROWG 2.0: Organizational Framework


Identify Options



SPROWG 2.0: Organizational Framework

Deliverables





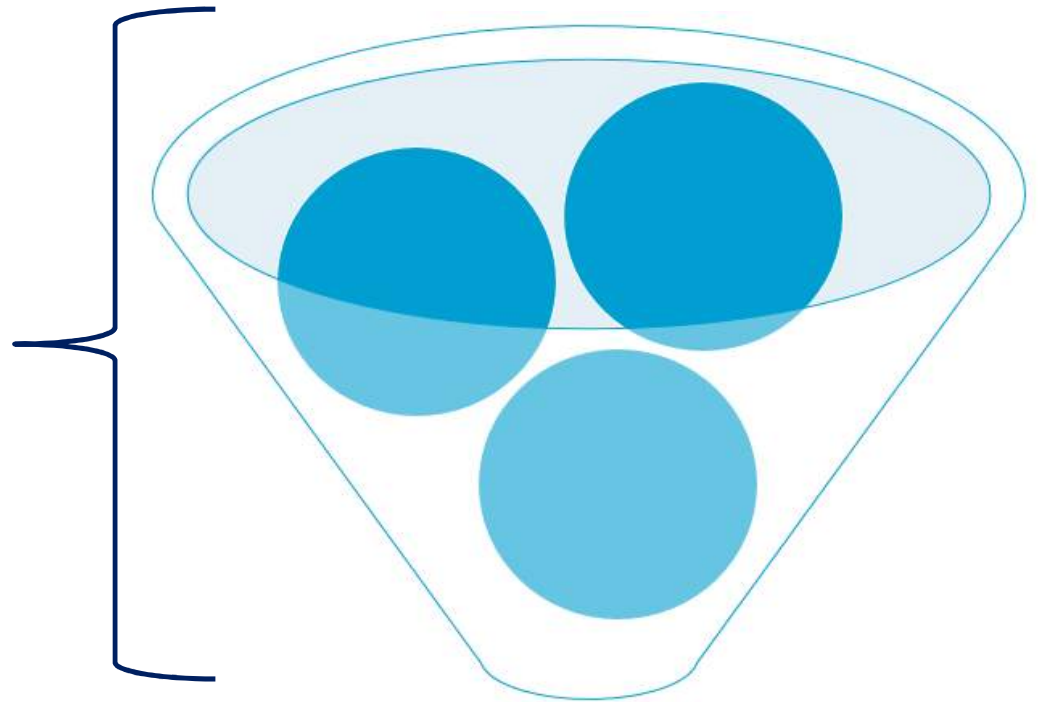
Organizational Framework

Study Approach

SPROWG 2.0: Organizational Framework Approach

Step One:

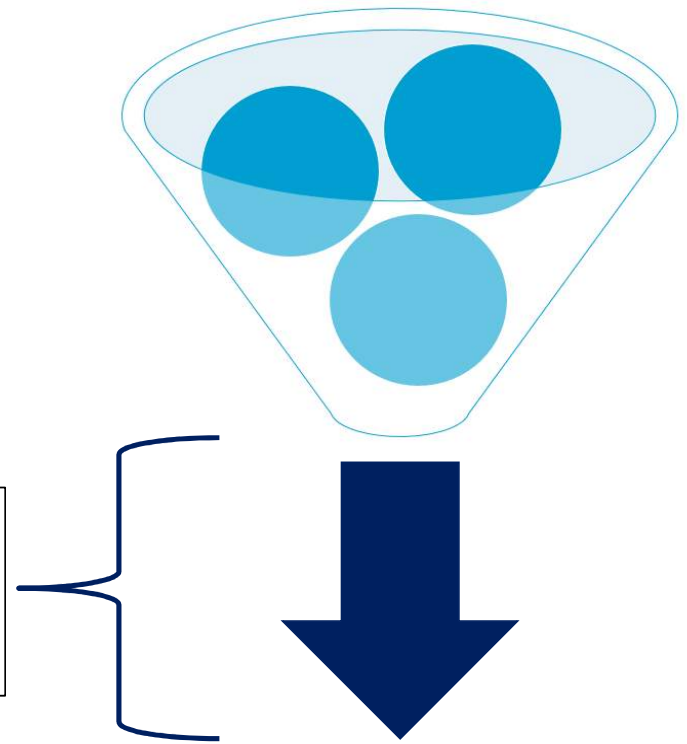
- Identify Organizational Structures
- Identify Common Characteristics



SPROWG 2.0: Organizational Framework Approach

Step Two:

- Solicit and receive feedback on characteristics

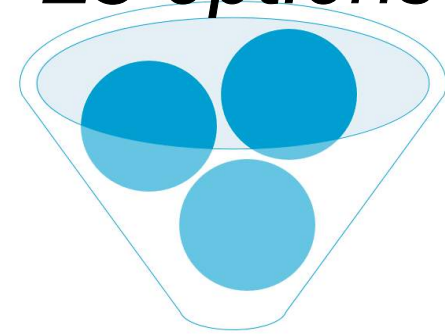


SPROWG 2.0: Organizational Framework Approach

Step Three:

- Apply feedback and identify most relevant organizational structures
- Evaluate and document constraints and opportunities

13 options



5 options





Organizational Framework

Organizational Framework Characteristics

Step One: Organizational Framework Characteristics

Applicable Characteristics													
Method of Formation		Methods of Generating Revenue		Options for Governance		Ownership Considerations		Distribution of Profits		Tax Status		Staffing	
Act of Legislature		Tax/Fee Collection		Board Elected by Voters in benefitting		Organization owns assets		Based on Equity Ownership		Taxable		Hired Employees of Organization	
Local Government-- Judicial Creation		Mill Levy		Board Appointment by Elected Officials		Members/participants have Ownership interest in assets through equity in the organization		Based on use of Facilities or Services		Tax-Exempt		Hired through Independent Contracts	
Petition for Formation		Member Assessments		Board Appointed or elected by Participating Entities		Members/participants have ownership interest in assets through use of facilities and services		No Distributions		Government		Consultants	
Inter-governmental Agreement		Grants and Loans		Weighted Voting of Members/Participants Based on investment or in proportion to use of facilities		Participating Entities own assets and enter into use agreement		Other: Noted		Other: Noted		Staff Sharing Between Participants	
Memorandum of Understanding		Equity investment		Equal Voting of All Members/Participants								Other: Noted	
Other: Noted		Other: Noted		Other: Noted									

Step One: *Organizational Framework Options*

†

Non-Governmental Entities
For-profit Corporation
Non-profit Corporation
Memorandum of Understanding to Cooperate
Cooperative
Unincorporated Association
Partnership/ Limited Liability Company

Governmental Entities Only
Existing Government
Regional Water Authority
Project Specific Water Authority
Water Conservancy District
Water Conservation District
Special District
Enterprise



Organizational Framework

Organizational Framework Survey Questions

Step Two: Receive Feedback

Survey Questions:

Purpose:

Receive input from potential participants regarding preferences and requirements for participation in a regional organization.

Goal:

Identify the five most relevant organizational structures for further review (TM 2)

Topics:

- Tax Status
- Revenue Generation
- Governance
- Participation
- Staffing
- Ownership

Step Two: Receive Feedback

Survey Questions:

Question Formats:

- “Rate the following ... in order of importance to your organization.”
- “My organization could support ... (check all that apply).”

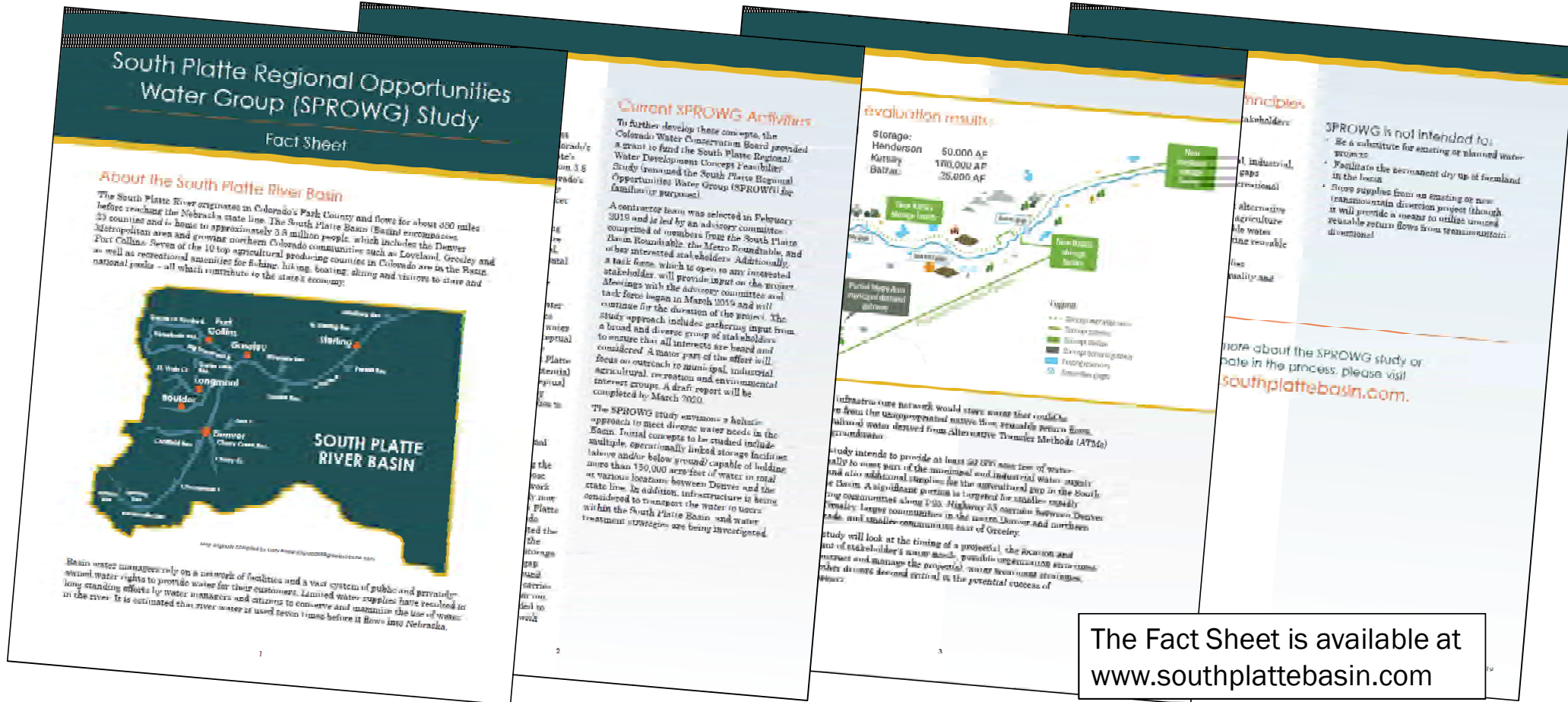
Organizational Framework: Approach and Process

Questions/Comments

Update on Outreach Activities






The team developed a Fact Sheet to describe SPROWG



Informational Meetings

- Meetings held on May 30th and 31st
 - ~40 attendees on May 30th in Berthoud
 - ~28 attendees on May 31st in Aurora
- General agenda
 - Overview of SPROWG
 - Guiding Principles
 - Description of feasibility study
 - Overview of project outreach
 - Information request and discussion about information use
 - Questions and open discussion

Purpose

-  Provide information about SPROWG and the current study
-  Describe an upcoming request for information
-  Gauge initial interest in SPROWG

Next Steps for Outreach with M&I stakeholders

- Survey of M&I Water Providers
 - Distributed Friday, June 7th
 - Sent to 83 entities
 - Complete by Friday, July 5th
- Compile and evaluate the findings
- If necessary, conduct some specific outreach
- Refine project concept based on results

25. Based on the supplies you have available (through existing projects, current and planned conservation measures, and planned IPPs), when does your organization need additional supplies on-line and available for use?

- By 2030
- By 2040
- By 2050
- By 2070
- After 2070

Comments

https://www.surveymonkey.com/r/SPROWG_MISurvey

Outreach with Agricultural Stakeholders

- Invitations have been emailed
 - 37 invitations
 - 11 in District 64
 - 9 in District 1
 - 13 in District 2 including tribes
 - 4 more broad organizations
- Meeting dates/locations
 - **June 24** at Morgan County Quality Water District
 - **June 26** at Central Colorado Water Conservancy District
 - **June 28** at Lower South Platte WCD



General Agenda for Agricultural Stakeholder Meetings

- Introductions and Purpose of Meeting
- Overview of SPROWG
- Guiding Principles
- Agricultural Water Needs
- Alternative Water Transfers
- Governance Framework
- Communications



Outreach with Environmental and Recreational Stakeholders

- 37 entities identified
 - Watershed groups
 - State agencies
 - Advocacy groups
- Plan is to use tool from the Technical Update to facilitate and inform outreach
- 3 Stakeholder Meetings
 - Early to Mid-July
 - Invitations to be emailed soon





Near-term Activities

Near-Term Activities

- Complete Outreach
 - Complete meetings with Agricultural and Environmental/Recreational Stakeholders
 - Compile and analyze survey results
 - Assess all of the outreach results collectively
- Develop project refinements
 - Consider up to four alternatives
- Begin water treatment evaluation
 - Establish quality objectives and perform characterization
 - Coordinate with WSRA funded South Platte Salinity Study on data collection
- Communications
 - Continue identifying key issues
 - Use available resources from interested parties to spread the word (e.g., southplattebasin.com)



Topics for Next Task Force Meeting

- Summary of findings from outreach activities
- Description of potential project refinements
- Next Task Force meeting scheduled for August 13th (before the South Platte BRT meeting)
 - Will send out meeting location, agenda, etc. at a later date.

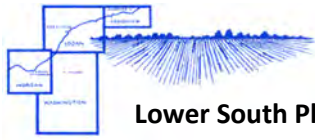
Upcoming Task Force meetings

Meeting Number	Proposed Date	Proposed Topics
1	April 3, 2019	<ul style="list-style-type: none"> Project kickoff Planning for outreach with potential partners
2	June 13, 2019 (before Metro BRT)	<ul style="list-style-type: none"> Description of organizational alternatives Report on initial outreach activities with potential partners
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4	October 10, 2019 (before Metro BRT)	<ul style="list-style-type: none"> Results of modeling project refinements Description of treatment strategies
5	December 10, 2019 (before SPBRT) May be rescheduled if December meeting is not held	<ul style="list-style-type: none"> Summary of cost estimate refinements Description of outreach and education plan
6	February 13, 2020 (before Metro BRT)	<ul style="list-style-type: none"> Presentation of draft-final report and discussion of Task Force comments (a draft report will be circulated to the Task Force in advance of this meeting)



Thank you.
Questions?





Lower South Platte Water
Conservancy District

Meeting Agenda

Prepared for: Lower South Platte Water Conservancy District

Project Title: South Platte Regional Opportunities Water Group Feasibility Study

Purpose of Meeting: Task Force Meeting #3

Date: August 13, 2019

Meeting Location: Greeley Rec Center
651 10th Avenue, Room 101-A
Greeley, Colorado 80631

Time: 1:30 p.m.

Agenda Prepared by: Matt Lindburg, Brown and Caldwell
1527 Cole Blvd, Suite 300
Lakewood, Colorado 80401
303-239-5400

Agenda

1. Introductions
2. Overview of activities since the last Task Force meeting
3. Organizational Framework
 - a. Review Technical Memorandum I and next steps
 - b. Questions, comments, and discussion
4. Findings from outreach activities
 - a. Municipal and industrial outreach
 - b. Environment and recreation outreach
 - c. Agricultural outreach
 - d. Questions, comments, and discussion
5. Concept refinements
 - a. Review potential refinements to SPROWG concept based on outreach
 - b. Questions, comments, and discussion
6. Summarize near-term activities and topics for the next Task Force meeting



SCHEDULE FOR TASK FORCE AND ADVISORY COMMITTEE MEETINGS

Task Force meetings:

Meeting Number	Proposed Date	Proposed Topics
1	April 3, 2019	<ul style="list-style-type: none"> • Project kickoff • Planning for outreach with potential partners
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6	February 13, 2020 (before Metro BRT)	<ul style="list-style-type: none"> • Presentation of draft-final report and discussion of Task Force comments (a draft report will be circulated to the Task Force in advance of this meeting)

Advisory Committee meetings:

Note: Advisory Committee meetings will be scheduled for Wednesdays at 9 am on the dates shown below.

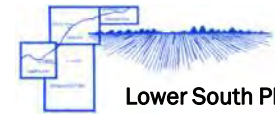
- March 20, 2019
- May 22, 2019
- July 24, 2019
- September 18, 2019
- November 20, 2019
- January 22, 2020



Doug
Robotham

TASK FORCE MEETING #3

South Platte Regional Opportunities Water Group (SPROWG) Feasibility Study



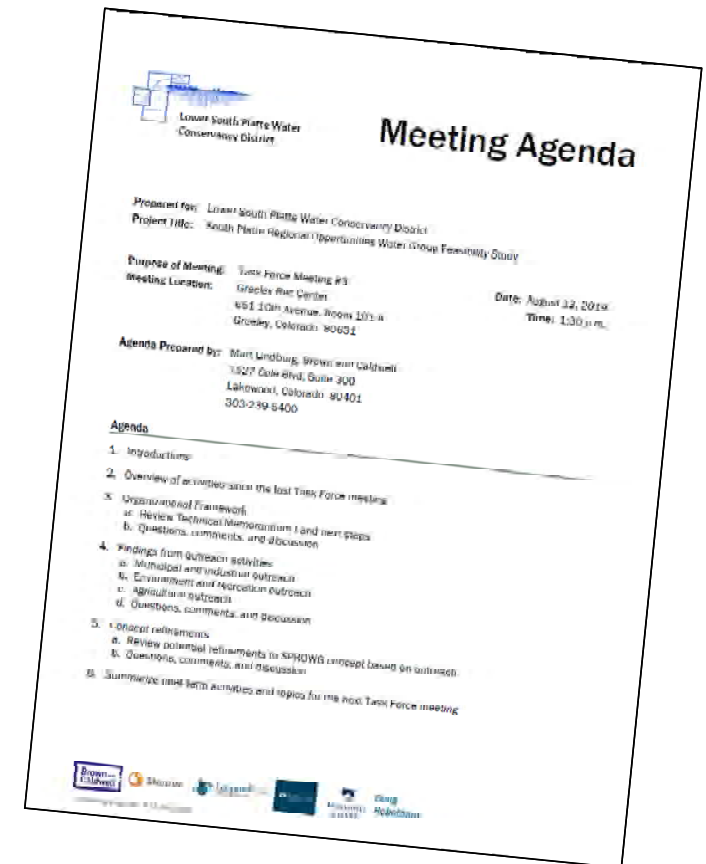
Lower South Platte Water
Conservancy District

August 13, 2019



Activities Since Last Task Force Meeting

- Researched Organizational Frameworks
 - Developed Technical Memorandum
- Conducted Outreach Activities
- Proposed Conceptual Refinements to SPROWG
- Other Happenings
 - Advisory Committee meeting on July 24
 - Recent media articles

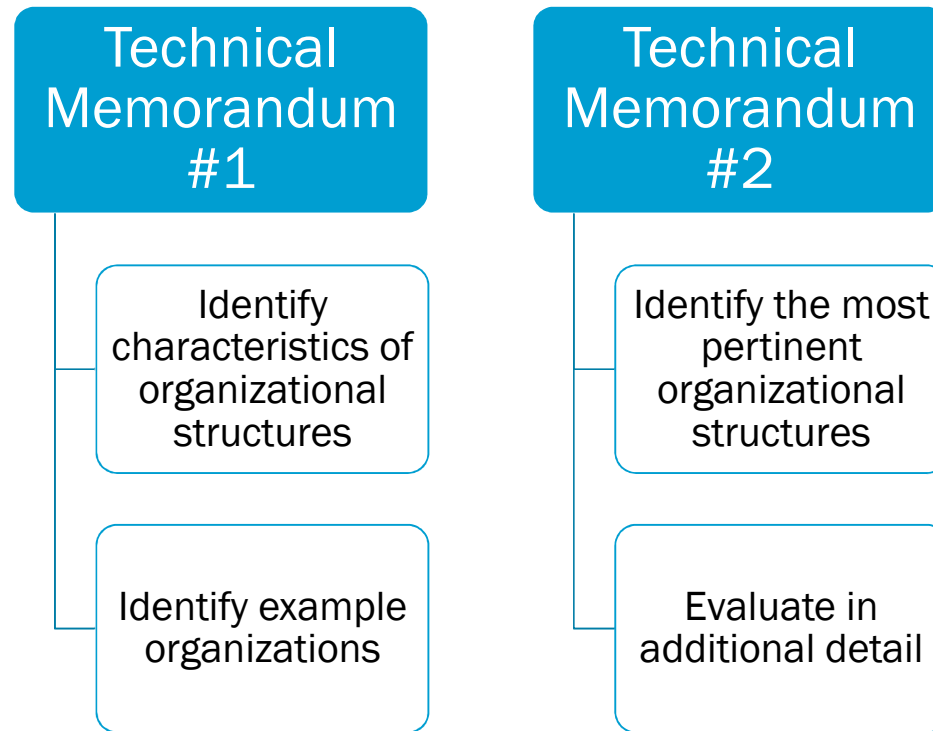


Organizational Framework



SPROWG 2.0: Organizational Framework

Deliverables



SPROWG 2.0: Organizational Framework

Technical Memorandum 1:

Current: Draft for review and comment

Incorporate Outreach Findings

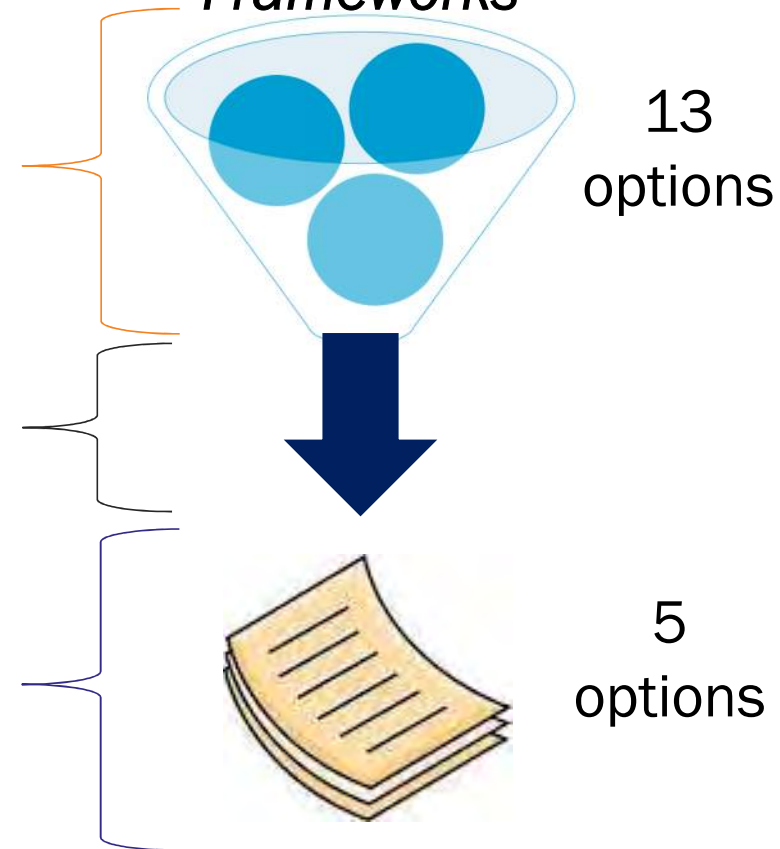
Current: Evaluating M/I, Ag and EnvRec

Technical Memorandum 2:

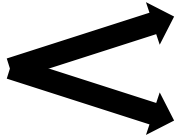
November: Draft

December: Final TM 2

Applicable Frameworks



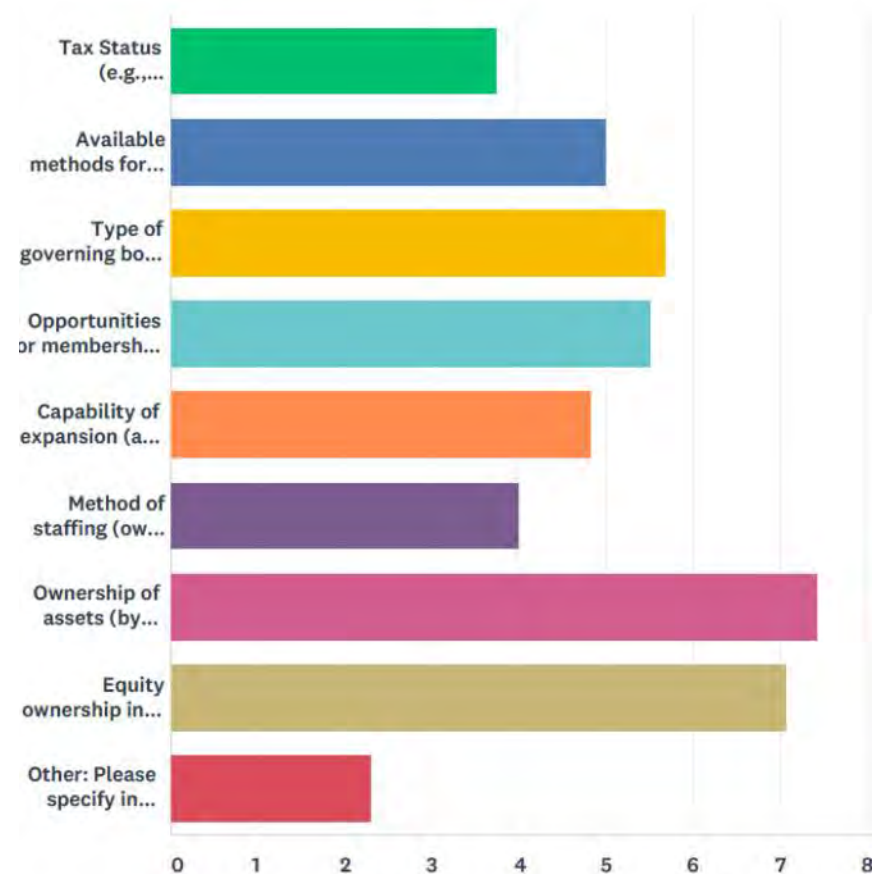
M&I Survey Results on Organizational Framework

- Questions 
 - Rank in order of preference
 - Select all that apply
- 29 respondents—not all responded to every question
- **Note:** Results are for M&I survey respondents only. Ag and E&R may have different opinion.

Most Important Organizational Framework Characteristics

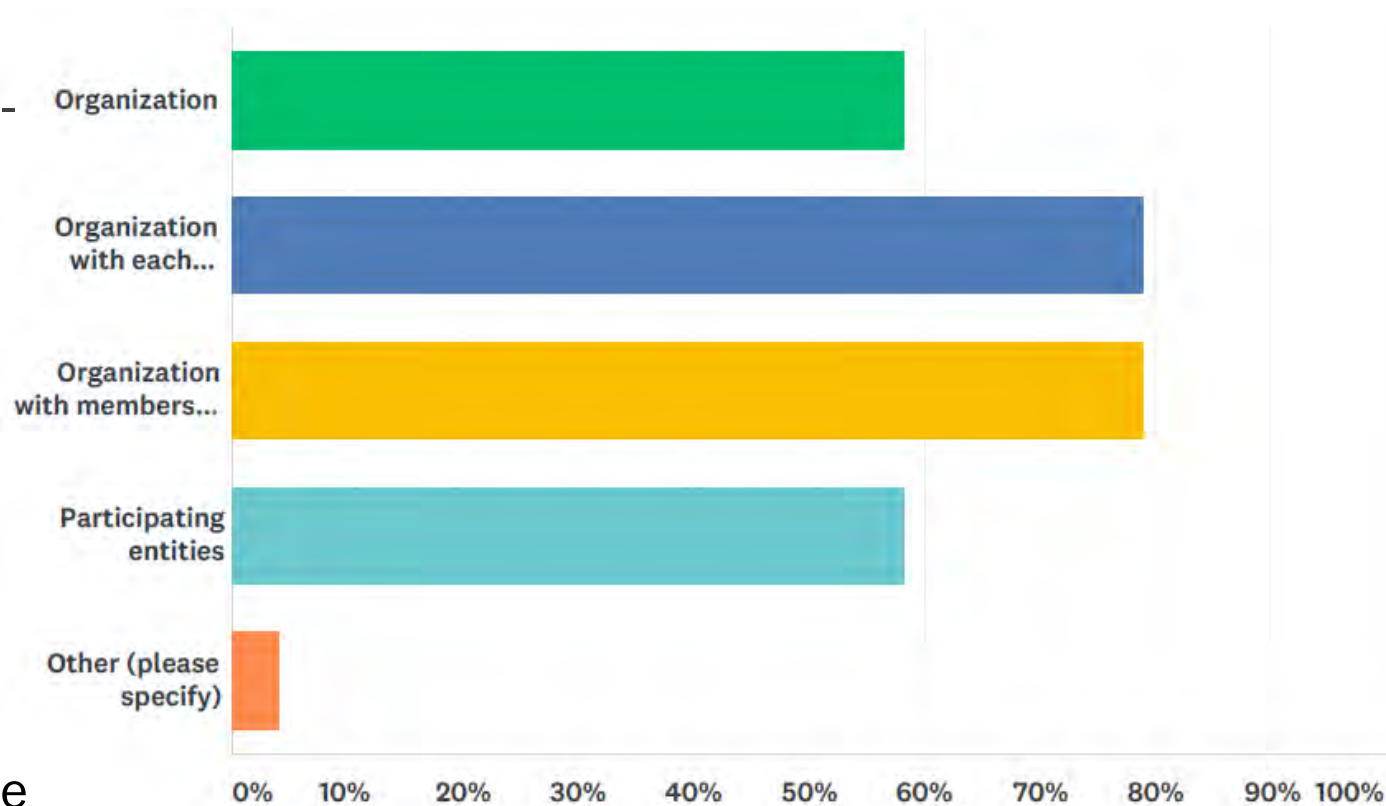
1. Ownership of Assets
2. Equity Ownership
3. Type of Governing Board
4. Opportunities for membership
5. Available methods for generating revenue
6. Methods of Staffing
7. Tax status

Finding: All characteristics could be important when selecting the type of organization



Preferred Approach to Ownership of Assets

1. Organization w/ members holding a pro-rata share based on use (Tie)
2. Organization w/members holding a percentage ownership (Tie)
3. Organization only
4. Participating entities



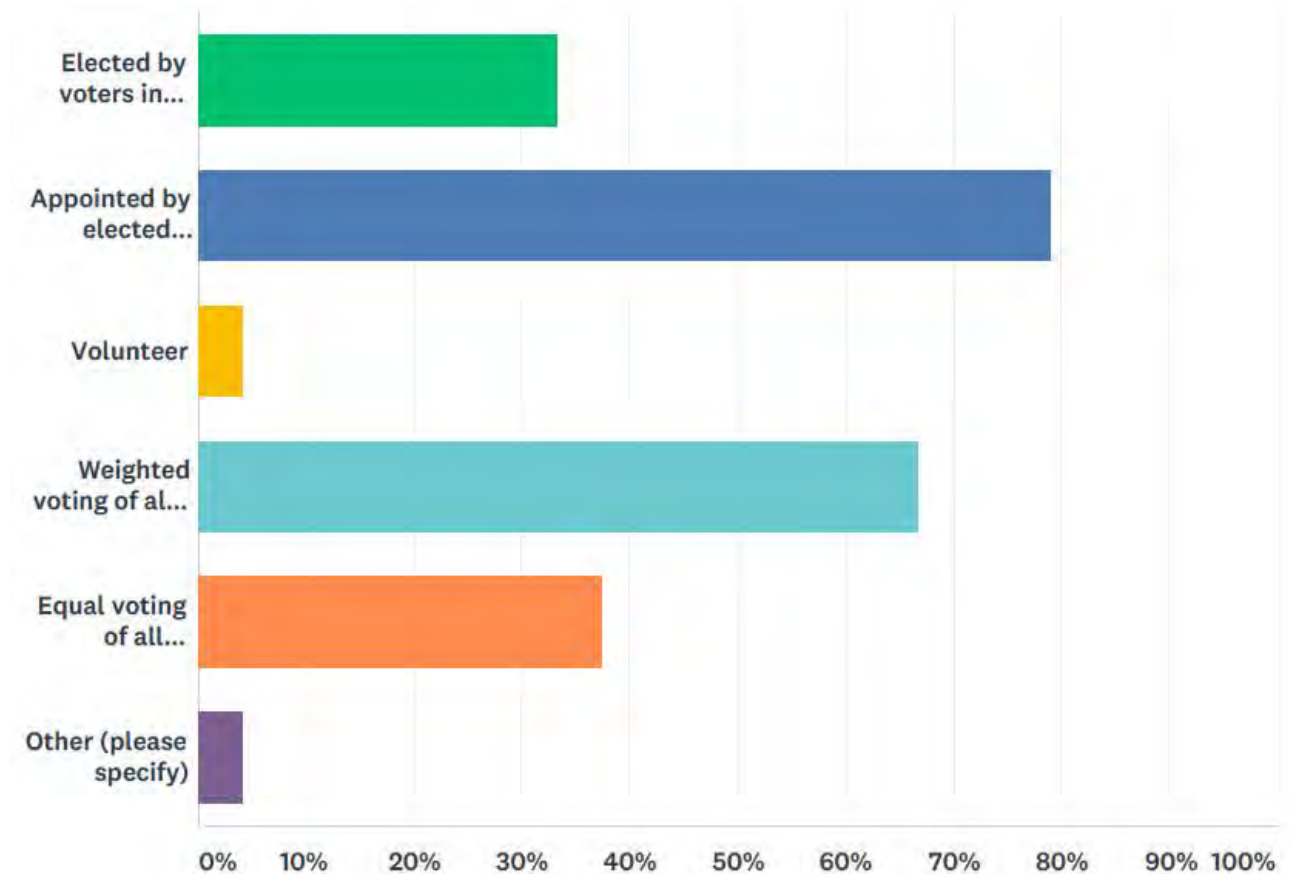
Finding: No strong preference to how assets are owned

Preferred Type of Governing Board

Top 3:

1. Appointed by elected officials
2. Weighted voting of all participants
3. Equal voting of all participants

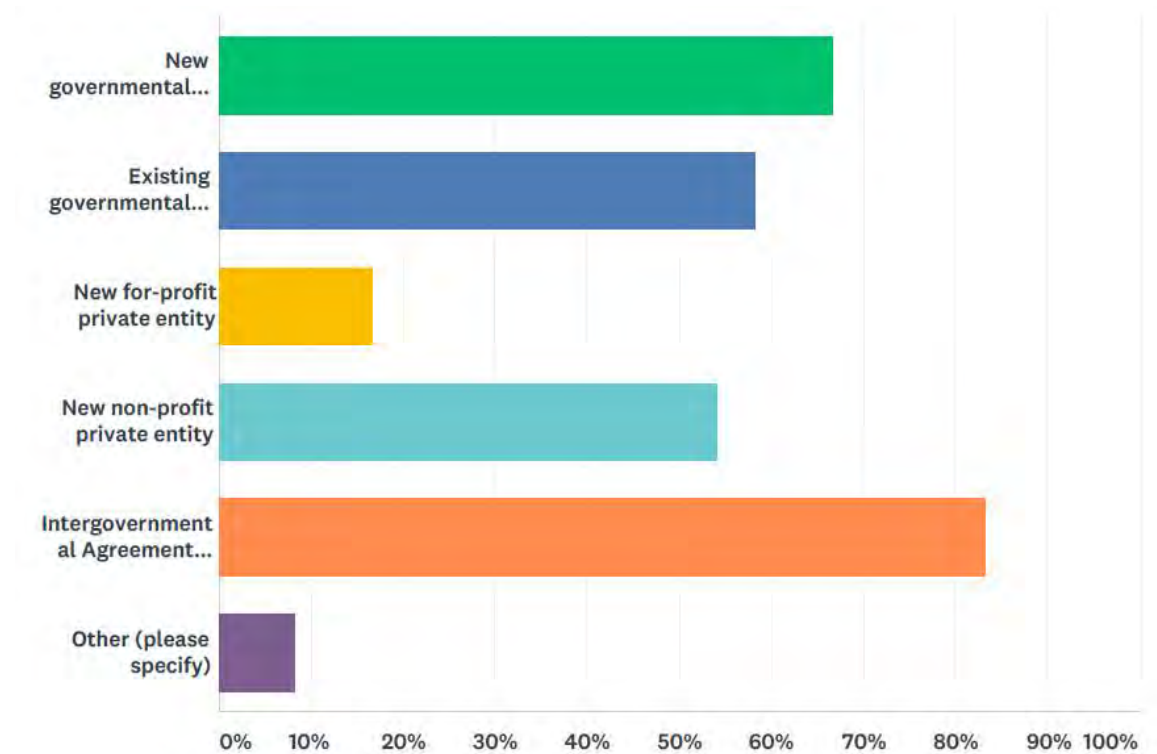
Finding: Board should be appointed or elected, not volunteer



Governmental vs Private Entity

- Governmental entities are preferred over private entities
- For-profit entities received little support

Note: Results are for M&I survey respondents only. Ag and E&R may have different opinion.



Next Steps




- Incorporate input from Agricultural and Environmental & Recreation meetings and surveys
- Coordinate with Advisory Committee to select 5 organizational frameworks for more study
- Prepare technical memorandum outlining those 5 frameworks by November
- Bring results to Task Force

Update on Outreach with M&I providers

Informational Meetings

- Meetings held on May 30th and 31st
 - ~40 attendees on May 30th in Berthoud
 - ~28 attendees on May 31st in Aurora
- General agenda
 - Overview of SPROWG
 - Guiding Principles
 - Description of feasibility study
 - Overview of project outreach
 - Information request and discussion about information use
 - Questions and open discussion

Purpose

-  Provide information about SPROWG and the current study
-  Describe an upcoming request for information
-  Gauge initial interest in SPROWG

Comments/Feedback

- It would be nice to see the State Engineer or Division Engineer at the table during the project development.
- Should there be a requirement that project participants use water derived from SPROWG in an efficient manner?
 - Not all entities have the ability/authority to control how water is used.
 - If there are going to be restrictions, it is important to know this sooner before later.
 - Not interested if project is just going to promote irrigation of non-essential landscape (eg, sod in medians)

M&I Survey

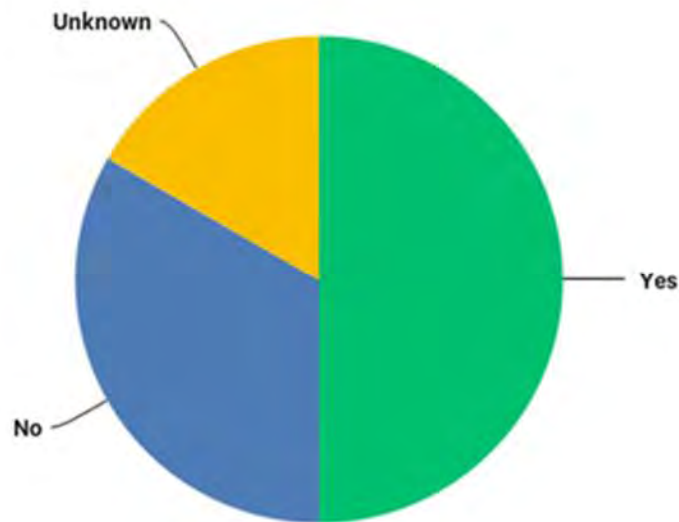
- Sent on June 7, 2019
- Survey soft close on July 19, 2019
- Distributed to 81 M&I Entities
- Responses from 24 Entities
 - 3 Industrial Water Users
 - 9 Entites in Denver Metro area
 - 9 Entites in I25/US85/US287
 - 3 Entites in Middle South Platte



Preliminary Survey Responses

Q23: Following development of current supplies and supplies projected to be made available through IPPs, does your organization project it will have a water supply gap?

Answered: 24 Skipped: 5

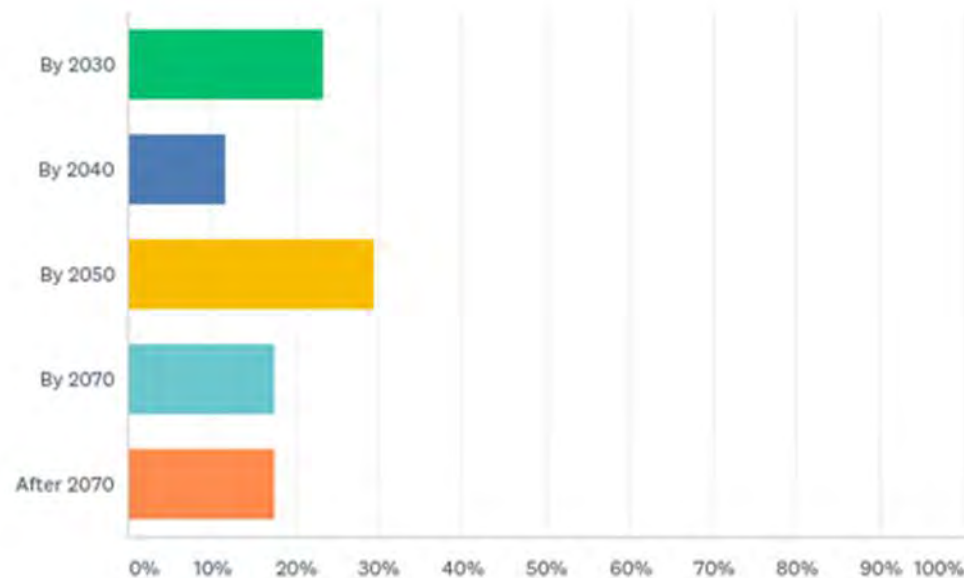


ANSWER CHOICES	RESPONSES	
Yes	50.00%	12
No	33.33%	8
Unknown	16.67%	4
TOTAL		24

Preliminary Survey Responses

Q25: Based on the supplies you have available (through existing projects, current and planned conservation measures, and planned IPPs), when does your organization need additional supplies on-line and available for use?

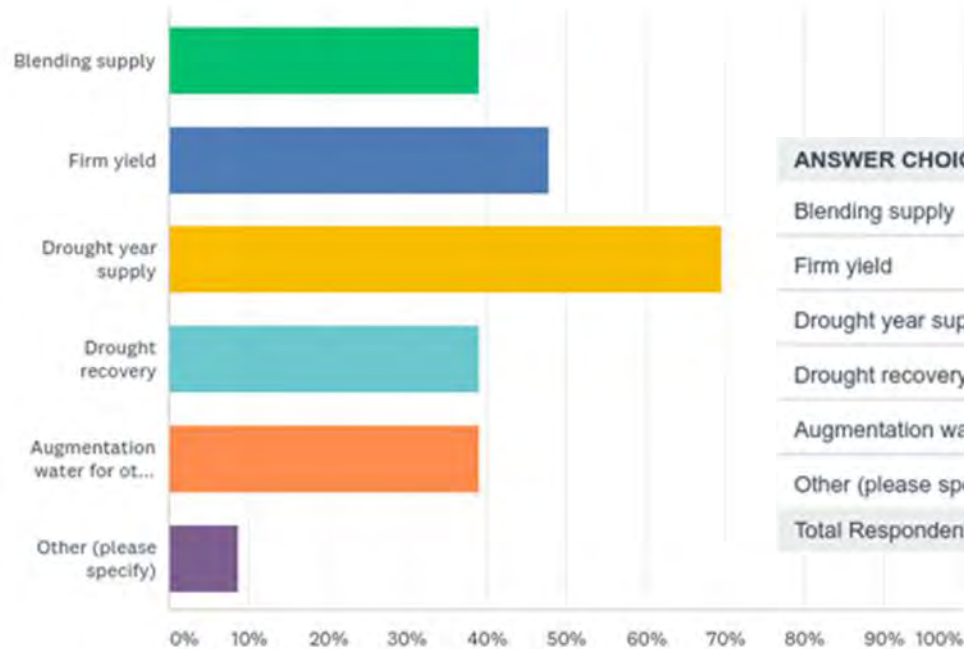
Answered: 17 Skipped: 12



Preliminary Survey Responses

Q29: If your organization received water from a regional project, what would be the intended use? (Select all that apply)

Answered: 23 Skipped: 11

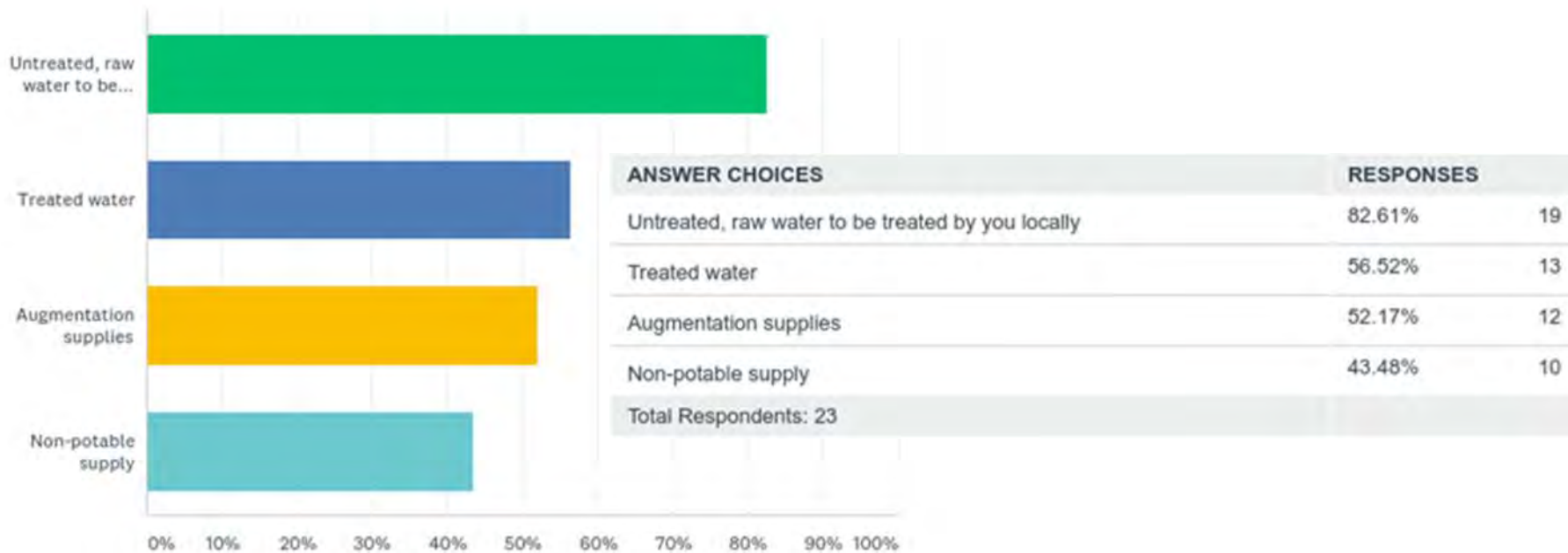


ANSWER CHOICES	RESPONSES
Blending supply	39.13% 9
Firm yield	47.83% 11
Drought year supply	69.57% 16
Drought recovery	39.13% 9
Augmentation water for other water sources	39.13% 9
Other (please specify)	8.70% 2
Total Respondents: 23	

Preliminary Survey Responses

Q30: Identify your organization's preference for the type of water available through a regional project. (select all that apply)

Answered: 23 Skipped: 6



Update on Outreach with E&R Stakeholders



E&R Outreach Meetings

- Meetings held on July 22nd and 23rd
 - 11 attendees on July 22nd in Greeley
 - 24 attendees on July 23rd in Denver

* Does not include consultants

- General agenda
 - Overview of SPROWG
 - Guiding Principles
 - Recreational Water Needs
 - Environmental Water Needs
 - PRRIP
 - Complementary Demand Side Opportunities
 - Survey Overview

- 1 Provide information about SPROWG and the current study
- 2 Get your feedback on E&R needs and opportunities
- 3 Describe follow up survey



How do you think recreational and/or environmental needs could be maintained or enhanced from this project?

- Opportunity for greenway improvements (floodplain enhancements, develop or enhance wetlands and habitat for waterfowl, water quality improvements, benefit to community and public health)
- Creation of "water trails"
- Develop additional hunting and fishing opportunities
- Enhancement of flow for spawning
- If project requires modification of existing diversion structures, redesign could incorporate recreational bypass and fish passage
- Opportunity to reconnect the river at existing dry-up points
- SPR between Wiggins and Fort Morgan is considered the Golden Triangle for water fowl use
- Development of permanent open land, reduce the risk of losing open space to highest bidder when long-term leases expire

How do you think this project could impact recreational and/or environmental needs?

- More reuse of reusable return flows upstream will reduce the amount of water downstream.
- Increased reuse could result in increased TDS
- Potential for project to reduce peak flows/flushing flows that are important to Colorado and Nebraska
- Potential for the project to impact "3 birds and a fish"
- If project is developed on private land it could limit the use of the facility for recreation
- Exchanges can have a negative impact downstream water quality

Is there data that needs to be collected now so to evaluate impact on recreation or the environment?

- Chlorophyll-a (Standards expected to go into effect in 2022. Need to compile existing data and develop new data)
- Water quality standards for warm water aquatic species
- Ebird app (Audobon) includes a wealth of information. Data should be ground-truthed to improve reliability and confidence in data
- Limited data on small body plains fish between Kersey and Fort Morgan

Update on Outreach with Agriculture



Ag Outreach Meetings

- Meetings held on June 24th, 26th, and 28th
 - 7 attendees on June 24th in Ft. Morgan
 - 4 attendees on June 26th in Greeley
 - 11 attendees on June 28th in Sterling

* Does not include consultants

- General agenda
 - Overview of SPROWG
 - Guiding Principles
 - Agricultural Water Needs
 - Alternative Water Transfers
 - Governance Framework
 - Communications

- 1 Provide information about SPROWG and the current study
- 2 Get your feedback on Agricultural needs and opportunities
- 3 Describe follow up survey



Feedback on Guiding Principles

- Support for not using SPROWG to facilitate buy-and-dry transfers
- Encouragement to build this project sooner than later
- Several statements that municipalities need to use water more efficiently and judiciously before seeking more supply from agriculture
- Anticipation that cities would need to bear much of the financial burden for the project

Feedback on Water Supply Needs

- Well augmentation supplies
 - Up to 40,000 AF within and downstream of District 2
 - Unspecified augmentation need in District 1
 - Can use NECWC research to develop demand information
- Surface water supplies
 - Water supplies on Little Thompson have diminished – 10 cfs would be useful for irrigators
 - Diminished supply on other tributaries mentioned, but no amounts were cited.
 - Some ditches in District 64 are short in dry years
 - Can use information from Technical Update and NECWC research to develop demand information

Feedback on Water Supply Needs

- Desirable infrastructure
 - Storage at strategic locations
 - To deliver augmentation supplies
 - To manage existing excess recharge credits
 - Pipelines to deliver augmentation supplies at strategic locations
 - Strategic locations cited - above Weldon Valley or Bijou
 - Recharge facilities located relatively far from the South Platte
 - Generates recharge credits with long lags – good for augmentation plan projections
- Supplies for eastern plains municipalities

Feedback on Alternative Water Transfers

- Concerns regarding volumetric limits during periods when direct flow irrigation water is not being used for M&I and becomes limited for irrigation use
- ATMs should be a last resort rather than a primary source of supply
 - Preference for interruptible supply agreements rather than rotational fallowing
- Price should reflect the value of water
 - For agriculture (common theme)
 - For end user (expressed by some)
 - Regardless, ATMs should provide an economic benefit to agriculture
- Concerns regarding uncertainties regarding how ATMs could work
 - Need more pilots and education

Feedback on Alternative Water Transfers

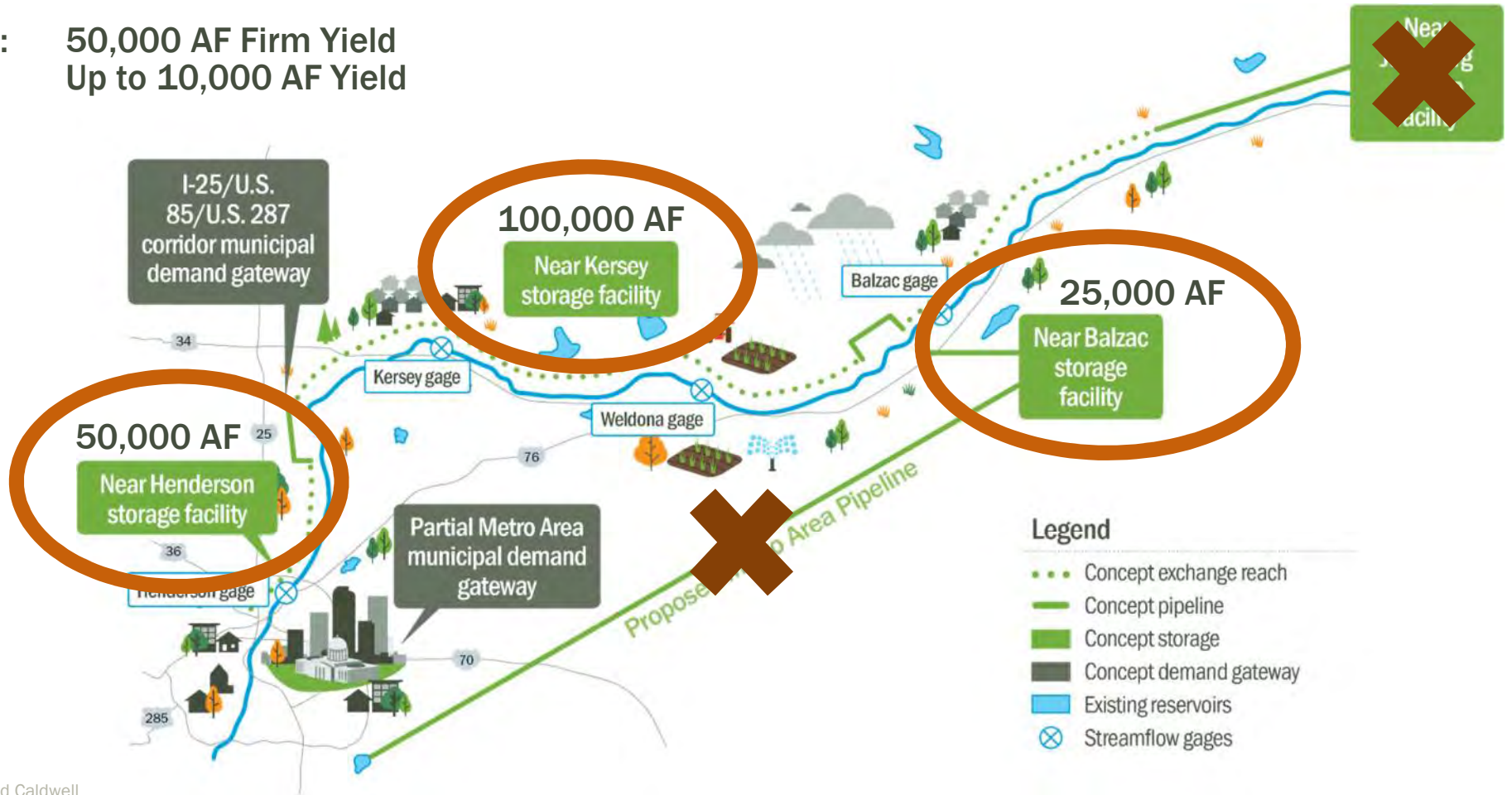
- Need to consider agricultural operations
 - Early notice would be required if implementing interruptible supply transfer
 - Relationship building and education will be important
 - Impacts on renters were a concern
 - Seemed to get positive feedback on the concept of a long term interruptible supply agreement that allows agriculture to deliver water to storage when it works best for them.
- Need to consider impacts on local communities
 - ATMs are not without impacts



Concept
Refinement
Alternatives

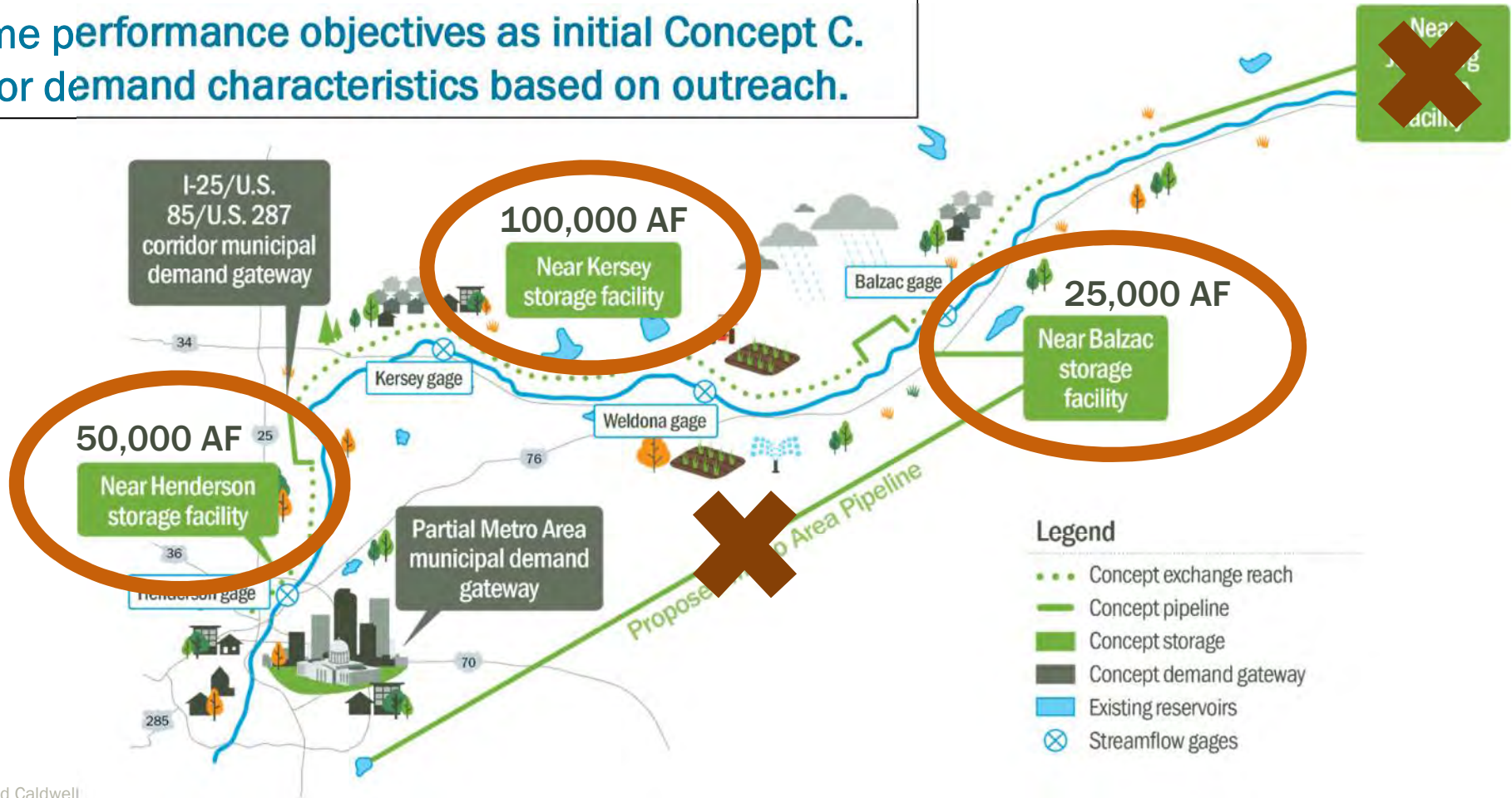
Initial Concept C

M&I: 50,000 AF Firm Yield
 Ag: Up to 10,000 AF Yield



Alternative 1: Refine the Initial Concept

Same performance objectives as initial Concept C.
Tailor demand characteristics based on outreach.



Alternative 1: Refine the Initial Concept

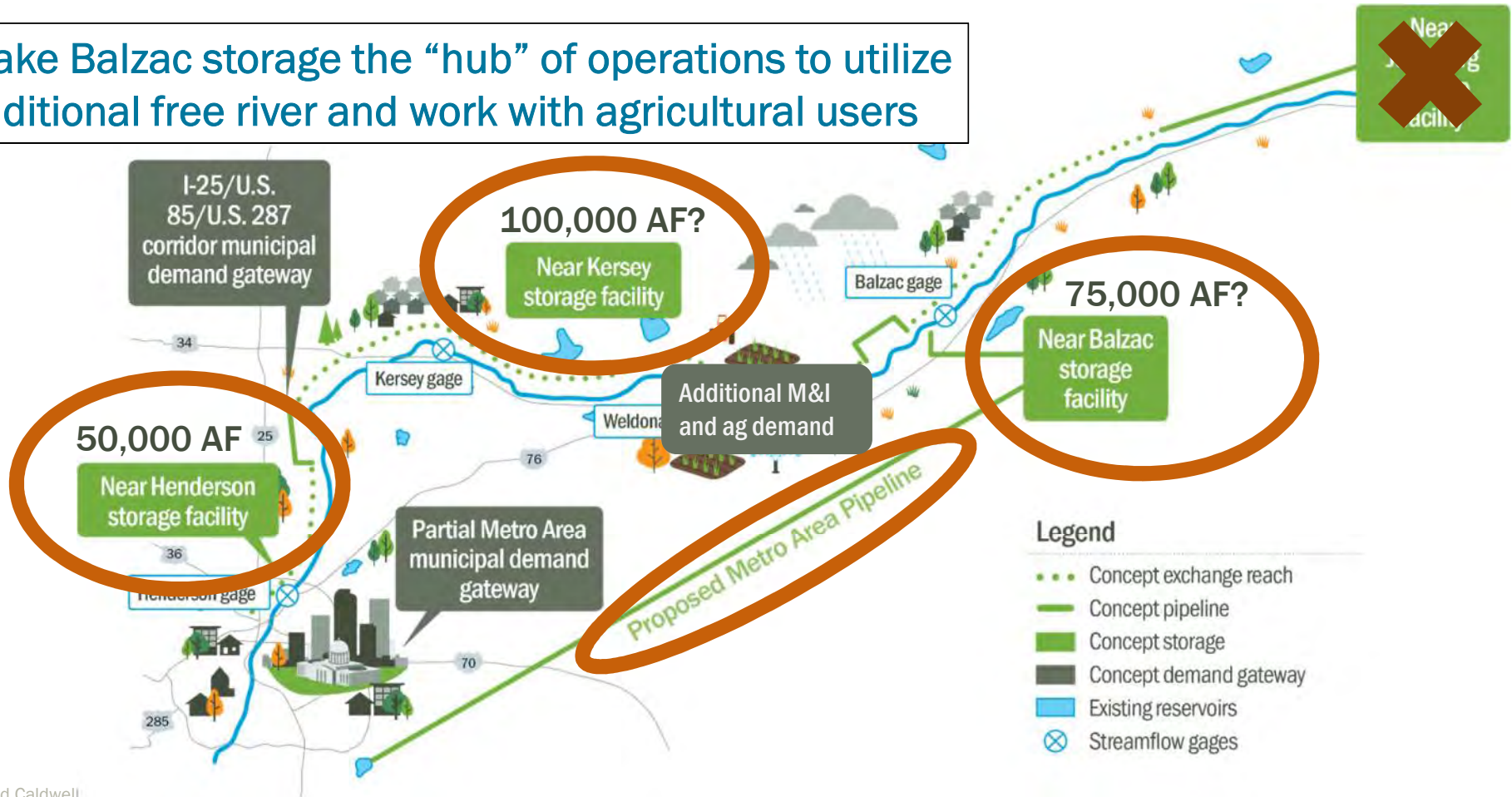
- Municipal and Industrial
 - Maintain 50,000 AF/year yield to Denver Metro and Hot Zone
 - 40,000 AF firm annual yield
 - Additional 40,000 AF dry year yield (possibly provide dry year yield to Hot Zone)
 - Tailor location and amount of delivery based on outreach feedback
 - Provide limited supply to M&I on eastern plains
 - Demand based on results of outreach and Technical Update of Water Plan
 - Use the model to inform how much demand could be met

Alternative 1: Refine the Initial Concept

- Agriculture
 - Meet up to 10,000 AF of agricultural demand
 - Assume primary use is for augmentation purposes
 - Try to meet some demand every year
 - Provide most of the supply in dry years
- Environmental and Recreation
 - Limit exchange capacity and preserve flow in the river
 - Evaluate ways to move water between storage facilities when beneficial for E&R
- Infrastructure
 - Identify infrastructure from South Platte Storage Study that could meet needs
 - Consider phased implementation

Alternative 2: Balzac First

Make Balzac storage the “hub” of operations to utilize additional free river and work with agricultural users



Alternative 2: Balzac First

- Municipal and Industrial
 - Maintain 50,000 AF/year yield to Denver Metro and Hot Zone
 - 40,000 AF firm annual yield
 - Additional 40,000 AF dry year yield (possibly provide dry year yield to Hot Zone)
 - Tailor location and amount of delivery based on outreach feedback
 - Provide additional supply to M&I on eastern plains (more than Alternative 1)
 - Demand based on results of outreach and Technical Update of Water Plan
 - Use the model to inform how much demand could be met

Alternative 2: Balzac First

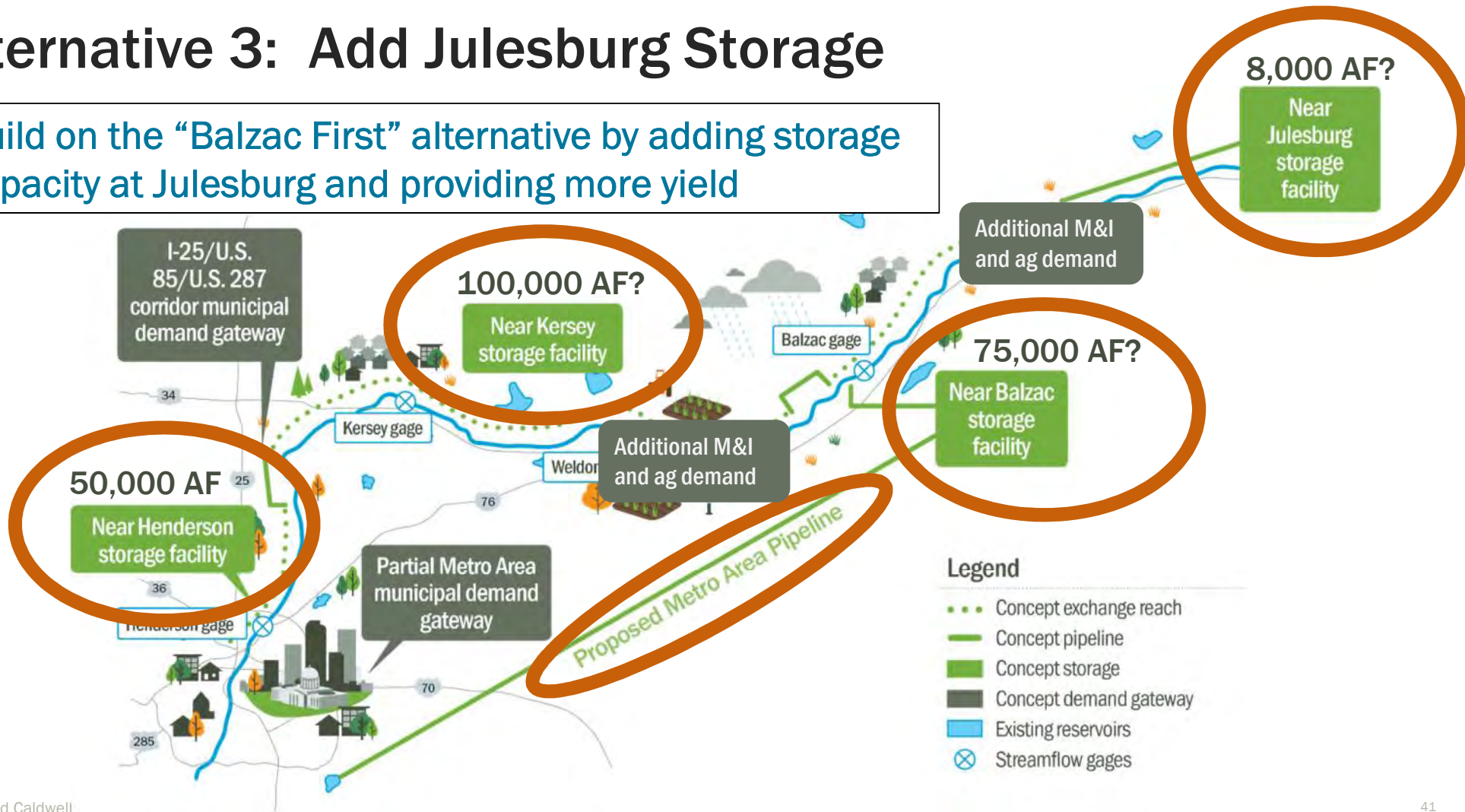
- Agriculture
 - Meet up to 40,000 AF of agricultural demand
 - Assume primary use is for augmentation purposes
 - Try to meet some demand every year
 - Provide most of the supply in dry years
 - Provide most of supply to District 1 but also District 2
 - Provide some additional storage for surface water users
- Environmental and Recreation
 - Limit exchange capacity and preserve flow in the river
 - Evaluate ways to move water between storage facilities when beneficial for E&R
 - Include recharge facilities that benefit water fowl

Alternative 2: Balzac First

- Infrastructure
 - Identify infrastructure from South Platte Storage Study that could meet needs
 - Consider phased implementation
 - Increase storage at Balzac facility
 - Evaluate whether Kersey storage could be reduced
 - Include pipeline to Front Range (this was not modeled in initial Concept C)

Alternative 3: Add Julesburg Storage

Build on the “Balzac First” alternative by adding storage capacity at Julesburg and providing more yield



Alternative 3: Add Julesburg Storage

- Municipal and Industrial
 - Maintain 50,000 AF/year yield to Denver Metro and Hot Zone
 - 40,000 AF firm annual yield
 - Additional 40,000 AF dry year yield (possibly provide dry year yield to Hot Zone)
 - Tailor location and amount of delivery based on outreach feedback
 - Provide additional supply to M&I on eastern plains, especially District 64 (more than Alternative 2)
 - Demand based on results of outreach and Technical Update of Water Plan
 - Use the model to inform how much demand could be met

Alternative 3: Add Julesburg Storage

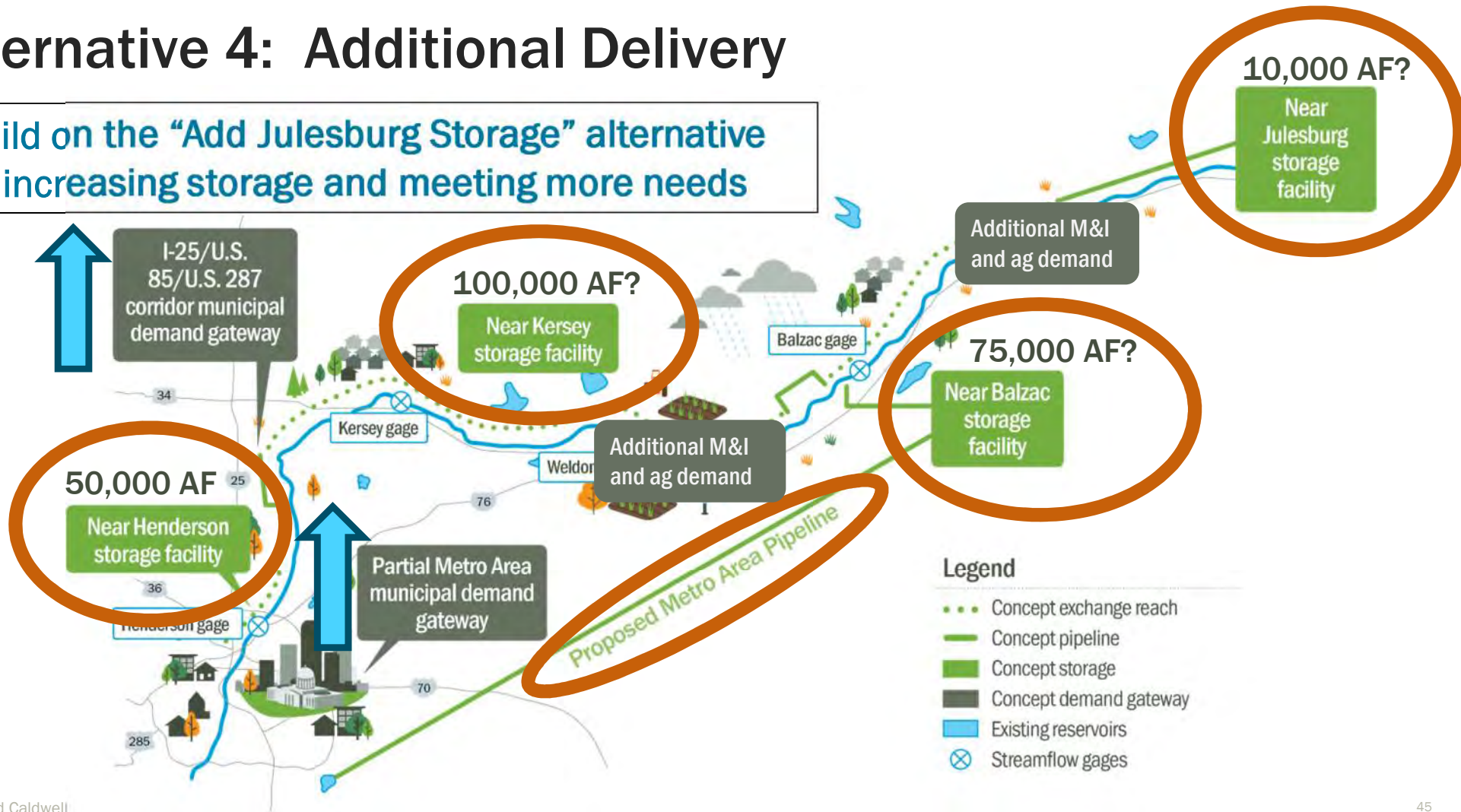
- Agriculture
 - Meet up to 40,000 AF of agricultural demand
 - Assume primary use is for augmentation purposes
 - Try to meet some demand every year
 - Provide most of the supply in dry years
 - Provide most of supply to District 1 but also District 2
 - Provide some additional storage for surface water users focused in District 64
- Environmental and Recreation
 - Limit exchange capacity and preserve flow in the river
 - Evaluate ways to move water between storage facilities when beneficial for E&R
 - Include recharge facilities that benefit water fowl
 - Consider benefits to the Platte River Recovery Implementation Program (PRRIP)

Alternative 3: Add Julesburg Storage

- Infrastructure
 - Identify infrastructure from South Platte Storage Study that could meet needs
 - Consider phased implementation
 - Increase storage at Balzac facility
 - Evaluate whether Kersey storage could be reduced
 - Include pipeline to Front Range (this was not modeled in initial Concept C)
 - Add storage at Julesburg and also a pipeline to deliver water above Harmony Ditch to help relieve exchange bottlenecks

Alternative 4: Additional Delivery

Build on the "Add Julesburg Storage" alternative by increasing storage and meeting more needs



Alternative 4: Additional Delivery

- Municipal and Industrial
 - Provide more yield than the original concept to Hot Zone and Denver Metro users
 - Tailor location and amount of delivery based on outreach feedback and also consider gap analysis from Technical Update of Water Plan
 - Use the model to inform how much demand could be met
 - Provide additional supply to M&I on eastern plains, consistent with Alternative 3
 - Demand based on results of outreach and Technical Update of Water Plan
 - Use the model to inform how much demand could be met

Alternative 4: Additional Delivery

- Agriculture
 - Meet up to 40,000 AF of agricultural demand
 - Assume primary use is for augmentation purposes
 - Try to meet some demand every year
 - Provide most of the supply in dry years
 - Provide most of supply to District 1 but also District 2
 - Provide some additional storage for surface water users focused in District 64
- Environmental and Recreation
 - Limit exchange capacity and preserve flow in the river
 - Evaluate ways to move water between storage facilities when beneficial for E&R
 - Include recharge facilities that benefit water fowl
 - Consider benefits to the Platte River Recovery Implementation Program (PRRIP)

Alternative 4: Additional Delivery

- Infrastructure
 - Identify infrastructure from South Platte Storage Study that could meet needs
 - Potentially substitute infrastructure with higher storage capacity
 - Increase storage at Balzac facility
 - Consider phased implementation
 - Kersey storage at least consistent with Concept C if not more
 - Include pipeline to Front Range (this was not modeled in initial Concept C)
 - Add storage at Julesburg and also a pipeline to deliver water above Harmony Ditch to help relieve exchange bottlenecks

Near-term Activities



Near-Term Activities

- Complete Outreach
 - Obtain a little more feedback
 - Complete assessment of results
- Assess preferences on organizational framework characteristics
- Develop project refinements
 - Develop refinement details
 - Model the project refinements
- Develop water treatment strategies
 - Establish quality objectives and perform characterization
 - Coordinate with WSRA funded South Platte Salinity Study on data collection
- Communications
 - Conduct media outreach
 - Use available resources from interested parties to spread the word (e.g., southplattebasin.com)

Topics for Next Task Force Meeting

- Results of modeling project refinements
- Description of water treatment strategies

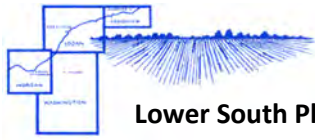
- Next Task Force meeting scheduled for **October 10th** (before the Metro BRT meeting)
 - Will send out meeting location, agenda, etc. at a later date.

Upcoming Task Force meetings

Meeting Number	Proposed Date	Proposed Topics
1	April 3, 2019	<ul style="list-style-type: none"> Project kickoff Planning for outreach with potential partners
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6	February 13, 2020 (before Metro BRT)	<ul style="list-style-type: none"> Presentation of draft-final report and discussion of Task Force comments (a draft report will be circulated to the Task Force in advance of this meeting)



Thank you.
Questions?



Lower South Platte Water
Conservancy District

Meeting Agenda

Prepared for: Lower South Platte Water Conservancy District

Project Title: South Platte Regional Opportunities Water Group Feasibility Study

Purpose of Meeting: Task Force Meeting #4

Date: October 10, 2019

Meeting Location: Denver Water
1600 West 12th Avenue
Denver, Colorado 80204

Time: 2:00 p.m.

Agenda Prepared by: Matt Lindburg, Brown and Caldwell
1527 Cole Blvd, Suite 300
Lakewood, Colorado 80401
303-239-5400

Agenda

1. Introductions
2. Overview of activities since the last Task Force meeting
3. Organizational Framework
 - a. Review refined list of potential organizational frameworks
 - b. Questions, comments, and discussion
4. Concept Refinement
 - a. Summary of M&I future water needs based on feedback from outreach
 - b. Description of refinements to demands, infrastructure, and operations in each alternative
 - c. Questions, comments, and discussion
5. Water Treatment Alternatives:
 - a. Summary of progress and description of alternatives
 - b. Questions, comments, and discussion
6. Summarize near-term activities and topics for the next Task Force meeting



Doug
Robotham

SCHEDULE FOR TASK FORCE AND ADVISORY COMMITTEE MEETINGS

Task Force meetings:

Meeting Number	Proposed Date	Proposed Topics
1	April 3, 2019	<ul style="list-style-type: none"> • Project kickoff • Planning for outreach with potential partners
2	June 13, 2019 (before Metro BRT)	<ul style="list-style-type: none"> • Description of organizational alternatives • Report on initial outreach activities with potential partners
3	August 13, 2019 (before SPBRT)	<ul style="list-style-type: none"> • Summary of findings from outreach activities • Description of potential project refinements
4	October 10, 2019 (before Metro BRT)	<ul style="list-style-type: none"> • Results of modeling project refinements • Description of treatment strategies
5	December 10, 2019 (before SPBRT) <i>May be rescheduled if December meeting is not held</i>	<ul style="list-style-type: none"> • Summary of cost estimate refinements • Description of outreach and education plan
6	February 13, 2020 (before Metro BRT)	<ul style="list-style-type: none"> • Presentation of draft-final report and discussion of Task Force comments (a draft report will be circulated to the Task Force in advance of this meeting)

Advisory Committee meetings:

Note: Advisory Committee meetings will be scheduled for Wednesdays at 9 am on the dates shown below.

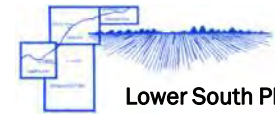
- March 20, 2019
- May 22, 2019
- July 24, 2019
- September 18, 2019
- November 20, 2019
- January 22, 2020



Doug
Robotham

TASK FORCE MEETING #4

South Platte Regional Opportunities Water Group (SPROWG) Feasibility Study



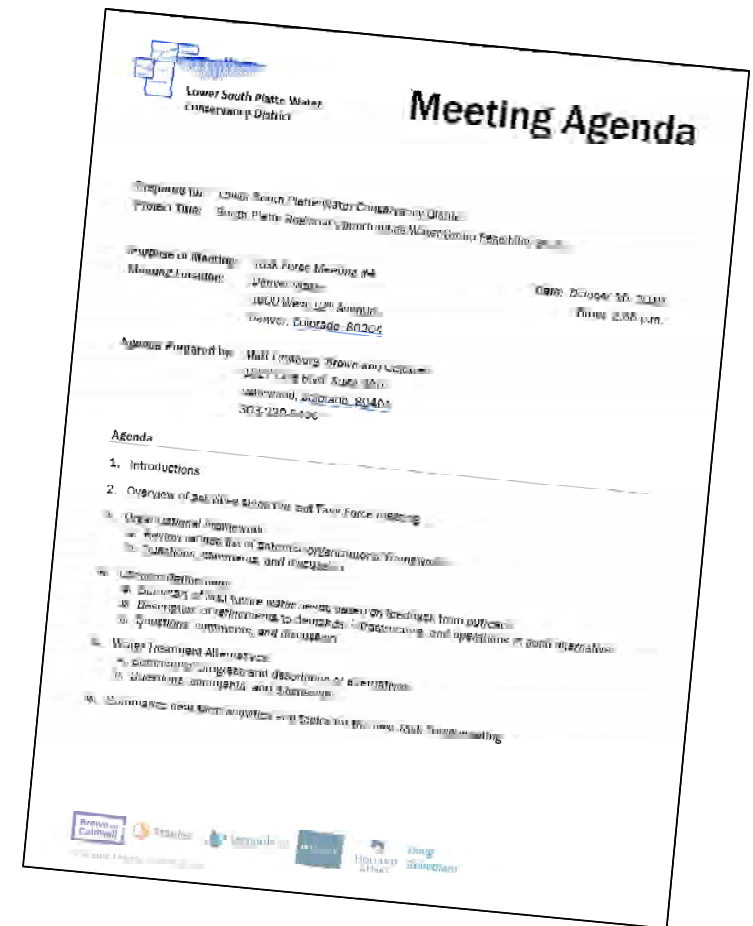
Lower South Platte Water
Conservancy District

October 10, 2019

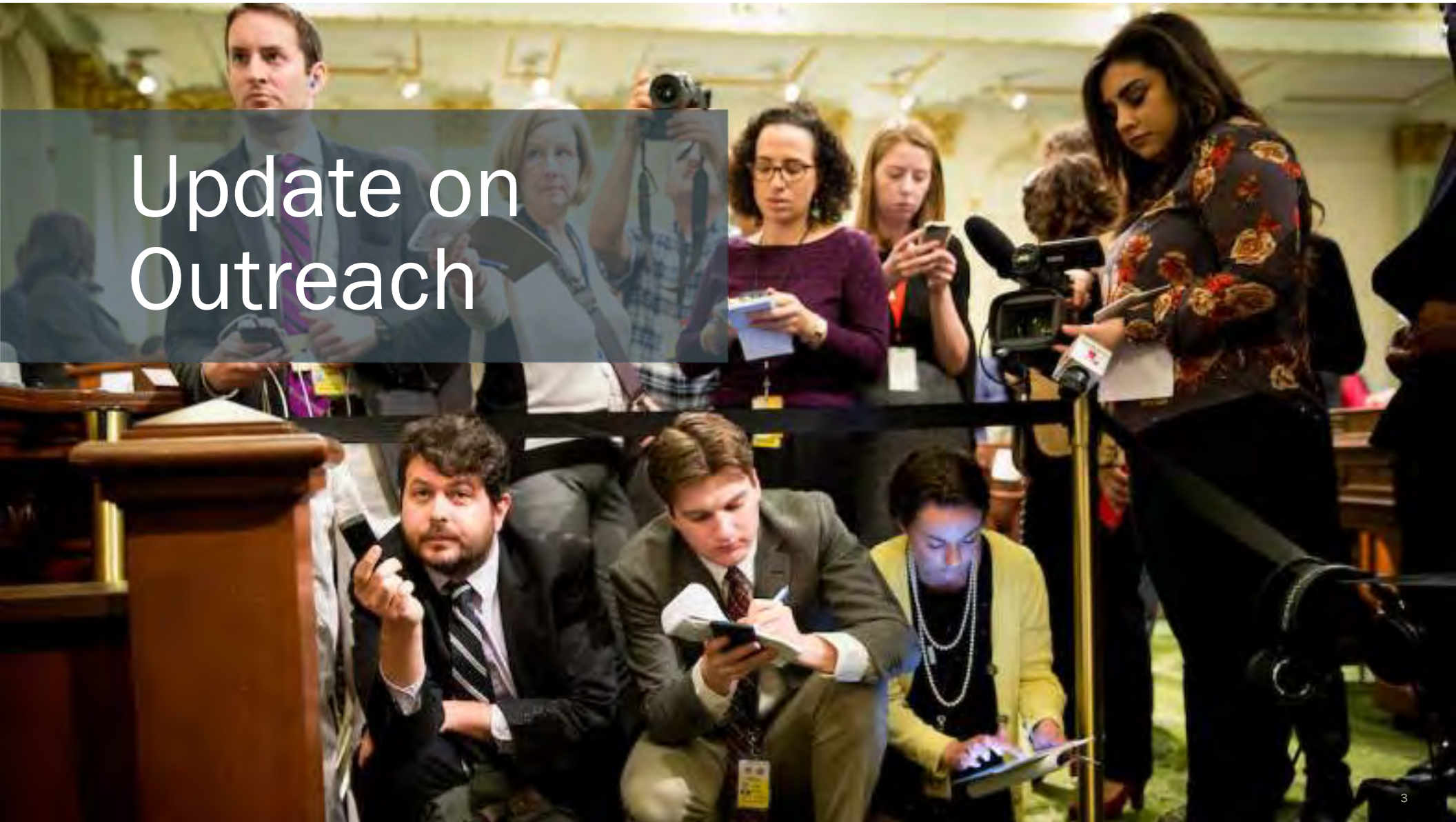


Activities Since Last Task Force Meeting

- Conducted Outreach Activities
- Narrowed List of Potential Organizational Frameworks for Further Research
- Started Modeling Refinements to SPROWG
- Developed Water Treatment Strategies
- Other Happenings
 - Advisory Committee meeting on September 18



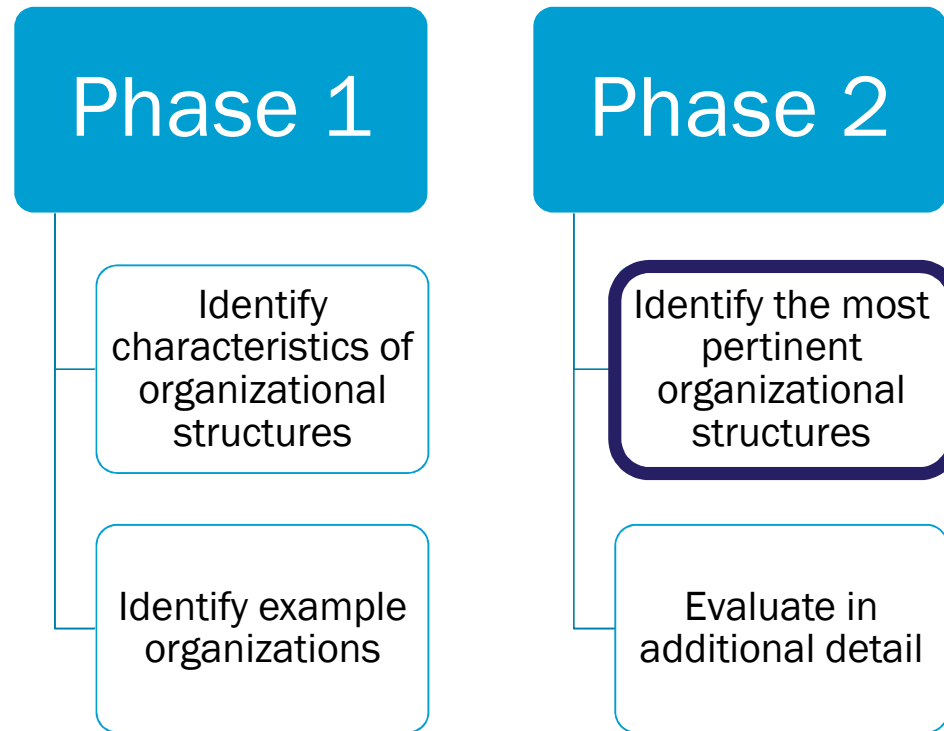
Update on Outreach



Organizational Framework



SPROWG 2.0: Organizational Framework Phases



SPROWG 2.0: Organizational Framework

Technical Memorandum 1:

Current: Draft for review and comment

Incorporate Outreach Findings

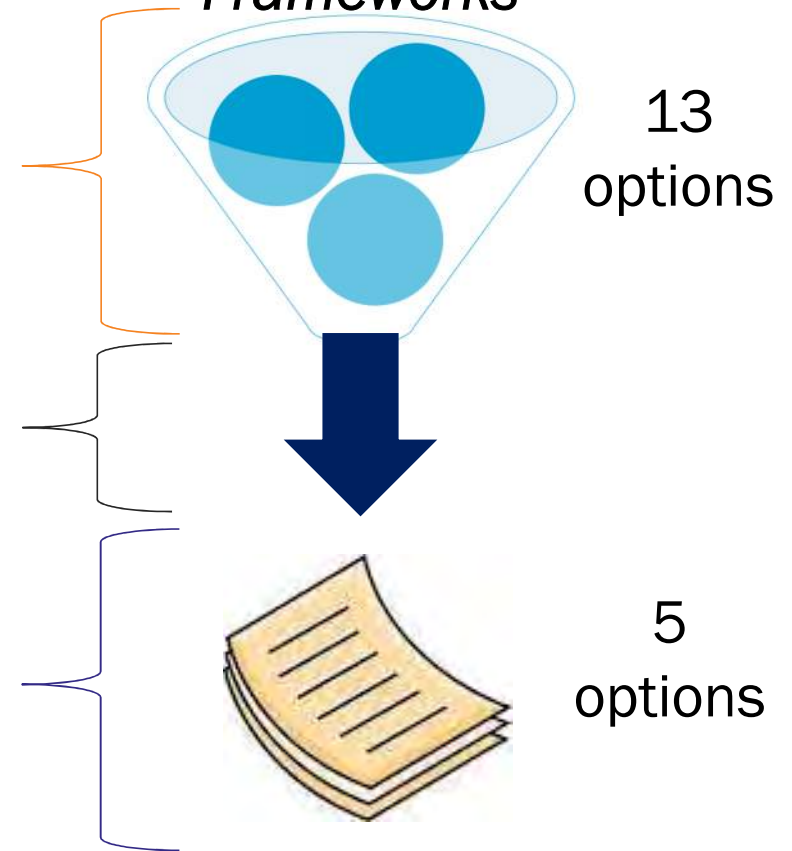
Current: Evaluating M/I, Ag and EnvRec

Technical Memorandum 2:

November: Draft

December: Final TM 2

Applicable Frameworks

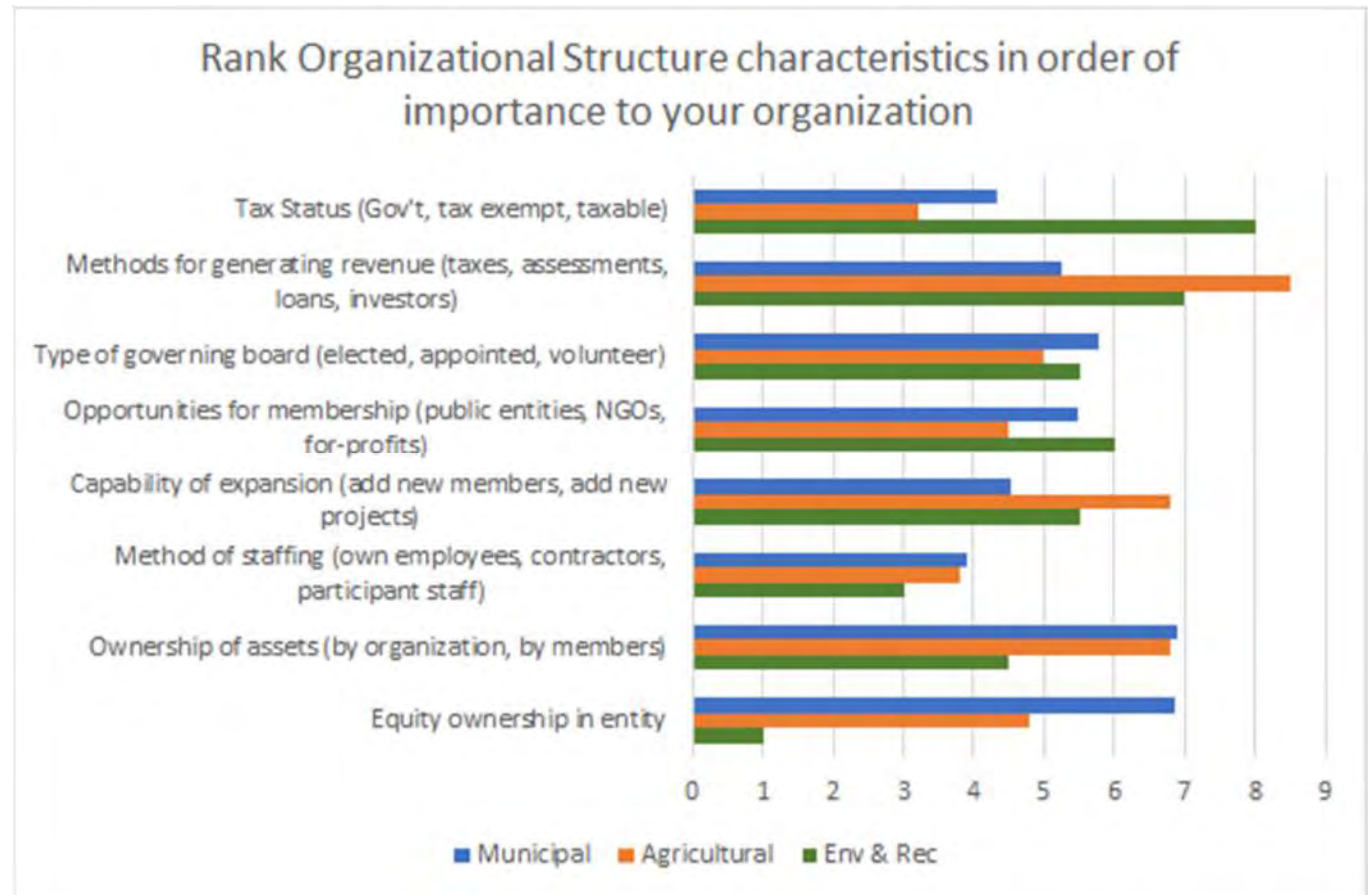


Most important organizational structure characteristics (select all that apply)

Respondents:
Municipal – 28
Agricultural – 5
Env & Rec – 2

Most characteristics are important to most categories of potential participants

No strong preference that would affect selection of short-list of organizational structures

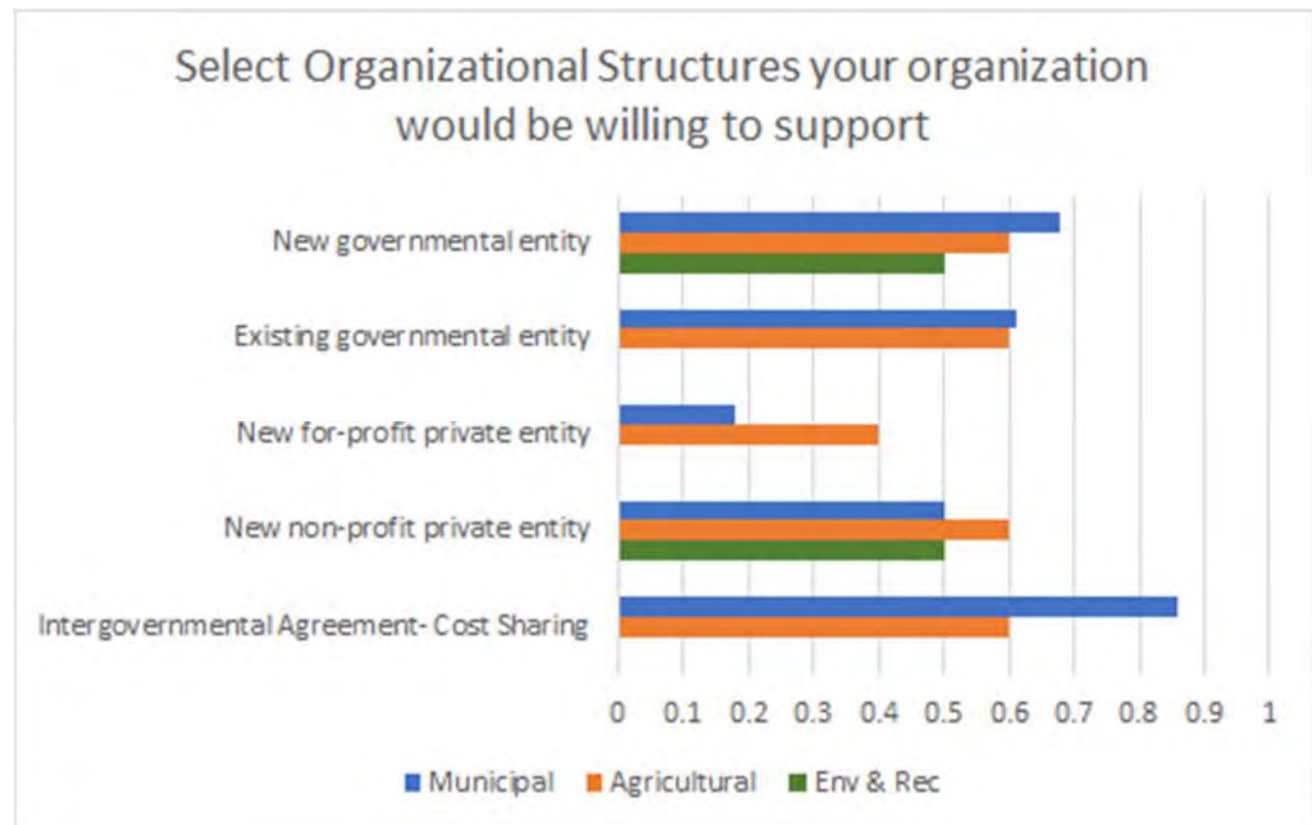


What type of organizational structure would you be willing to support (select all that apply)

Respondents:
Municipal – 28
Agricultural – 5
Env & Rec – 2

Little support for a for-profit private entity

Public entity options and non-profits received similar support



Proposed Organizational Structures to Consider for Phase 2 Evaluation

Organizational Structure	Candidate for Phase 2	Screened Out	Comments
<i>Non-Governmental Entities</i>			
For-Profit Corporation		X	
Non-Profit Corporation	X		
Memorandum of Understanding to Cooperate (MOU)	With IGA		Interim Option
Cooperative		X	
Unincorporated Non-Profit Association		X	
Partnership/Limited Liability Company		X	
<i>Governmental Entities</i>			
Existing Government	X		State or Local
Regional Water Authority	X		
Water Conservancy District	X		
Water Conservation District		X	
Special District		X	
Enterprise		X	
Intergovernmental Agreement (IGA)	With MOU		Interim Option

Planned content for Phase 2 TM

- Description of organizational structures
 - General structure
 - Financing options
 - Ownership of assets
 - Governance
 - Staff options
- Examples in Colorado or other states
- Pros and cons
- Discussion of how they could be applied in the SPROWG project
 - Interim vs permanent long-term options

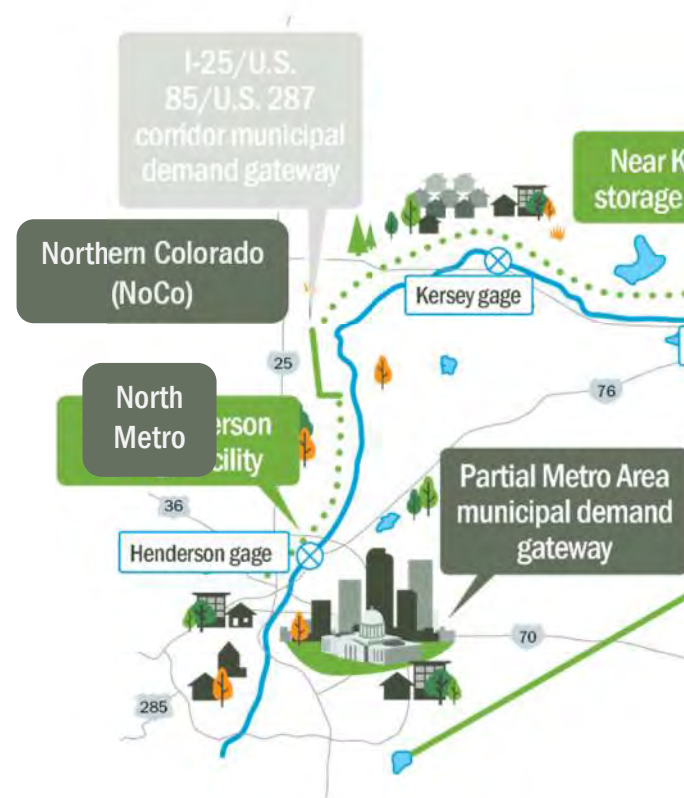


Concept
Refinement
Alternatives

Survey Results from M&I Water Providers

- We received 31 responses

Planning Region	Number of Responses
Metro	10
NoCo	8
North Metro	7
Lower South Platte	2
Industrial Water User	4
TOTAL	31



After use of current supplies and supplies projected to be made available through IPPs, how much water supply gap does your organization project at build out?

Planning Region	Count	Low Estimate (AF/year)	High Estimate (AF/year)	Avg Yr Estimate (AF/year)
Metro	10	19,901	141,000	55,450
NoCo	8	4,900	21,900	13,400
North Metro	7	4,775	7,686	6,231
Lower South Platte	2	1,000	3,500	2,250
Industrial Water User	4	-	-	-
TOTAL	31	30,576	174,086	77,331

Amount of Water Needed by Year, by Planning Region (Avg AF/yr)

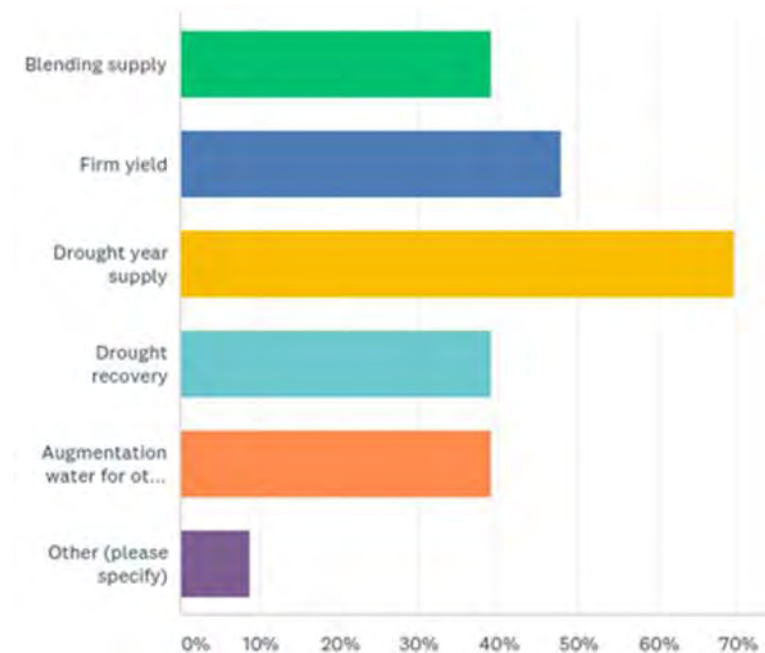
Planning Region	2030	2040	2050	2070	After 2070
Metro	1,000	50,001	2,000	18,050	750
NoCo		5,300	1,500	6,600	
North Metro	4,281		1,950		
Lower South Platte			2,250		
Industrial Water User					
TOTAL	5,281	55,301	7,700	24,650	750
CUMULATIVE TOTAL	5,281	60,582	68,282	92,932	93,682

How much unused reusable supply does your organization have that can be stored, conveyed, and/or treated in a regional project?

Planning Region	Count	Avg Yr Estimate (AF/year)
Metro	10	41,075
NoCo	8	6,340
North Metro	7	3,400
Lower South Platte	2	650
Industrial Water User	4	9,300
TOTAL	31	60,765

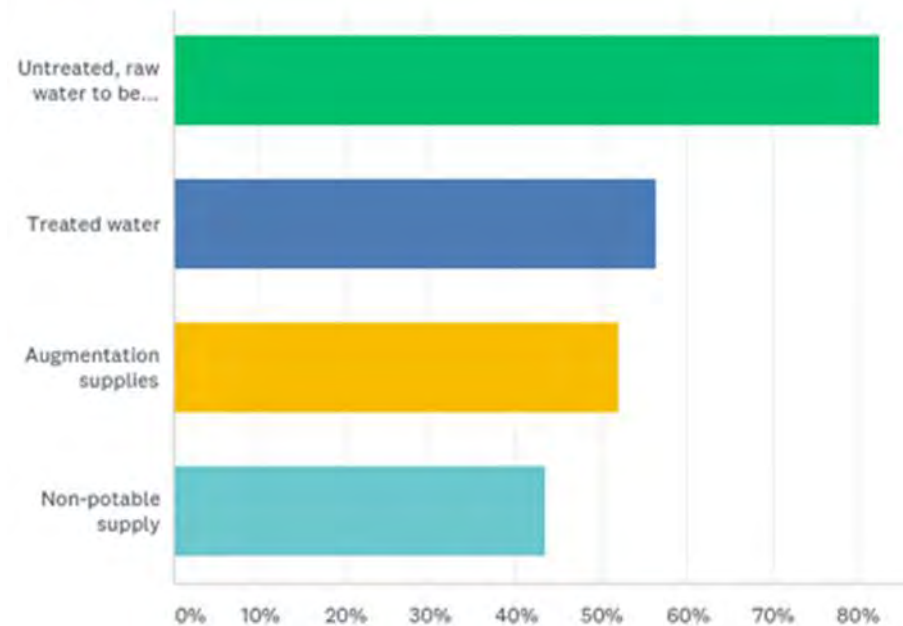
If your organization received water from a regional project, what would be the intended use? (Select all that apply)

Planning Region	Blending Supply	Firm yield	Drought Year Supply	Drought Recovery	Aug Water
Metro	2	6	8	5	3
NoCo	2	2	4	3	2
North Metro	4	3	5	2	2
Lower South Platte	1	1			1
Industrial Water User	1				2
Total	10	12	17	10	10



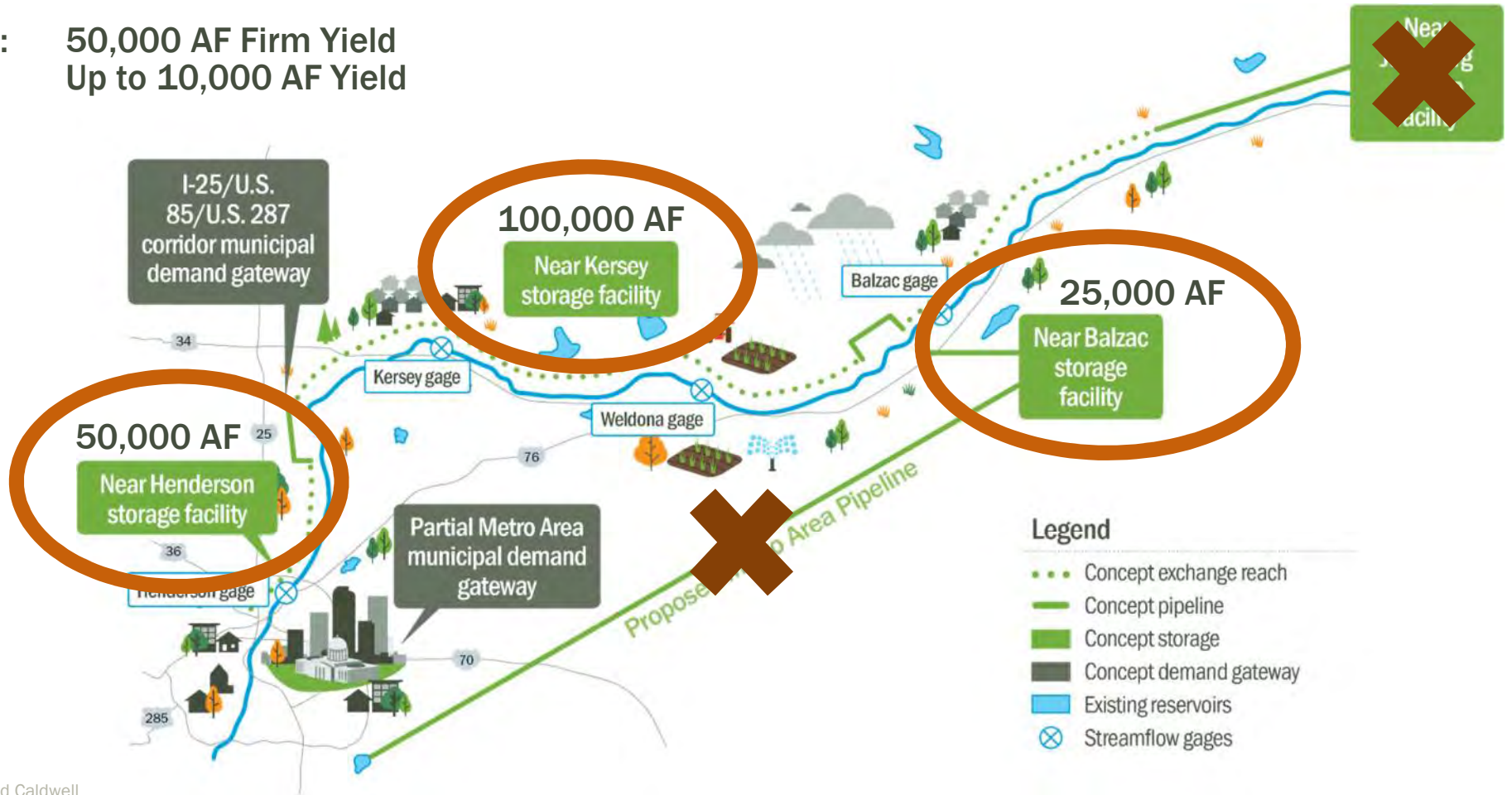
Identify your organization's preference for the type of water available through a regional project. (select all that apply)

Planning Region	Raw water	Treated water	Aug supplies	Non-potable supply
Metro	7	4	6	4
NoCo	5	5	2	2
North Metro	5	3	1	2
Lower South Platte	1	1	1	1
Industrial Water User	2		3	1
Total	20	13	13	10



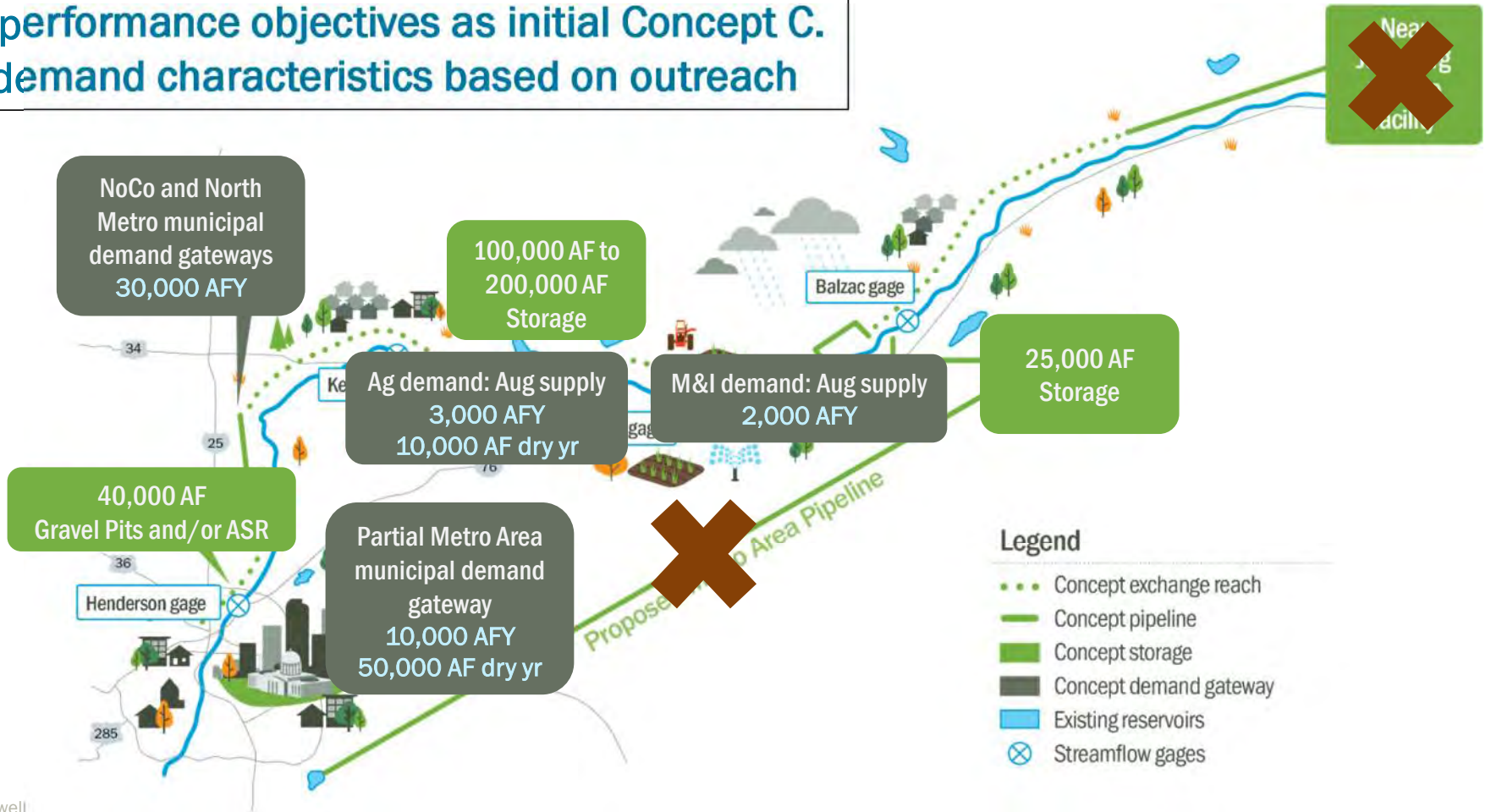
Initial Concept C

M&I: 50,000 AF Firm Yield
 Ag: Up to 10,000 AF Yield

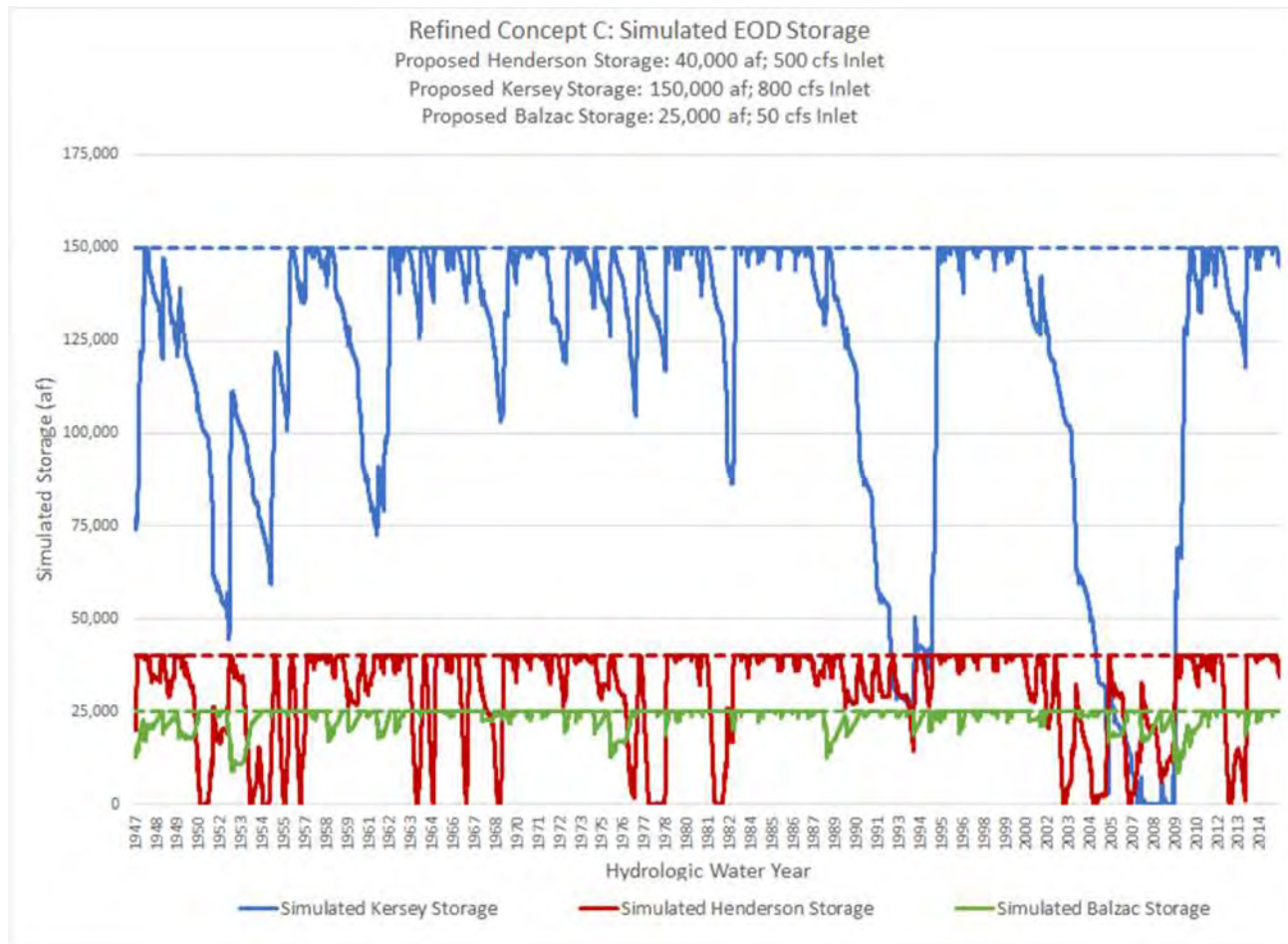


Alternative 1: Refine the Initial Concept

Same performance objectives as initial Concept C.
Tailor demand characteristics based on outreach



Alternative 1: Refine the Initial Concept

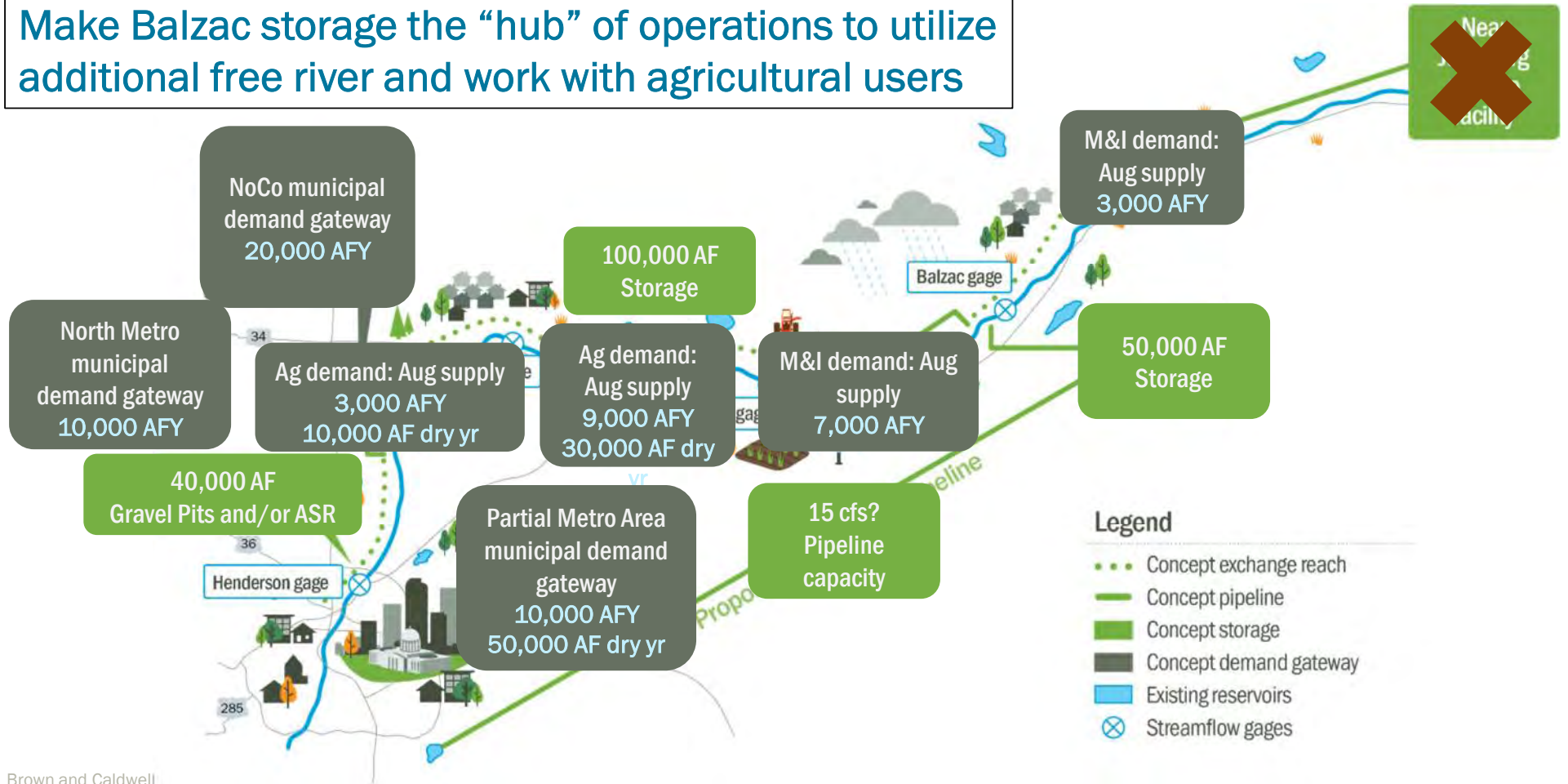


Alternative 1: Refine the Initial Concept

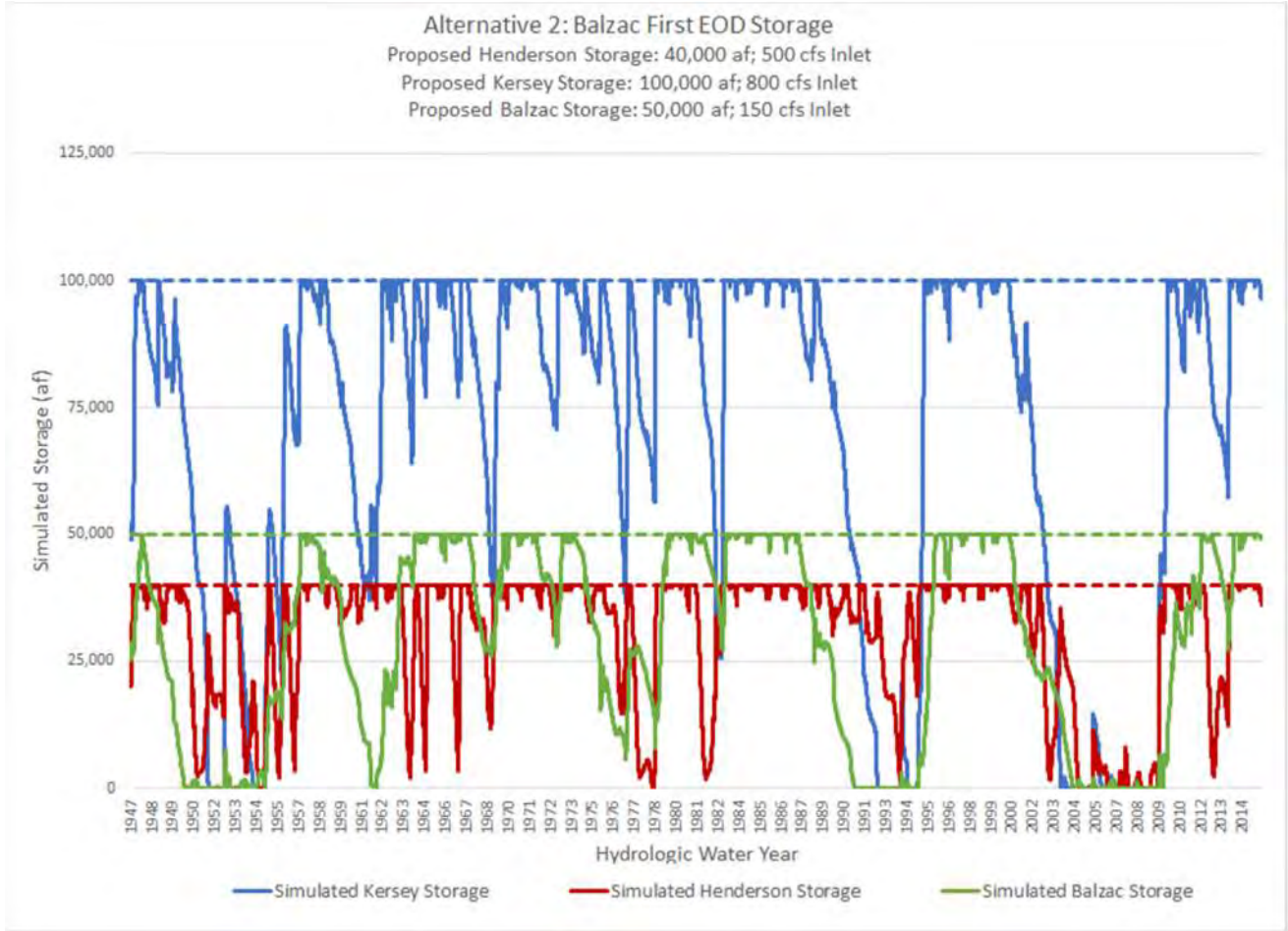
- Preliminary findings from modeling (SUBJECT TO CHANGE):
 - Muni demands fully met except in very dry or just after dry years for 98% yield
 - Results are sensitive to the amount of flow left in river for existing conditional exchanges (still evaluating this parameter)
 - Sensitivity - shifted some muni demand to Metro Area gateway in Alternative 1B
 - Similar results between 1A and 1B, but agricultural demands met in WD 2 dropped as muni demand shifted to Metro
 - Limited exchange potential impairs ability to meet agricultural demand in WD2
 - Sensitivity – Henderson has to be at least 40,000 AF to meet all Metro demand
 - Sensitivity – dropped Kersey to 100,000 and still met muni demands

Alternative 2: Balzac First

Make Balzac storage the “hub” of operations to utilize additional free river and work with agricultural users



Alternative 2: Balzac First

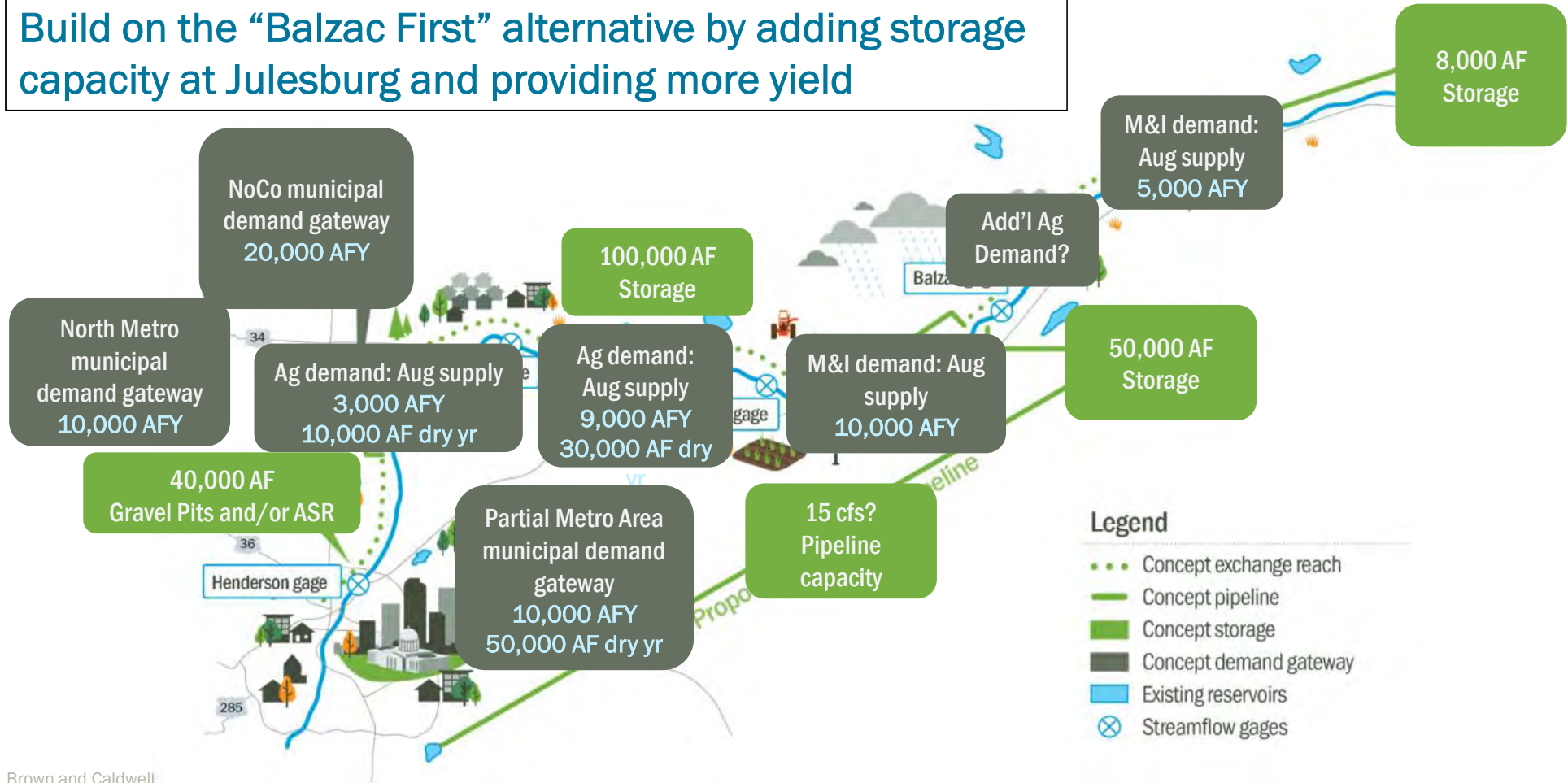


Alternative 2: Balzac First

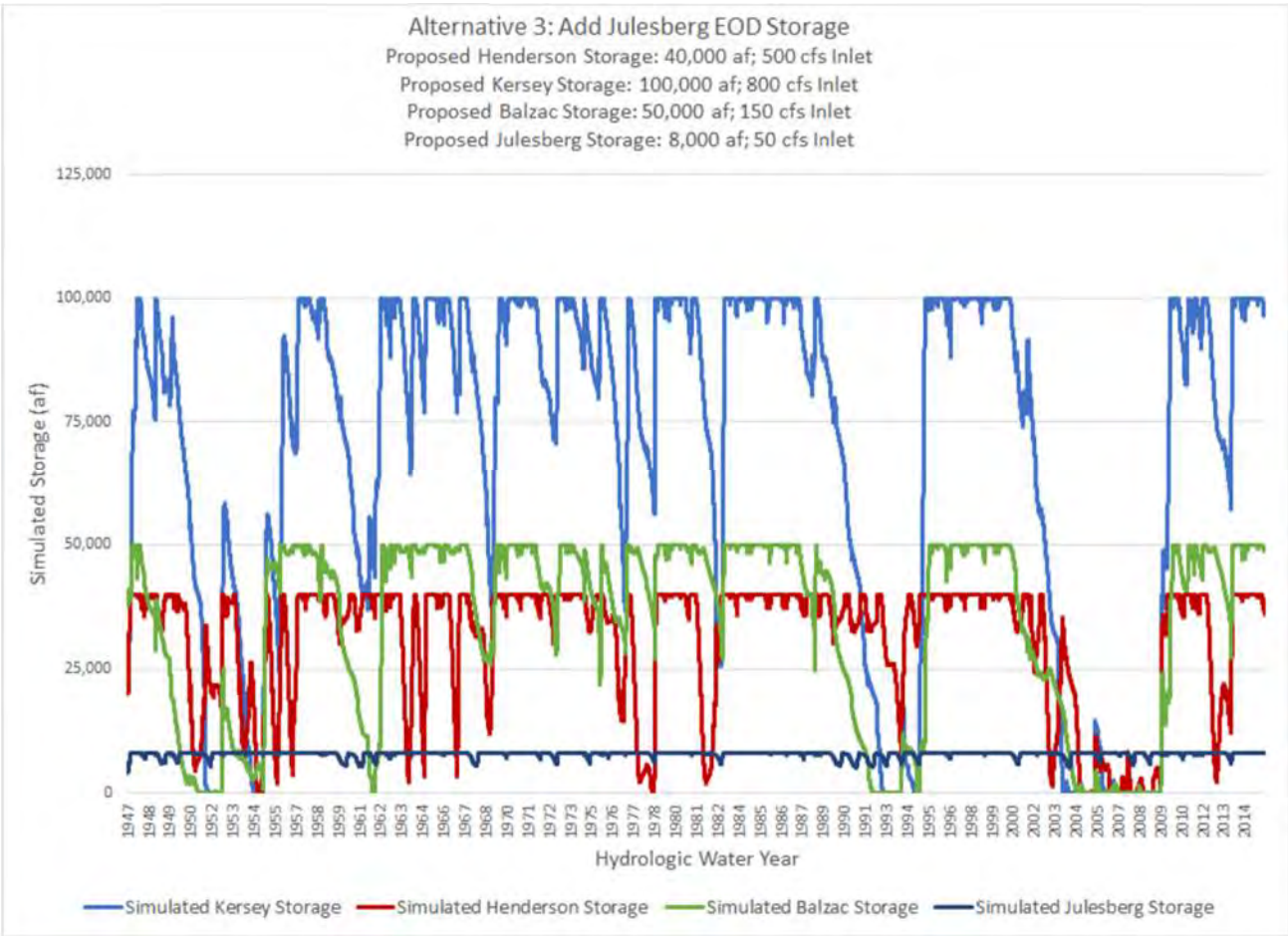
- Preliminary findings from modeling (SUBJECT TO CHANGE):
 - Balzac storage used much more than in Alt 1, but also drawn down in the 1950s, early 1990s and 2000s
 - Muni demands met 97% of time but have shortages 1950s and 2000s
 - Resetting agricultural demands to Alt 1 levels fixes this
 - Results are sensitive to the amount of flow left in river for existing conditional exchanges (still evaluating this parameter)
 - Muni demand can be met without Metro pipeline in initial concept configuration, but helps keep more water in storage in Kersey and Henderson
 - Sensitivity - increasing pipeline size didn't impact yield in current Alt 2 configuration
 - Less than 500 AF of agricultural demand met in WD2, but 85% of WD 1 agricultural demand met
 - Increased Eastern Plains muni demand met almost all the time

Alternative 3: Add Julesburg Storage

Build on the “Balzac First” alternative by adding storage capacity at Julesburg and providing more yield



Alternative 3: Add Julesburg Storage

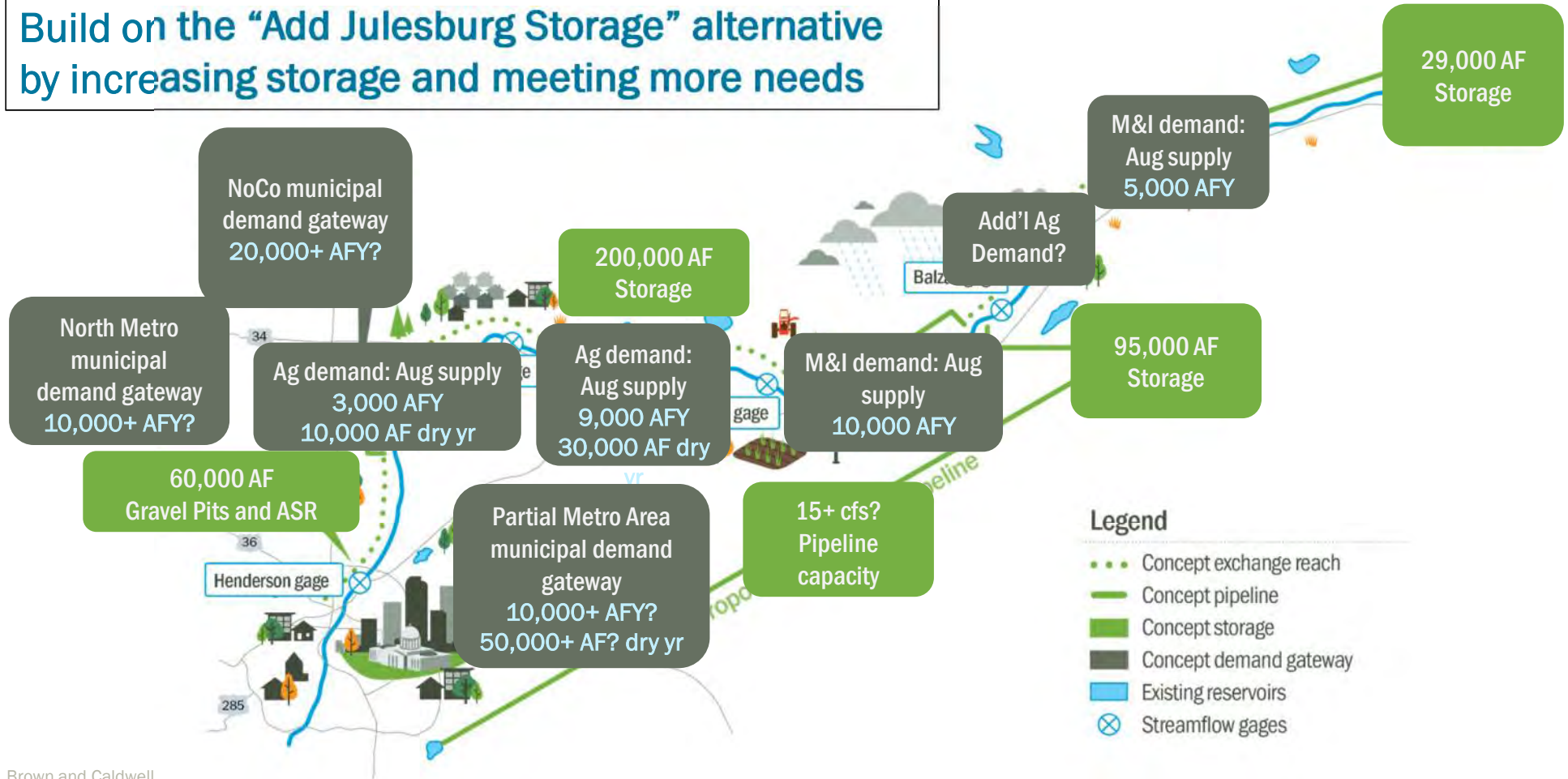


Alternative 3: Add Julesburg Storage

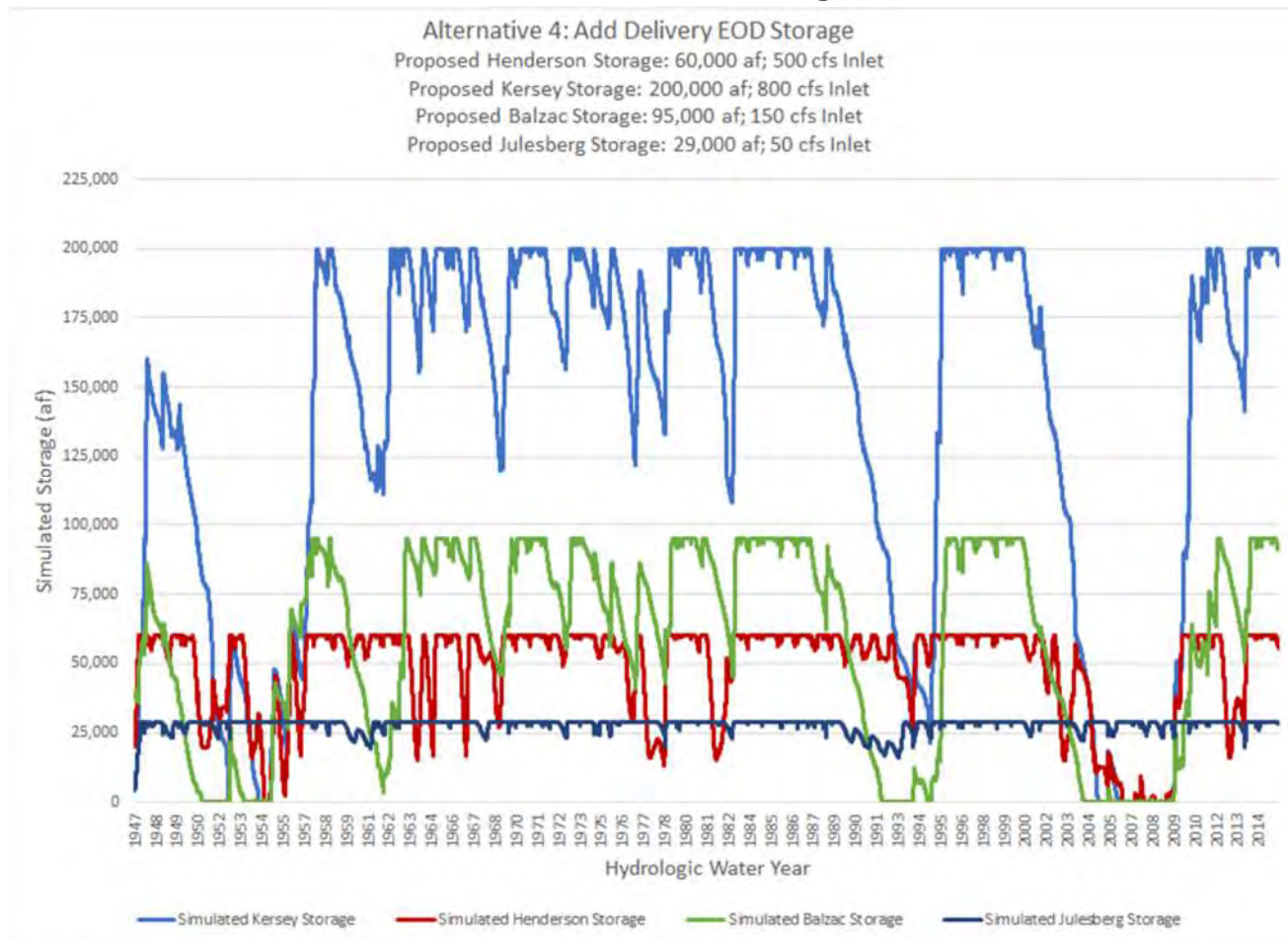
- Preliminary findings from modeling (SUBJECT TO CHANGE):
 - Better performance in meeting Metro and NoCo/North Metro demand compared to Alt 2
 - Higher levels of agricultural demand in WD 1 met more consistently with additional storage
 - Agricultural demands in WD 2 are limited by exchange capacity
 - Julesburg can meet WD 64 demands (both muni and agricultural)

Alternative 4: Additional Delivery

Build on the "Add Julesburg Storage" alternative by increasing storage and meeting more needs



Alternative 4: Additional Delivery



Alternative 4: Additional Delivery

- Preliminary findings from modeling (SUBJECT TO CHANGE):
 - Increase muni deliveries by more than 15,000 AF over prior alternatives
 - Agricultural demands in WD 2 are limited by exchange capacity but WD 1 deliveries increased by approximately 500 AF

Next steps on modeling....

- Scrutinize the amount of streamflow reserved for existing exchanges
 - Concept yield is sensitive to this assumption
- Continue to seek a balance among storage amounts, capacity of conveyance infrastructure, and/or delivery goals for each alternative
- Modeling has been insightful, and there is more to do

Water Treatment Strategies



Water Treatment Options

- Two treatment options aligned with alternatives:
 - advanced water treatment using existing traditional technologies
 - natural filtration pretreatment (e.g., riverbank filtration) followed by conventional water treatment
- Both options will meet all primary and secondary drinking water standards
- Advanced water treatment will include brine disposal
- Riverbank filtration for pretreatment will be patterned after the Prairie Waters North Campus
- Any alternatives involving ASR will require pretreatment prior to recharge
- Nonpoint source reduction options will be evaluated conceptually at land-use level (municipal, industrial, irrigated agriculture, range land, etc.)

Water Treatment Scenarios

- Assume all other storage and conveyance infrastructure will be the same with or without treatment for each of the alternatives.
- Alternative costs can then be shown for scenarios with or without treatment.



Water Treatment Scenarios

- For alternatives with Metro Gateway deliveries taken from South Platte diversions near Brighton (e.g., Prairie Waters North Campus)
 - Treat South Platte River water quality at Brighton
 - Advanced Water Treatment Scenario – AWTP located near Brighton to serve NoCo South demands
 - Riverbank Filtration Scenario - RBF facilities adjacent to river; assume participants have their own finished water treatment plants



Water Treatment Scenarios

- For alternatives with Metro Gateway deliveries taken directly from Metro Area Pipeline
 - Treat Balzac reservoir water quality
 - Advanced Water Treatment Scenario – AWTP located at discharge end of pipeline
 - Riverbank Filtration Scenario - None



Water Treatment Scenarios

- For NoCo Area Gateway deliveries for all alternatives
 - Treat South Platte river water quality at Milliken
 - Advanced Water Treatment Scenario – AWTP located at Walmart Hill site.
 - Riverbank Filtration Scenario – RBF facility adjacent to river at Milliken; WTP at Walmart Hill site



Water Treatment Scenarios

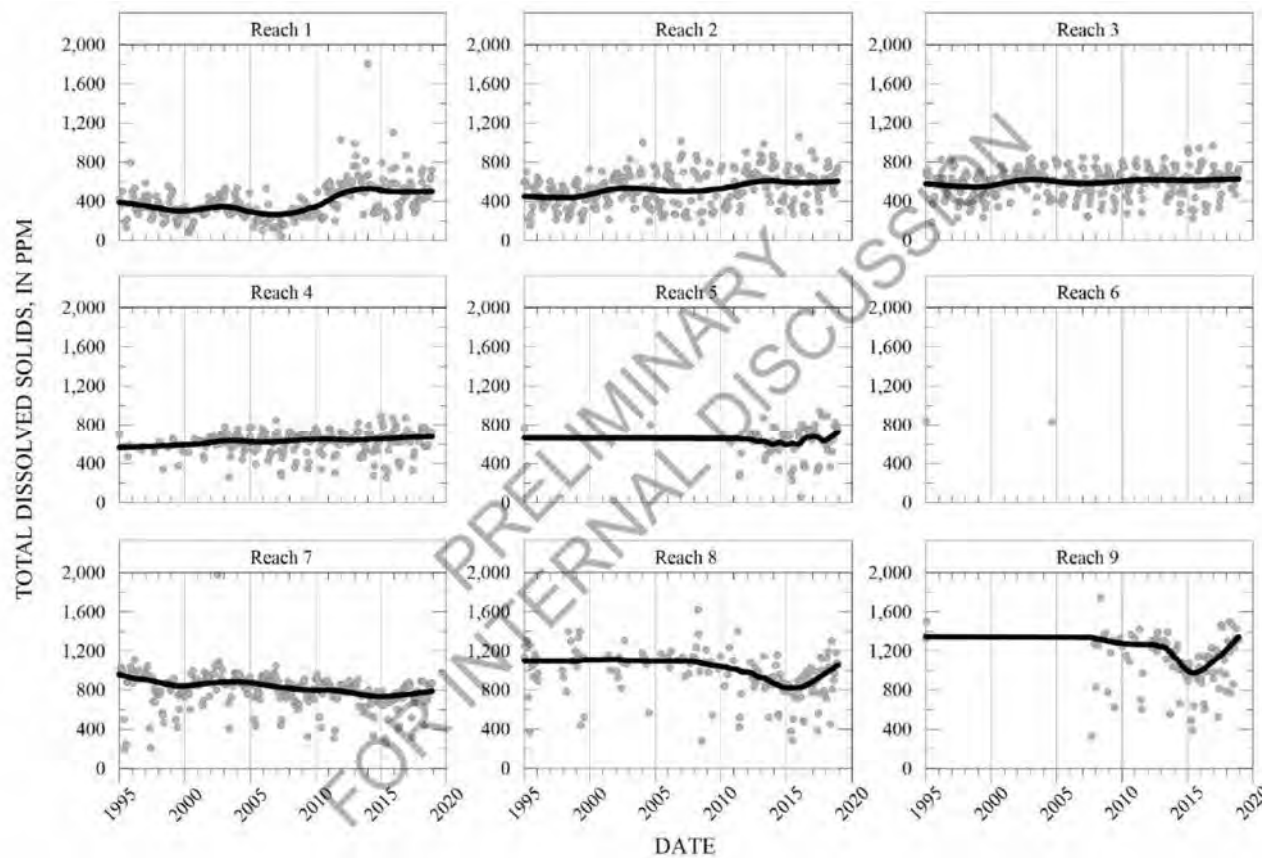
- For alternatives with ASR
 - Treat South Platte River water quality at Brighton prior to recharge
 - Advanced Water Treatment Scenario – AWTP located at ASR recharge location
 - Riverbank Filtration Scenario – RBF facility adjacent to river at Brighton; WTP at ASR recharge location



Water quality data from other State Grant project (Colorado Corn Growers/Nierbo)



Water quality data from other State Grant project (Colorado Corn Growers/Nierbo)



Location	TDS in South Platte River at Diversion (mg/L)		
	Low	High	Average
Brighton (Reach 3)	400	800	600
Milliken (Reach 4)	400	800	650
Fort Morgan (Reach 8)	800	1300	1100

Secondary drinking water standard = 500 mg/L

Water Treatment Scenarios

- Nonpoint Source Treatment Option
 - Characterize main land use types affecting South Platte water quality (urban, suburban, irrigated agriculture, rangeland)
 - Identify best management practices for main land use types
 - Estimate possible water quality benefits and costs at the watershed scale



Near-term Activities



Near-Term Activities

- Complete Technical Memoranda on outreach to M&I, Agriculture and Environment/Recreation stakeholders
- Conduct research on five alternative organizational frameworks and write Technical Memorandum
- Complete modeling SPROWG concept alternatives
- Complete evaluation of water treatment strategies
- Develop initial cost estimates of SPROWG alternatives
- Develop draft Outreach and Education Plan
- Present SPROWG concept to Interim Water Resources Review Committee on October 24



Topics for Next Task Force Meeting

- Results of organizational analysis
- Results of modeling project refinements
- Summary of initial SPROWG cost estimates
- Draft Outreach and Education plan
- Next Task Force meeting scheduled for **December 10th** (before the South Platte BRT meeting)
 - Will send out meeting location, agenda, etc. at a later date

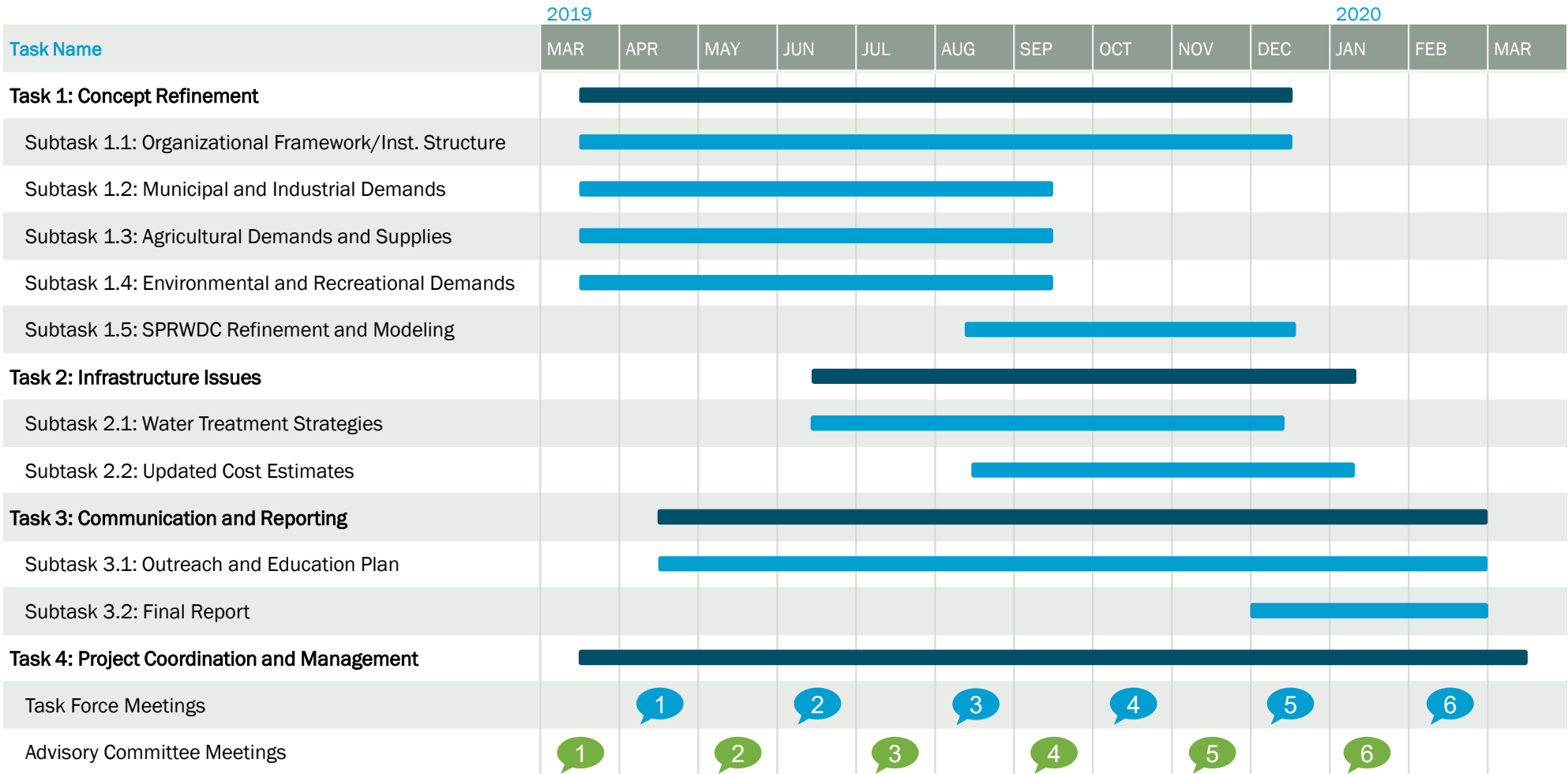
Upcoming Task Force meetings

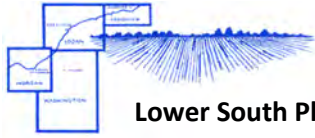
Meeting Number	Proposed Date	Proposed Topics
1	April 3, 2019	<ul style="list-style-type: none"> Project kickoff Planning for outreach with potential partners
2	June 13, 2019 (before Metro BRT)	<ul style="list-style-type: none"> Description of organizational alternatives Report on initial outreach activities with potential partners
3	August 13, 2019 (before SPBRT)	<ul style="list-style-type: none"> Summary of findings from outreach activities Description of potential project refinements
4	October 10, 2019 (before Metro BRT)	<ul style="list-style-type: none"> Results of modeling project refinements Description of treatment strategies
5	December 10, 2019 (before SPBRT) May be rescheduled if December meeting is not held	<ul style="list-style-type: none"> Summary of cost estimate refinements Description of outreach and education plan
6	February 13, 2020 (before Metro BRT)	<ul style="list-style-type: none"> Presentation of draft-final report and discussion of Task Force comments (a draft report will be circulated to the Task Force in advance of this meeting)



Thank you.
Questions?







Lower South Platte Water
Conservancy District

Meeting Agenda

Prepared for: Lower South Platte Water Conservancy District

Project Title: South Platte Regional Opportunities Water Group Feasibility Study

Purpose of Meeting: Task Force Meeting #5

Date: December 10, 2019

Meeting Location: Boulder County Parks and Open Space
5201 St. Vrain Road
Longmont, Colorado 80503

Time: 2:00 p.m.

Agenda Prepared by: Matt Lindburg, Brown and Caldwell
1527 Cole Blvd, Suite 300
Lakewood, Colorado 80401
303-239-5400

Agenda

1. Introductions
2. Overview of activities since the last Task Force meeting
3. Organizational Framework
 - a. Brief review of potential organizational frameworks
4. Concept Refinement
 - a. Review of modeling results and concept refinements including demands, infrastructure, operations, and opportunities for environmental and recreational benefits
 - b. Questions, comments, and discussion
5. Water Treatment Alternatives:
 - a. Brief review of water treatment strategies
6. Cost Estimates
 - a. Review of draft cost estimates
 - b. Questions, comments, and discussion
7. Communications and Outreach Plan
 - a. Description of plan
 - b. Questions, comments, and discussion
8. Summarize near-term activities and topics for the next Task Force meeting



Doug
Robotham

SCHEDULE FOR TASK FORCE AND ADVISORY COMMITTEE MEETINGS

Task Force meetings:

Meeting Number	Proposed Date	Proposed Topics
1	April 3, 2019	<ul style="list-style-type: none"> • Project kickoff • Planning for outreach with potential partners
2	June 13, 2019 (before Metro BRT)	<ul style="list-style-type: none"> • Description of organizational alternatives • Report on initial outreach activities with potential partners
3	August 13, 2019 (before SPBRT)	<ul style="list-style-type: none"> • Summary of findings from outreach activities • Description of potential project refinements
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5	December 10, 2019 (before SPBRT) <i>May be rescheduled if December meeting is not held</i>	<ul style="list-style-type: none"> • Summary of cost estimate refinements • Description of outreach and education plan
6	February 13, 2020 (before Metro BRT)	<ul style="list-style-type: none"> • Presentation of draft-final report and discussion of Task Force comments (a draft report will be circulated to the Task Force in advance of this meeting)

Advisory Committee meetings:

Note: Advisory Committee meetings will be scheduled for Wednesdays at 9 am on the dates shown below.

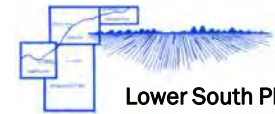
- March 20, 2019
- May 22, 2019
- July 24, 2019
- September 18, 2019
- November 20, 2019
- January 22, 2020



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TASK FORCE MEETING #5

South Platte Regional Opportunities Water Group (SPROWG) Feasibility Study



Lower South Platte Water
Conservancy District

December 10, 2019



Activities Since Last Task Force Meeting

- Conducted Research on Narrowed List of Potential Organizational Frameworks
- Completed Modeling Refinements
- Finalized Water Treatment Strategies
- Developed Draft Cost Estimates
- Developed Outline and Content for Communications and Outreach Plan
- Other Happenings
 - Interim Water Resources Review Committee presentation on October 24
 - 2nd Environmental/Recreation Outreach Meeting on November 22

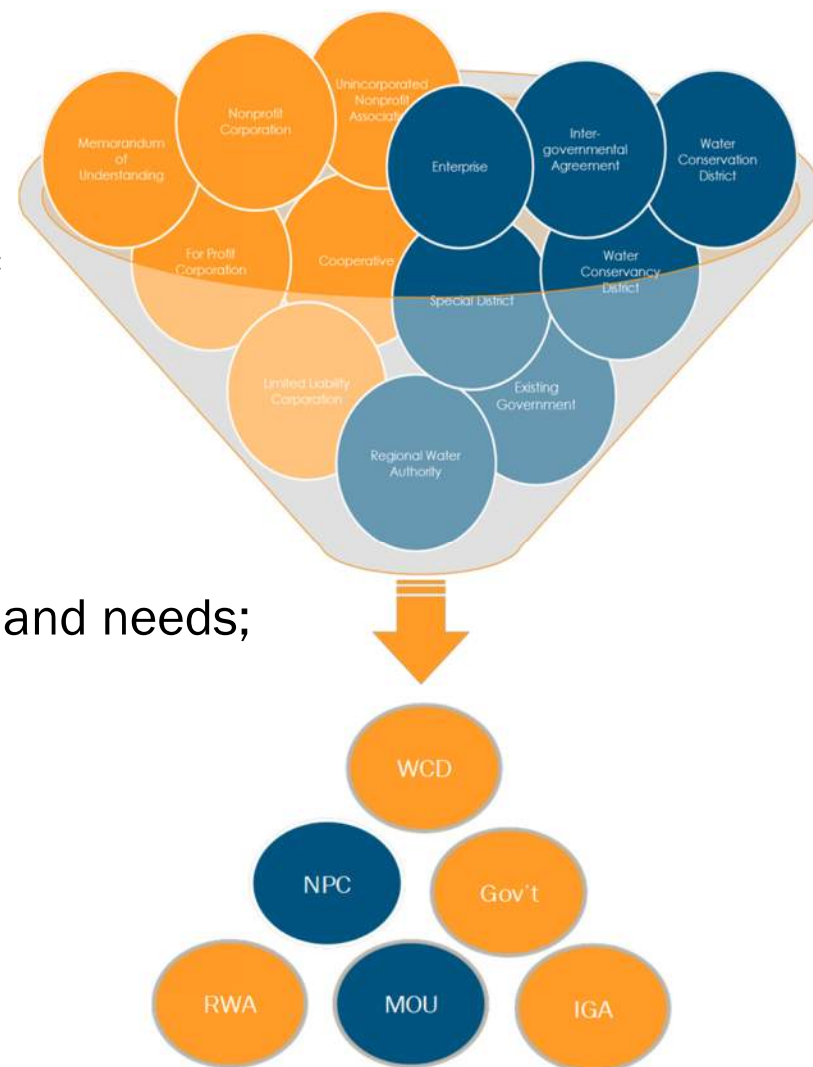


Organizational Framework



Organizational Framework

1. Identify pertinent frameworks and their basic characteristics;
2. Survey potential participants for preferences and needs;
3. Evaluate the five most relevant frameworks.



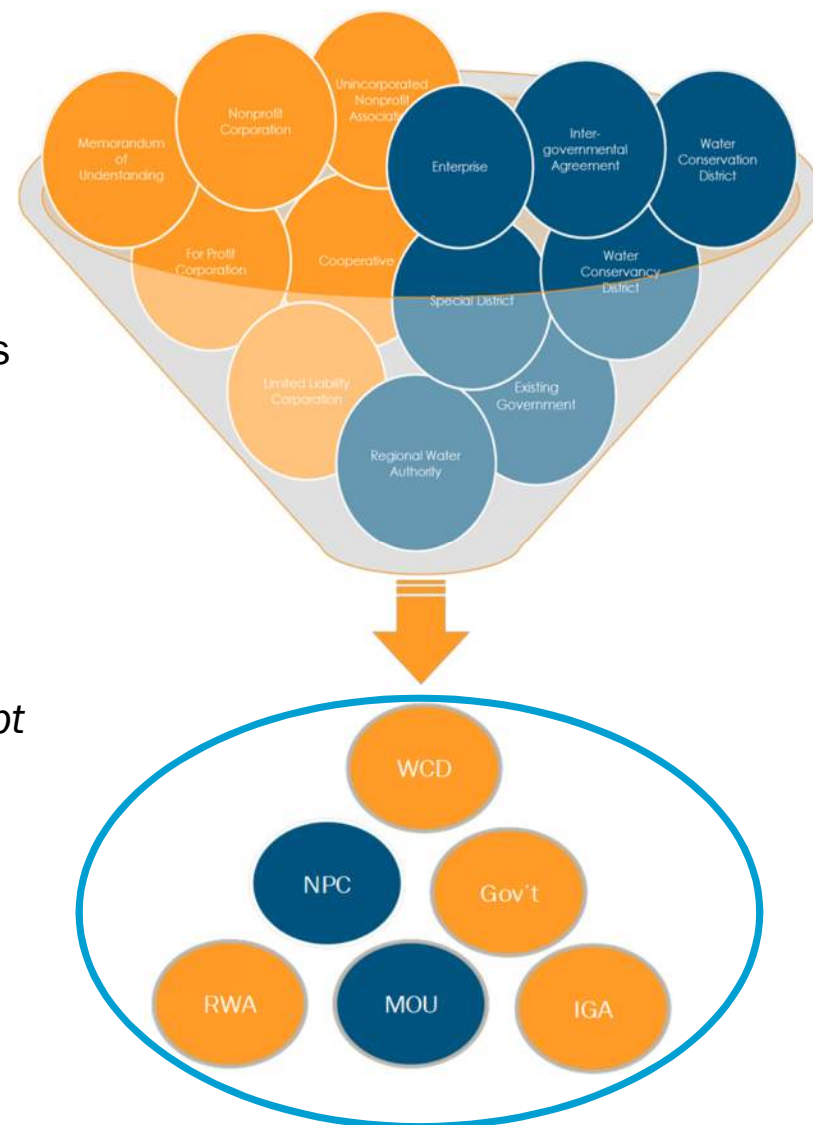
Organizational Framework

3. Evaluate the five most relevant frameworks.

a. Each Individual Framework Including:

- *Overview of:*
 - General structure and legal capabilities
 - Formation and Dissolution
 - Financing options
 - Ownership of assets
 - Governance
- *Case Studies*
- *Applicability: Framework and SPROWG Concept*

b. Qualitative Analysis.



Organizational Frameworks - Case Studies

Organizational Framework	Case Studies
Nonprofit Corporation	Chatfield Reservoir Mitigation Company (CRMC) South Platte Water Related Activities Program (SPWRAP) 501 (c)(3)
Existing Government	Windy Gap Firming Project
Water Conservancy District	Northern Colorado Water Conservancy District
Regional Water Authority	South Metro Water Supply Authority
Memorandum of Understanding	Eagle River MOU
Intergovernmental Agreement	Water Infrastructure Supply Efficiency (WISE) IGA

Organizational Frameworks - Qualitative Assessment Criteria

- **Adaptability**

Ability to adapt to future changes (e.g. participants, project components and project operations).

- **Flexibility:**

Ability to change the organization to accomplish different or additional goals.

- **Ease of Formation:**

Ease at which an organization may be formed.

- **Long-term Certainty:**

Ability to provide confidence that it will be able to deliver its identified purpose in future years.

- **Legal Protections:**

Ability to provide legal protections to participants as well as projects.

- **Inclusiveness:**

Ability to accommodate different participant types.

- **Interim Effectiveness:**

Ability to serve as an interim framework and transition to a successor framework.

Qualitative Assessment Process – Example Only

	Ease of Formation	
Organizational Framework	Score	Justification/Reasoning
Nonprofit Corporation	6	<ul style="list-style-type: none"> • Filing Requirements; • Tax exemption process; • Could require lengthy negotiations
Existing Government	6	<ul style="list-style-type: none"> • Must follow bylaws of existing government; • Ease of formation (e.g. signatures required on District's bylaws).
Water Conservancy District	2	<ul style="list-style-type: none"> • Strict requirements for formation (e.g. signatures required).
Regional Water Authority	6	<ul style="list-style-type: none"> • Depend on District's bylaws. • Could require lengthy negotiations.
Memorandum of Understanding	9	<ul style="list-style-type: none"> • No legal restrictions or requirements; • Participating entities must abide by respective bylaws.
Intergovernmental Agreement	8	<ul style="list-style-type: none"> • Other than participant type (government), limited legal requirements; • Binding agreement, requires more negotiations.

Evaluate each framework with the criteria

Qualitative Assessment Process – Example Only

Ease of Formation		
Organizational Framework	Score	Justification/Reasoning
Nonprofit Corporation	6	<ul style="list-style-type: none"> Filing Requirements; Tax exemption process; Could require lengthy negotiations
Existing Government	6	<ul style="list-style-type: none"> Must follow Ease of form bylaws.
Water Conservancy District	2	<ul style="list-style-type: none"> Strict and cu required, cou (e.g. signatures
Regional Water Authority	6	<ul style="list-style-type: none"> Depends on Could requir
Memorandum of Understanding	9	<ul style="list-style-type: none"> No legal res Participatin
Intergovernmental Agreement	8	<ul style="list-style-type: none"> Other than p Binding agreement, requires more negotiations. requirements;

Assign Score (1-10)

1= Very challenging to form

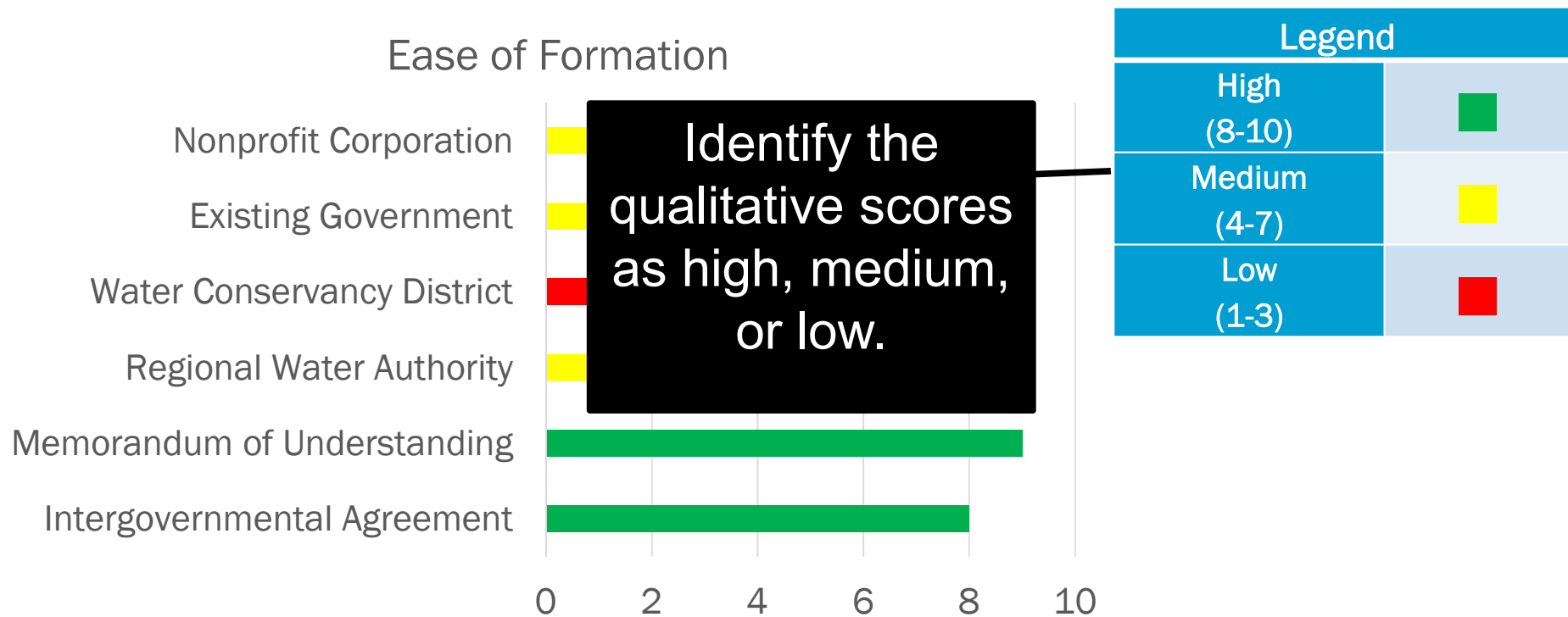
10= Easy to form

Qualitative Assessment – Example Only

		Ease of Formation	
Organizational Framework	Score	Justification/Reasoning	
Nonprofit Corporation	6	<ul style="list-style-type: none"> • Filing Requirements; • Tax exemption process; 	<ul style="list-style-type: none"> • Could require lengthy negotiations
Existing Government	6	<ul style="list-style-type: none"> • Must follow bylaws of existing government; • Ease of formation higher or lower depending on District's bylaws. • Strict and cumbersome legal requirements for formation (e.g. signatures required, court filing/ruling, and taxation initiative). 	
Wa		<ul style="list-style-type: none"> • Depends on participating entities' bylaws. • Could require lengthy negotiations. 	
Re		<ul style="list-style-type: none"> • No legal restrictions or requirements; • Participating entities must abide by respective bylaws. 	
Memorandum of Understanding	9	<ul style="list-style-type: none"> • Other than participant type (government), limited legal requirements; • Binding agreement, requires more negotiations. 	
Intergovernmental Agreement	8		

Provide justification or reasoning for score

Qualitative Assessment Process – Example Only



Qualitative Assessment Process - Example Only

Organizational Framework	Adaptability	Flexibility	Ease of formation	Long-term certainty	Legal protections	Inclusiveness	Interim effectiveness
Nonprofit Corporation	Yellow	Yellow	Yellow	Green	Green	Green	Yellow
Existing Government	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
Water Conservancy District	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red
Regional Water Authority	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
Memorandum of Understanding	Green	Green	Green	Red	Red	Green	Green
Intergovernmental Agreement	Green	Green	Green	Yellow	Red	Yellow	Green

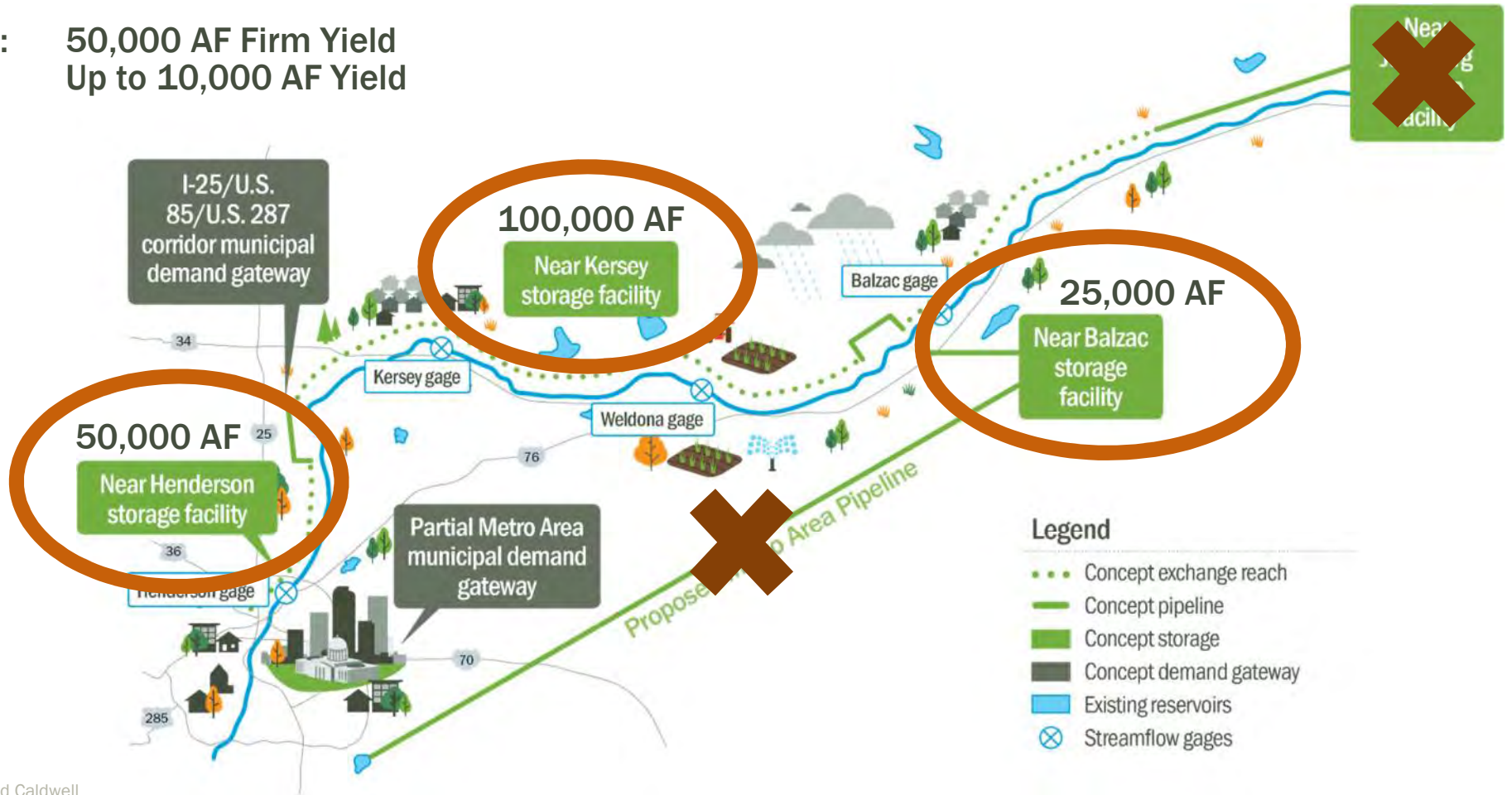
Combine all criteria scores into one matrix for evaluation.



Concept
Refinement
Alternatives

Initial Concept C

M&I: 50,000 AF Firm Yield
 Ag: Up to 10,000 AF Yield



Modeling Considerations

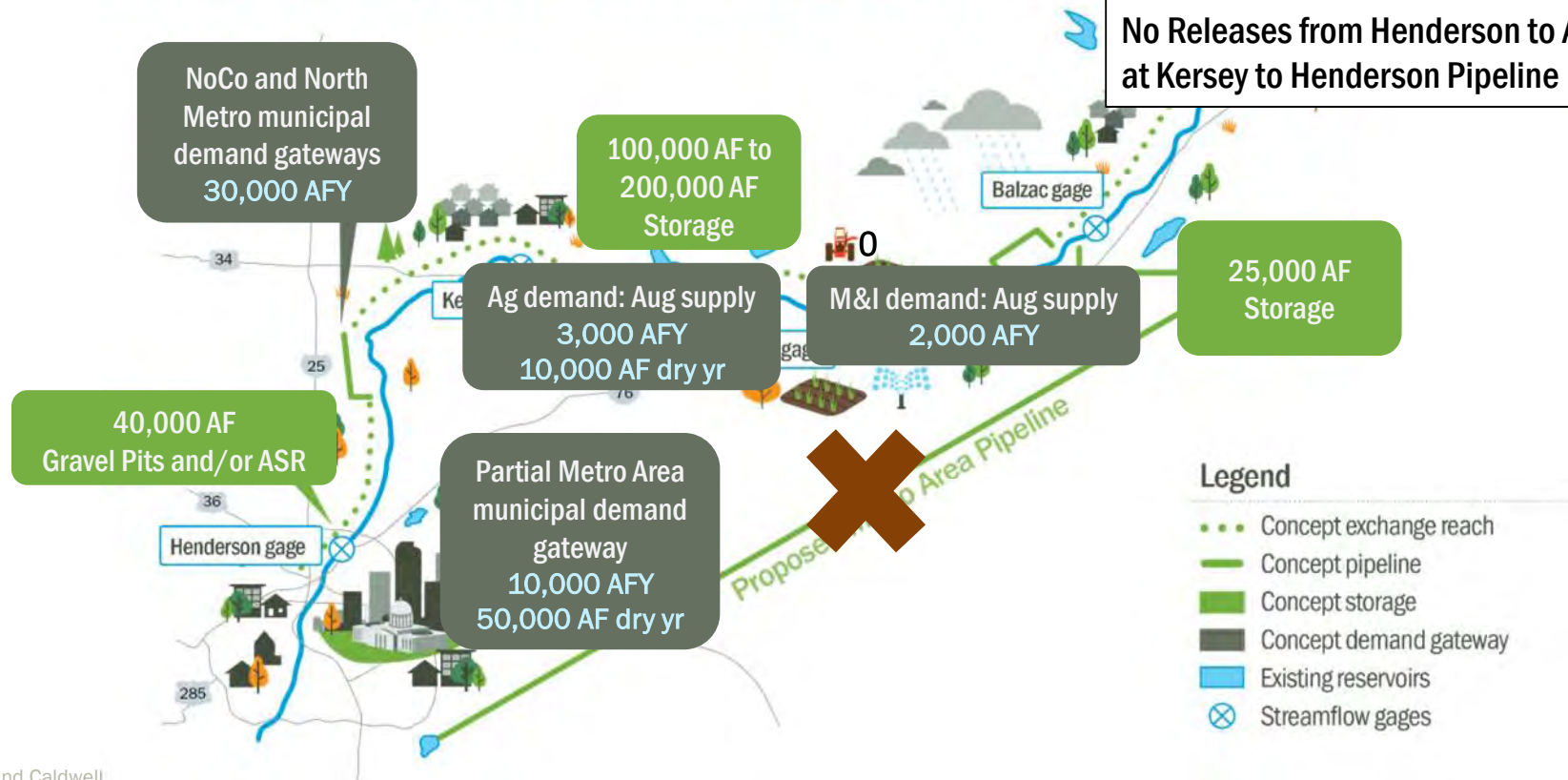
- Reduction in exchange capacity based on SPSS analyses
 - Prior modeling reduced exchange capacity by 150 cfs to account for conditional exchanges
- Concept of a Kersey-Henderson pipeline
- ATMs for drought recovery when reservoir storage is the lowest (30% of years)
- Meet at least 90% of municipal demands in all years
- Re-evaluation of deliveries for agriculture and eastern plains municipal demand
- Releasing water from Henderson storage to agricultural users

Alternative 1: Refine the Initial Concept

Same performance objectives as initial Concept C.
Tailor demand characteristics based on outreach

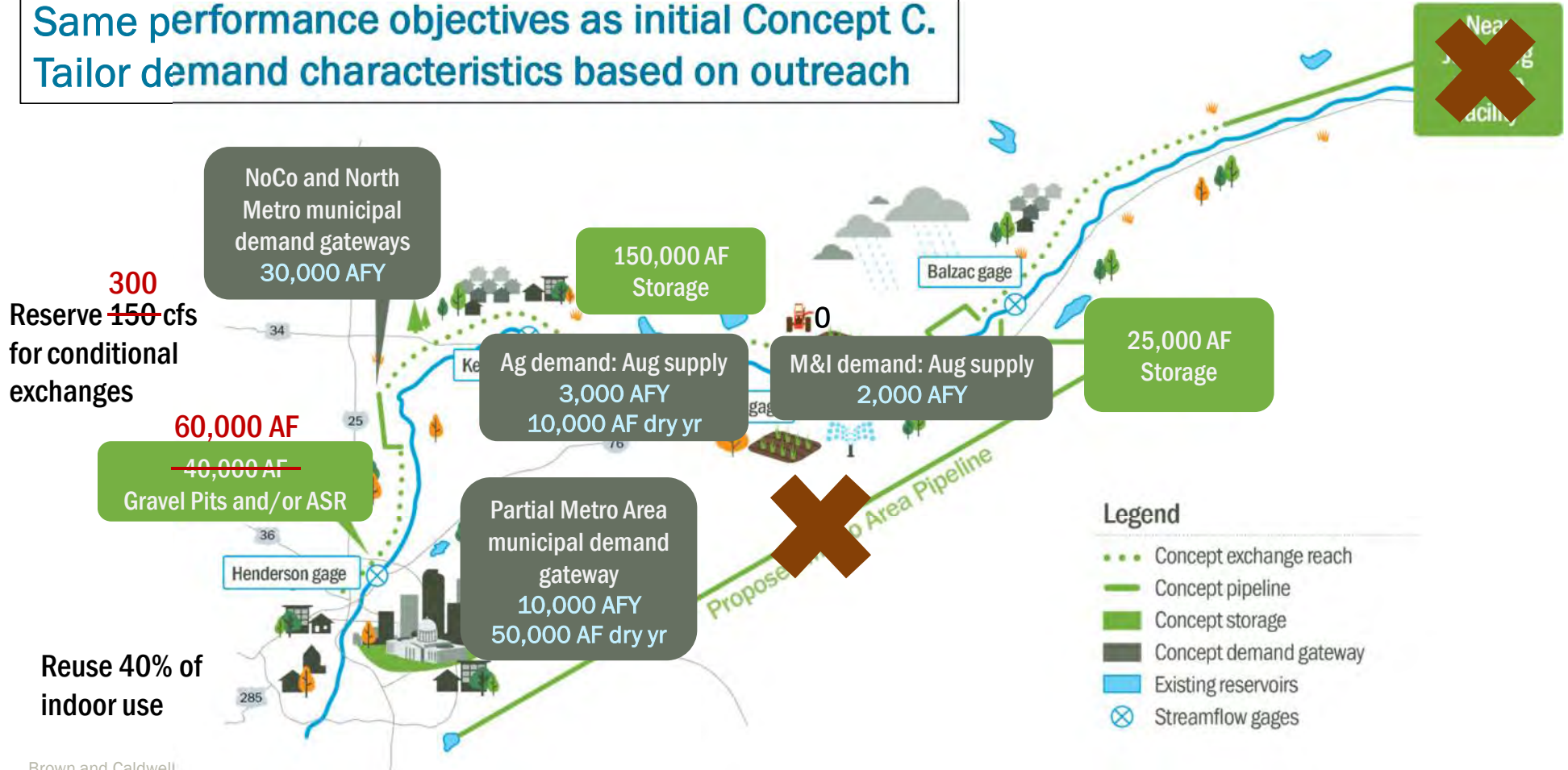
Variations on Alternative 1:

- 1A: North Metro demands at Walmart Hill
- 1B: North Metro demands at Metro Area gateway
- No Releases from Henderson to Ag, but did look at Kersey to Henderson Pipeline



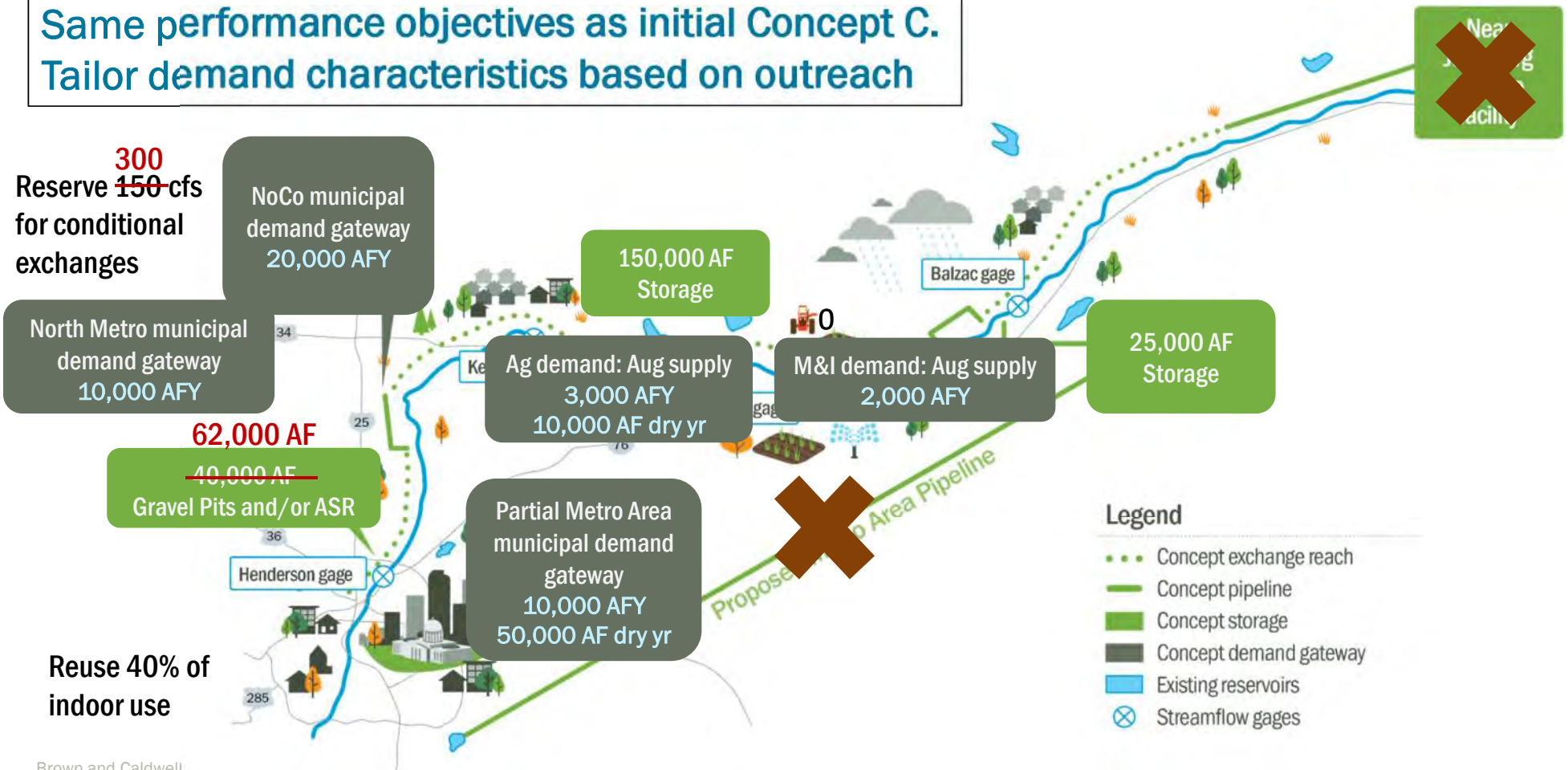
Alternative 1A: Refine the Initial Concept

Same performance objectives as initial Concept C.
Tailor demand characteristics based on outreach



Alternative 1B: Refine the Initial Concept

Same performance objectives as initial Concept C.
Tailor demand characteristics based on outreach

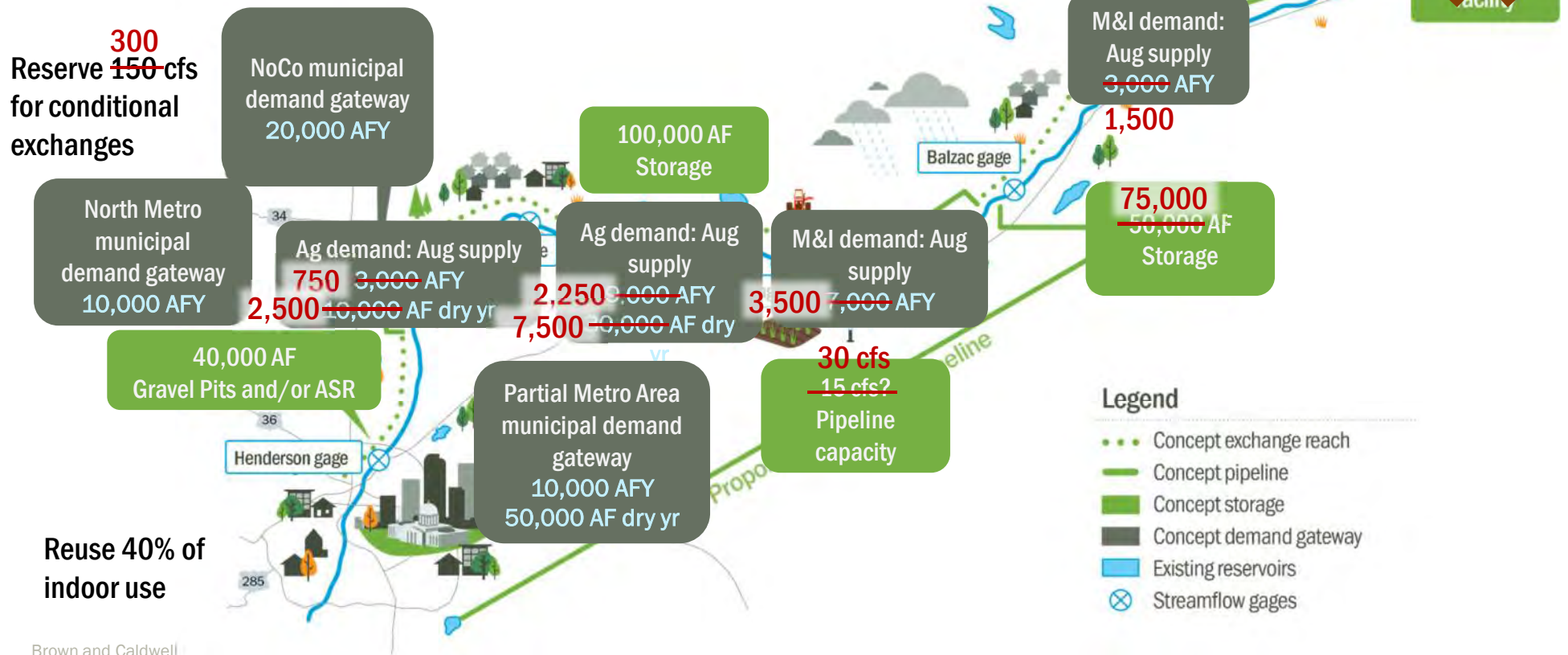


Alternative 1: Summary of Findings

- All variations on Alternative 1 meet 90% or more of municipal demand every year
 - Very similar results for Alternatives 1A and 1B
- Models illuminate tradeoffs regarding the amount of flow left in river for existing conditional exchanges
 - More storage/supply needed at Henderson if exchange potential is reduced
 - A pipeline from Kersey to Henderson reduces Henderson storage needs to 40,000 AF
 - Adding releases from Henderson to Ag strains Henderson storage
- Ag demands WD 1 are almost always met, Henderson release would help in WD 2

Alternative 2: Balzac First

Make Balzac storage the “hub” of operations to utilize additional free river and work with agricultural users



Alternative 2: Summary of Findings

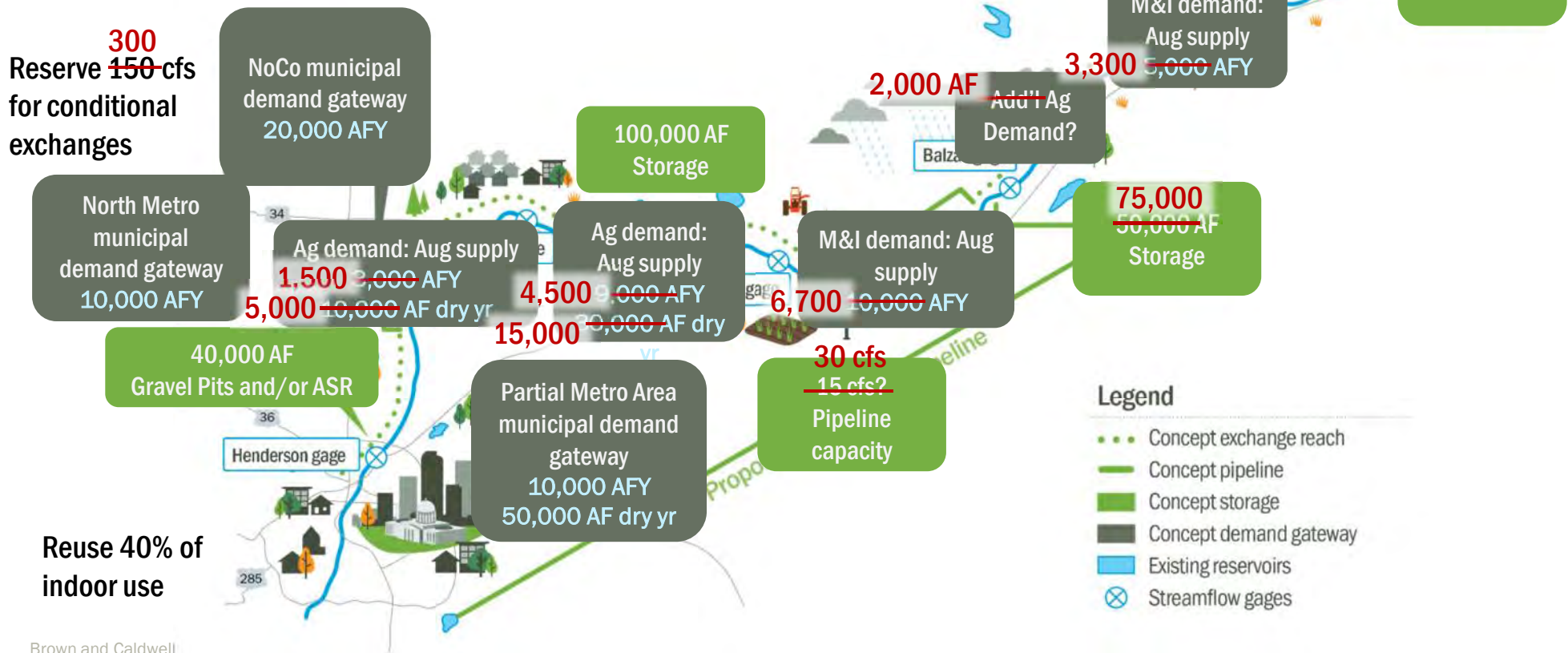
- Nearly all municipal demand met all the time
- Exchange capacity issues somewhat relieved with Balzac pipeline but is still a limitation
- 30 cfs pipeline seemed to be optimal
 - Lower capacity: Metro demands not met
 - Higher capacity: Balzac storage could not keep up and eastern plains demands could not be met
- Needed to lower muni and ag demands on eastern plains to make it work
- Ag demands WD 1 are almost always met, but see similar delivery issues in WD 2 – adding Henderson release helps

Alternative 2: Summary of Findings

- Balzac storage used much more than in Alt 1, but also drawn down in the 2000s
- This concept has less storage than Alternative 1 (without the Kersey-Henderson pipeline), but 50,000 AF of storage shifted from Kersey to Balzac.
- Modeled higher ag demands but reduced ability to meet muni demands and increased years that reservoirs go dry.

Alternative 3: Add Julesburg Storage

Build on the "Balzac First" alternative by adding storage capacity at Julesburg and providing more yield



Alternative 3: Summary of Findings

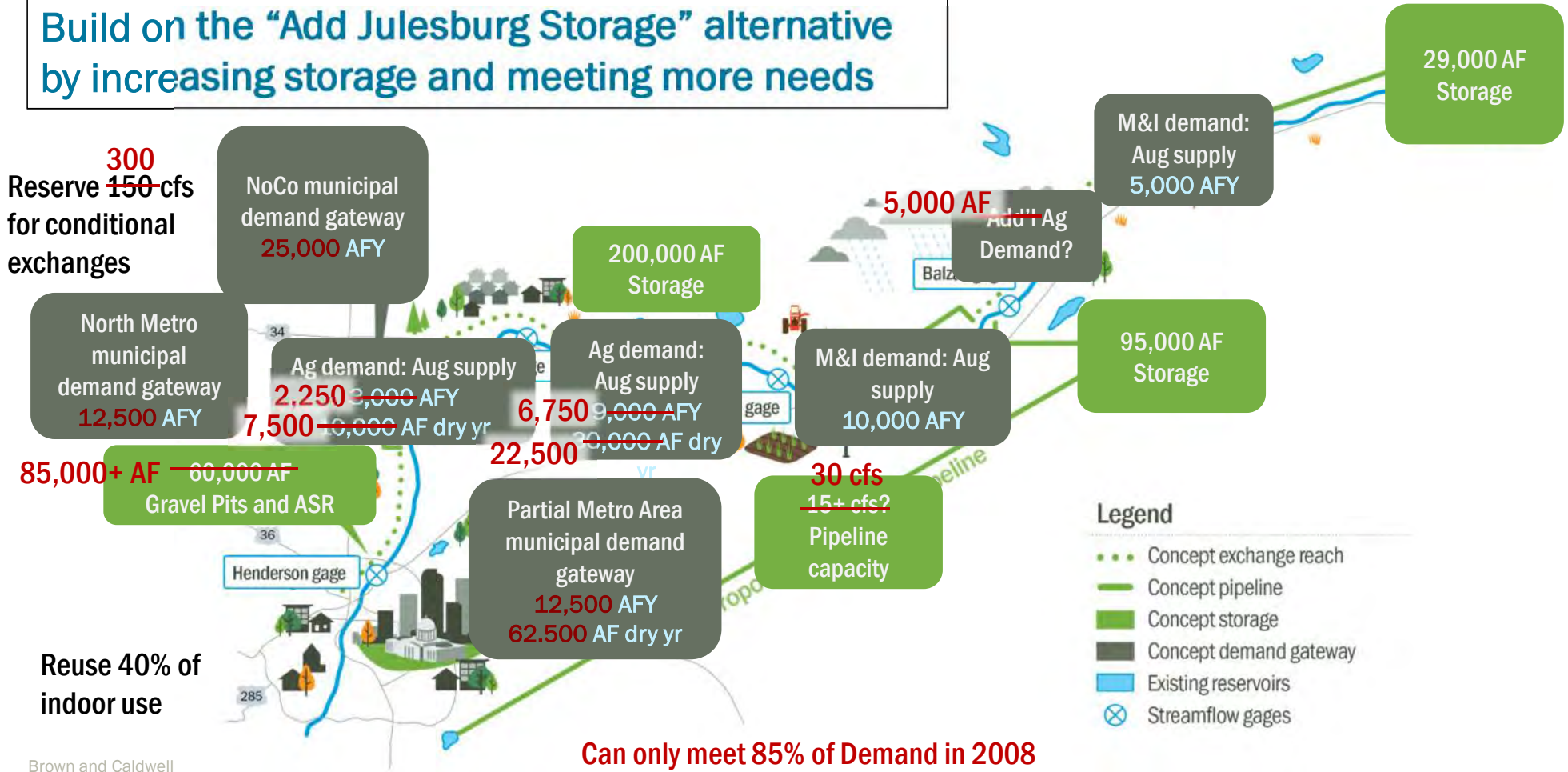
- Nearly all municipal demand met all the time
- Water is readily available for Julesburg-area reservoir and it remains full most of the time
 - Primarily used to meet local demands
- Balzac-area storage can meet more WD 1 demands when downstream demands met with Julesburg-area storage
- Muni and ag demands on eastern plains lower than initial targets, but more than Alt 2
- Ag demands WD 1 and 64 are almost always met, but see similar delivery issues in WD 2
 - Adding Henderson release to ag helps but slight impact to muni deliveries

Alternative 3 (Rev2): Summary of Findings

- Flipped Ag demand to be greater (20,000 AF) in wet and avg years, and lower (6,000 AF) in dry years.
- Nearly all municipal demand met all the time
- Much greater ag demands met in WD 1 and WD 2

Alternative 4: Additional Delivery

Build on the "Add Julesburg Storage" alternative by increasing storage and meeting more needs



Alternative 4: Summary of Findings

- Demands met nearly all of the time:
 - 50,000 AF in wet/average years on Front Range
 - 100,000 AF in dry years on Front Range (Only 85% met in 2008)
 - 15,000 AF in all years on the eastern plains
- Water is readily available for Julesburg-area reservoir and it remains full most of the time
 - Primarily used to meet local demands
- Muni and ag demands on eastern plains lower than initial targets, but more than Alt 3
- Ag demands WD 1 and 64 are almost always met, but see similar delivery issues in WD 2 – Adding Henderson release to ag helps

Environment and Recreation Strategies

- When designing new storage, incorporate elements that provide habitat for waterfowl and aquatic species.
- Consider needs for fish passage, flow improvements, bypass flows when changing existing infrastructure/constructing new infrastructure
- If using existing ditches for conveyance, prior to lining or making improvements, consider the potential benefit to habitat from ditch seep or conveyance losses.
- Deliver water into recharge facilities in early spring and late fall to create habitat conducive to wildlife and to minimize the growth of unwanted vegetation. Wetting early and being able to dry out recharge facilities is best for desirable wetland vegetation growth.
- Locate recharge facilities so that accretions provide benefit to critical habitats (both in the South Platte River and sloughs)

Environment and Recreation Strategies

- Additional work is needed to understand South Platte River flows: What flow is required for key species? Where are there flow requirements? How much is too much flow? How much is not enough flow?

Regarding continued stakeholder engagement:

- Continue to engage Enviro/Rec stakeholders and provide opportunities for feedback
- Education and outreach specific to conservation can be part of future SPROWG
- Water Quality Control Commission could be an important stakeholder

Water Treatment Strategies



Water Treatment Options

- Two treatment options:
 - advanced water treatment using existing traditional technologies (e.g., reverse osmosis, nanofiltration)
 - natural filtration pretreatment (e.g., riverbank filtration) followed by conventional water treatment
- Both options will meet all primary and secondary drinking water standards
- Advanced water treatment will include brine disposal
- Riverbank filtration for pretreatment will be patterned after the Prairie Waters North Campus
- Any alternatives involving ASR will require pretreatment prior to recharge
- Nonpoint source reduction options will be evaluated conceptually at land-use level (municipal, industrial, irrigated agriculture, range land, etc.)

Water Treatment Scenarios

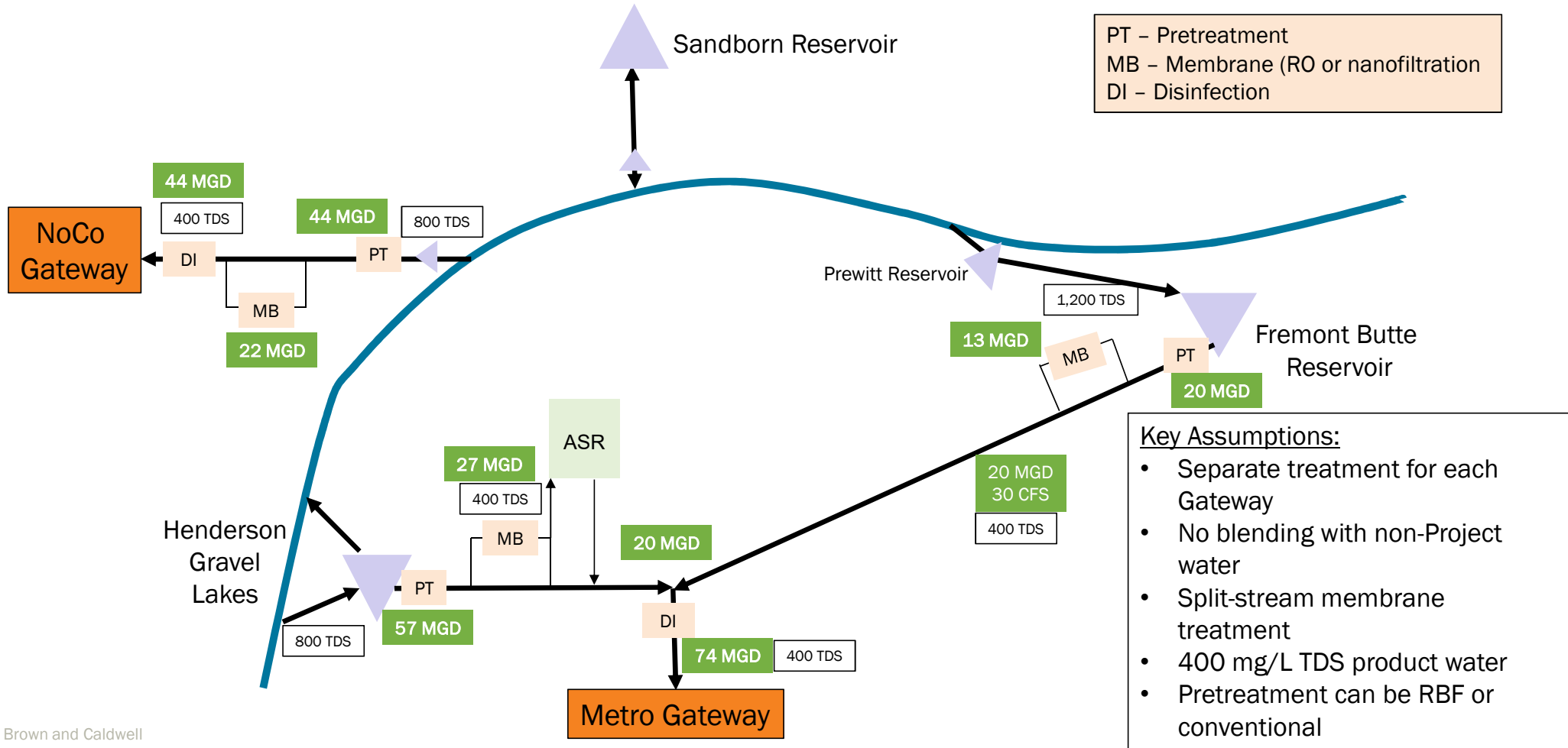
- Assume all other storage and conveyance infrastructure will be the same with or without treatment for each of the alternatives.
- Alternative costs can then be shown for scenarios with or without treatment.



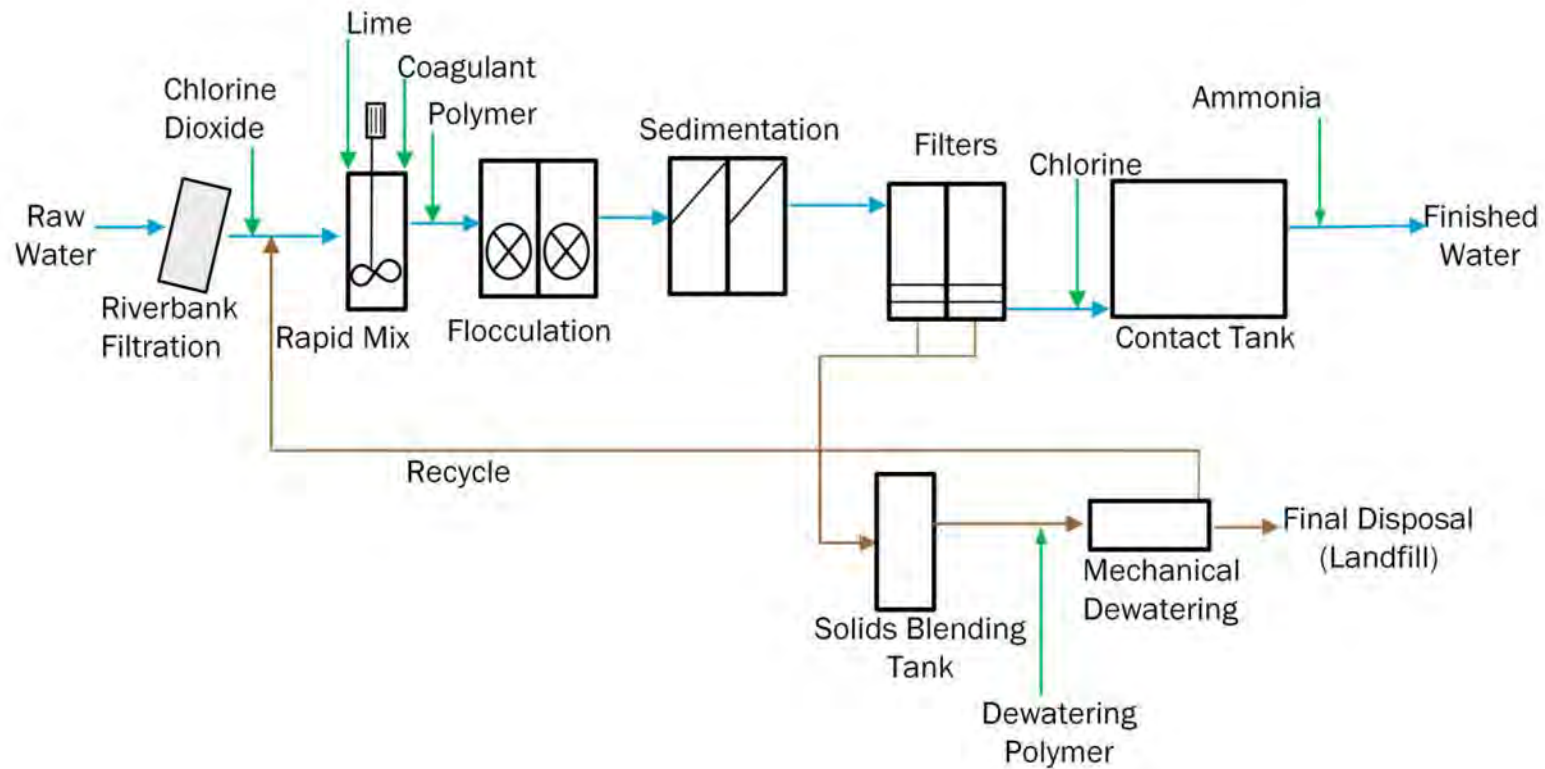
Source Water Quality

Table 21. Design Raw Water Quality			
	Brighton	Milliken	Fort Morgan
Turbidity	42 NTU	59 NTU	99 NTU
Total Dissolved Solids	844 mg/L	759 mg/L	1217 mg/L
Calcium	99 mg/L	82 mg/L	209 mg/L
Magnesium	20 mg/L	21 mg/L	58 mg/L
Sulfate	200 mg/L	198 mg/L	776 mg/L
Chloride	86 mg/L	129 mg/L	74 mg/L
Total Organic Carbon	12 mg/L	9 mg/L	6 mg/L
Alkalinity	185 mg/L	179 mg/L	260 mg/L
Iron	2.5 mg/L	2.2 mg/L	1.3 mg/L
Manganese	0.26 mg/L	0.28 mg/L	0.26 mg/L
Nitrogen-Nitrate	5 mg/L	1 mg/L	1 mg/L
pH	7.9	8.2	8.4
Temperature	69 deg. F	72 deg. F	75 deg. F

Treatment Scenario Schematic – Alternatives 2 and 3



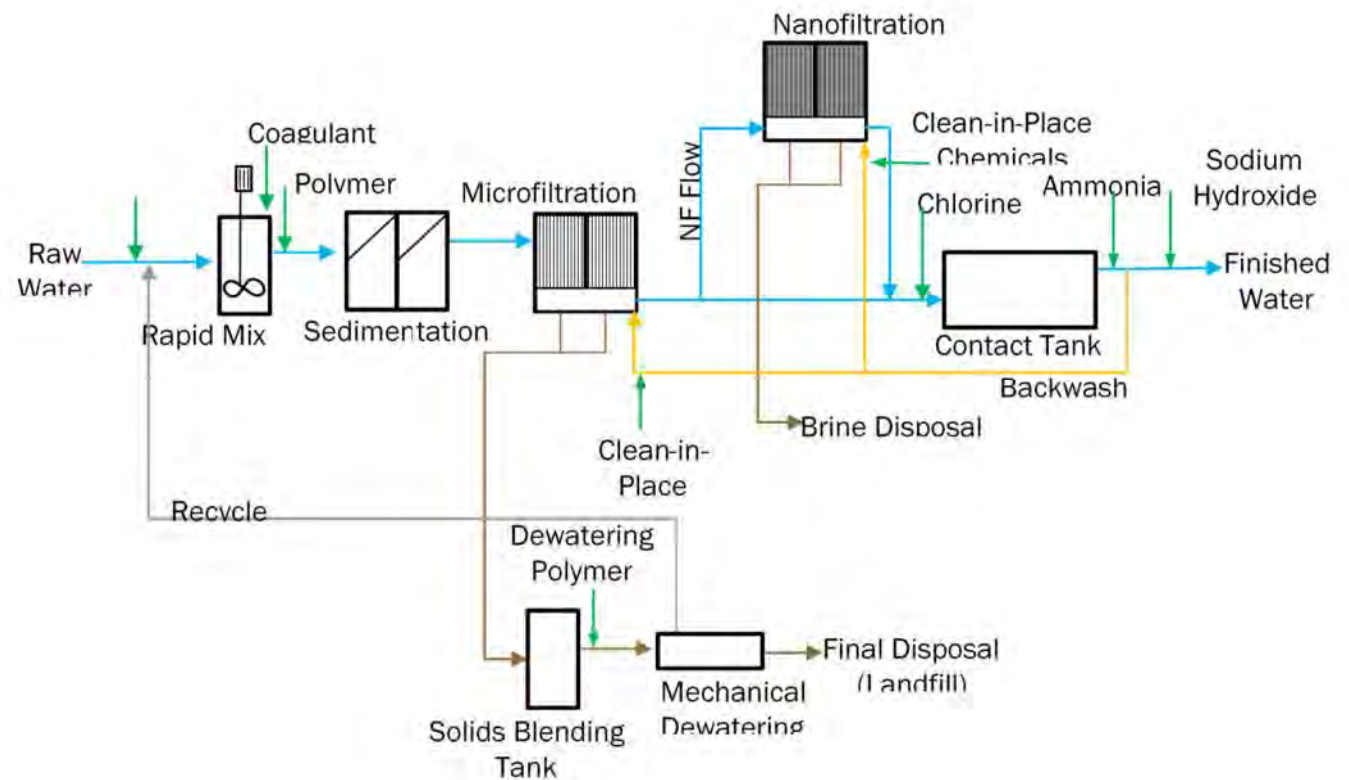
Riverbank Filtration + Conventional Treatment



Advanced Water Treatment Plant Process

Conceptual AWTP uses nanofiltration rather than RO

- Lower membrane pressure
- Less energy
- Effective for source water quality
- Less brine production
- Benefits for softening and TOC removal



Water Treatment Capital Costs

Alternative	Design Flow (MGD)	Construction Cost (\$M)	Engineering & Permitting Costs ³ (\$M)	Land Acquisition Costs ⁴ (\$M)	Legal and Administrative Costs ⁵ (\$M)	Contingency (20%)	Subtotal (\$M)	Total (\$M)
Alt 1 - Three Storage Facilities								
Metro Gateway (Metro + NoCo-S)	74	\$222	\$33	\$1.16	\$18	\$55	\$329	\$785
NoCo Gateway (NoCo-N)	44	\$308	\$46	\$1.16	\$25	\$76	\$456	
Alt 2 - Balzac First								
Metro Gateway (Metro + NoCo-S)	74	\$222	\$33	\$1.16	\$18	\$55	\$329	\$785
NoCo Gateway (NoCo-N)	44	\$308	\$46	\$1.16	\$25	\$76	\$456	
Alt 3 - Add Julesburg Storage								
Metro Gateway (Metro + NoCo-S)	74	\$222	\$33	\$1.16	\$18	\$55	\$329	\$785
NoCo Gateway (NoCo-N)	44	\$308	\$46	\$1.16	\$25	\$76	\$456	
Alt 4 - Additional Delivery								
Metro Gateway (Metro + NoCo-S)	92	\$276	\$41	\$1.16	\$22	\$68	\$408	\$978
NoCo Gateway (NoCo-N)	55	\$385	\$58	\$1.16	\$31	\$95	\$570	

Assume:

Nanofiltration for membranes

Mechanical evaporation and landfill for brine disposal (deep wells are less expensive but less sustainable)

Coordinated with South Platte Water Quality Studies

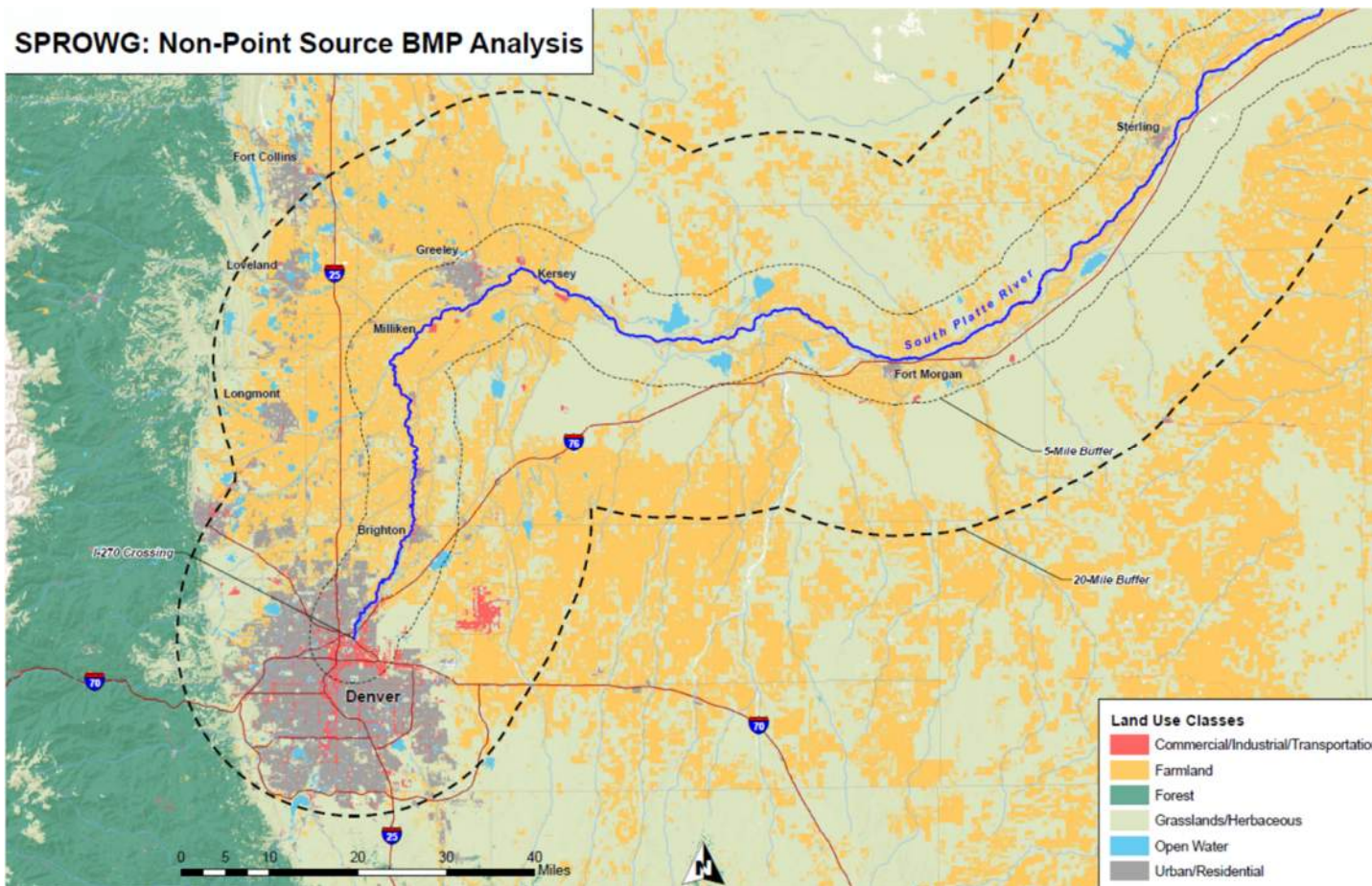
- Colorado Corn Growers water quality data collection and evaluation
 - Incorporated data to characterize water quality in stream reaches
- WISE Salinity Management Plan
 - Treatment methods
 - Brine disposal method
 - Overall treatment costs

Water Treatment Scenarios

- Nonpoint Source Treatment Option
 - Characterize main land use types affecting South Platte water quality (urban, suburban, irrigated agriculture, rangeland)
 - Identify best management practices for main land use types
 - Estimate possible water quality benefits and costs at the watershed scale



GIS Coverage of Land Uses in Study Area



BMP Applicability to Land Use Categories

BMP	Commercial / Industrial /		Forest	Grasslands /	Urban /
	Transportation	Farmland		Herbaceous	Residential
Bioretention (Rain Garden)	X	X			X
Detention Basin	X	X		X	X
Filter Strip/Field Borders	X	X	X	X	X
Grass Swale	X	X		X	X
LID	X				X
Media Filter	X				X
Porous Pavement	X	X			X
Retention Pond	X	X			X
Wetland Basin	X	X	X	X	X
Wetland/Retention Pond	X	X	X	X	X
Wetland Channel	X	X	X	X	X
Nutrient Management	X	X	X	X	X
Level Terraces		X	X		
Diversions around erodable soils	X	X	X	X	X
Animal Waste Storage (Lagoons, bins, composters)		X		X	
Livestock Exclusion (Fencing)		X		X	
Riparian Buffer Zones	X	X	X	X	X
Irrigation Water Management	X	X	X	X	X
Streambank Stabilization	X	X	X	X	X

Sample BMP Treatment Efficiencies

BMP	Contaminant	% Removal Lower Range	% Removal Upper Range	Score Low Range	Score High Range
Bioretention (rain garden)	Total Suspended Solids	78%	90%	4	5
	Fecal Coliforms	N/A	N/A	#N/A	#N/A
	Total Iron	0%	0%	1	1
	Total Zinc	76%	80%	4	5
	Total Nitrogen	8%	16%	1	2
	Total Phosphorus	0%	0%	1	1
	Composite	Total Suspended Solids	80%	85%	5
	Fecal Coliforms	20%	43%	2	3
	Total Iron	67%	91%	4	5
	Total Zinc	62%	63%	4	4
	Total Nitrogen	12%	48%	2	3
	Total Phosphorus	47%	66%	3	4
Detention Basin	Total Suspended Solids	56%	80%	4	5
	Fecal Coliforms	41%	85%	3	5
	Total Iron	N/A	N/A	#N/A	#N/A
	Total Zinc	55%	72%	4	4
	Total Nitrogen	0%	6%	1	1
	Total Phosphorus	17%	21%	2	2
	Grass Strip/Field Borders	Total Suspended Solids	50%	60%	4
	Fecal Coliforms	N/A	N/A	#N/A	#N/A
	Total Iron	24%	54%	2	4
	Total Zinc	71%	77%	4	4
	Total Nitrogen	30%	90%	3	5
	Total Phosphorus	0%	50%	1	4

Remaining Tasks

- Verify water treatment facilities and cost estimates
- Complete Nonpoint Source Control analysis
 - Potential water quality improvements
 - Potential implementation costs

Cost Estimates



Cost Estimating Process

- Develop capital and life-cycle cost estimates for the four alternatives
- Develop costs for raw water and treated water deliveries to each Gateway
- Use project costs from “SPROWG 1.0” or South Platte Storage Study
- In general:
 - Reservoir and ASR costs from South Platte Storage Study
 - Conveyance costs from SPROWG 1.0
 - Bypass system costs from SPROWG 1.0
 - New treatment costs

Cost Breakdown and Assumptions

- Storage
 - Surface reservoirs (e.g., Sandborn, Fremont Butte, Ovid, Julesburg Reservoir Enlargement)
 - Gravel lakes (up to 30,000 AF at Henderson, 10,000 AF regulating storage at Milliken and Kersey diversions)
 - ASR in Upper Lost Creek Basin (10,000 to 55,000 AF)
- Conveyance
 - Reservoir intakes and return pipelines and pump stations
 - Metro Area Pipeline and pump stations
 - Pipeline and pump station to Walmart Hill treatment facility
 - River diversions at Henderson, Milliken and Kersey

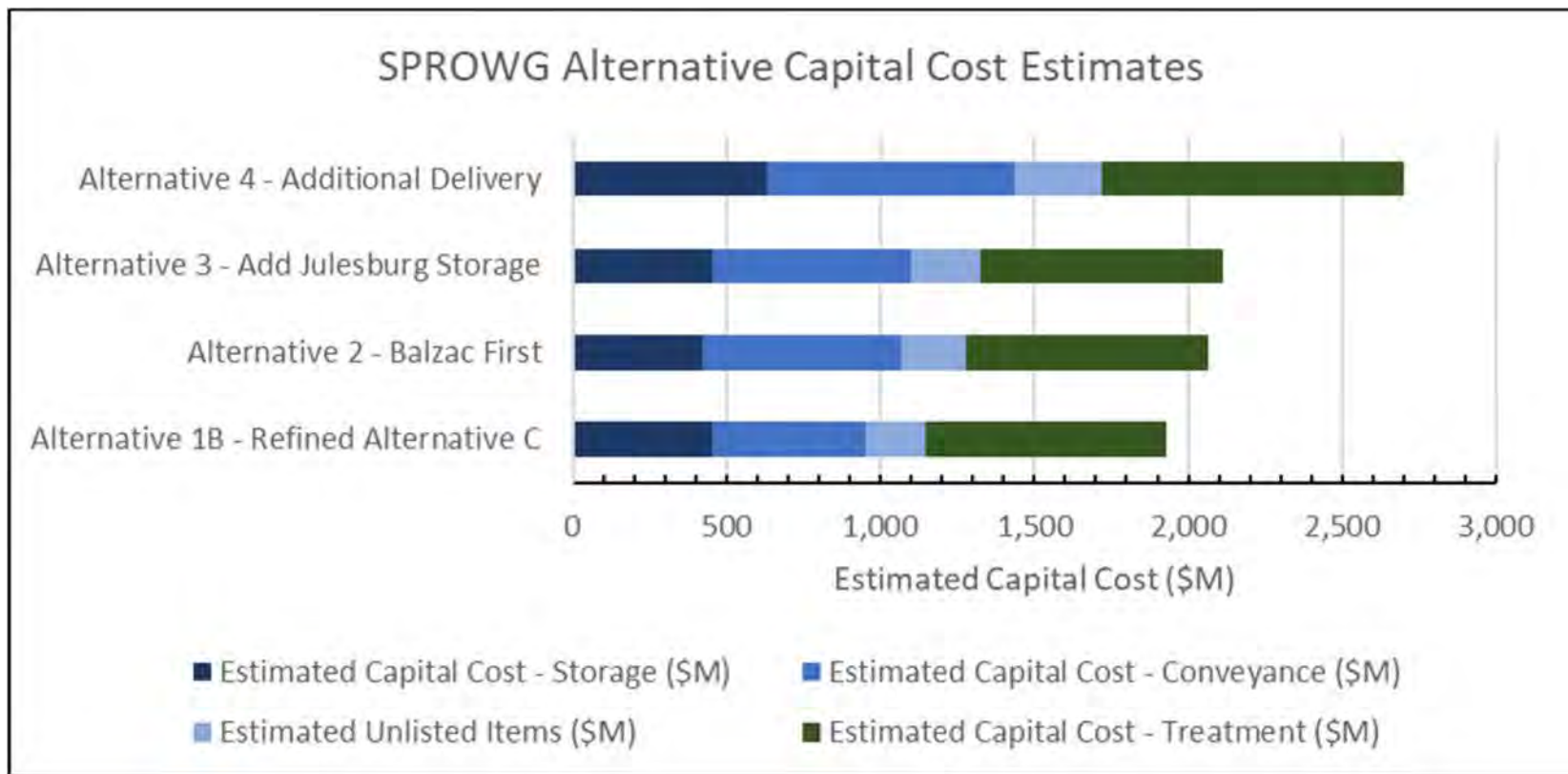
Other Assumptions

- Bidirectional pipeline to Sandborn Reservoir (Kersey storage) from South Platte
- Divert to Fremont Butte Reservoir (Balzac storage) using Prewitt diversion and reservoir
- Divert to Ovid Reservoir using Peterson Canal (Julesburg storage)
- Divert to Julesburg Reservoir using Harmony Ditch (Julesburg storage)
- All conveyance facilities are based on maximum month delivery
- 30 cfs (20 MGD) Metro Area Pipeline from Fremont Butte Reservoir to Brighton
- Costs are approximately 2017 costs
- Life-cycle costs based on 20 years of O&M at 4% discount rate

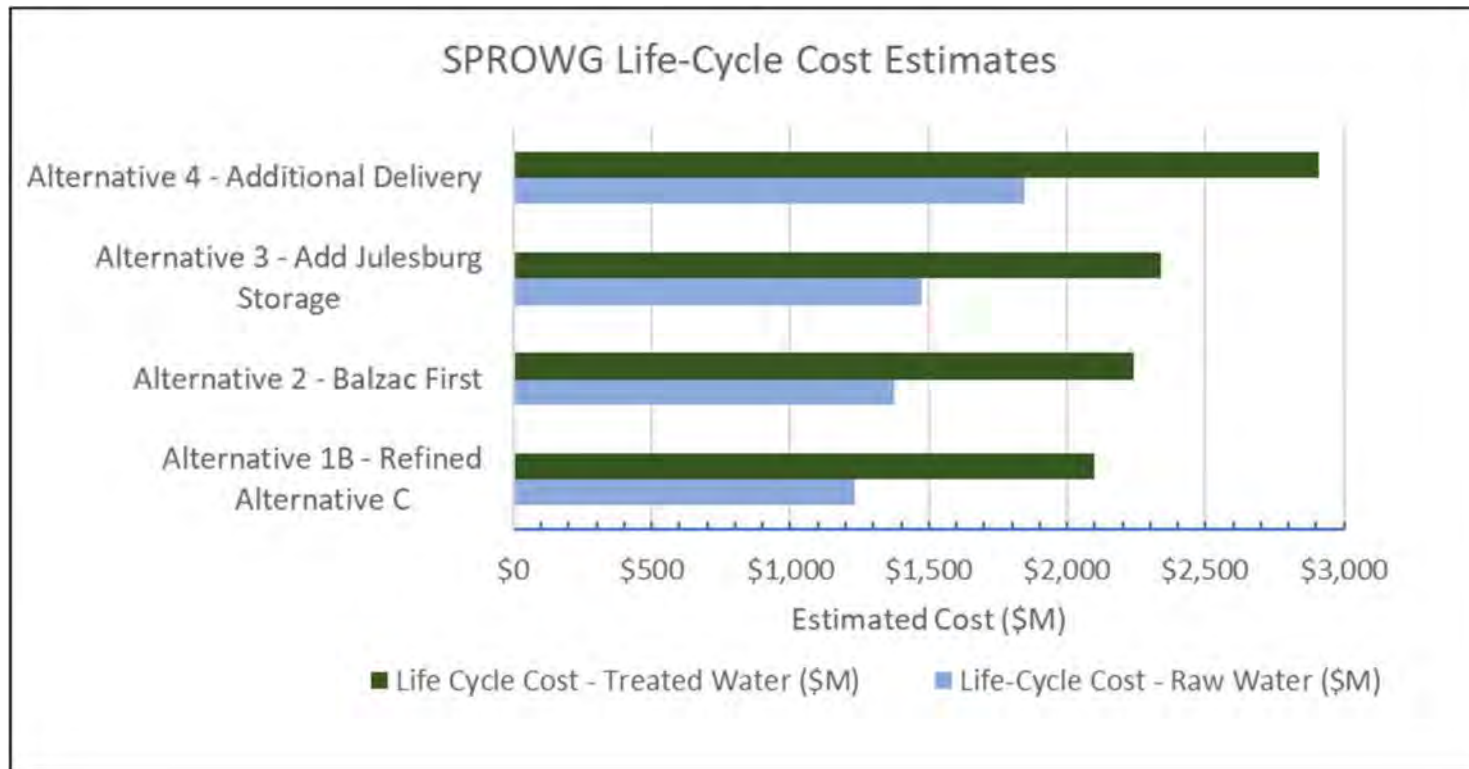
Cost Details – Just an Example

Location	Reservoir Storage	Quantity	Unit	Unit Price (\$)	Construction Cost (\$)	Land Easements / Acquisition (ac)	Land Cost (\$/ac)	Permitting (% of Const)	Engr / Legal / Admin (% of Const)	Contingency (% of Const)	Estimated Project Cost	Comments
Near Henderson	Henderson Storage - Gravel Pit	30,000	AF	1,500	45,000,000	2,250	10,000	10%	20%	30%	94,500,000	
Near Henderson	Henderson Storage - Upper Lost Creek ASR	55,000	AF	-	87,741,176	0		\$0	0%	30%	114,063,529	Based on SPSS cost - excludes contingency
Near Milliken	Gravel Pit Storage at Milliken Diversion	10,000	AF	1,500	15,000,000	750	10,000	10%	20%	30%	31,500,000	
Near Kersey	Kersey Storage - Sandborn Reservoir	200,000	AF	584	116,775,893	0	0	0%	0%	30%	151,808,661	Based on SPSS all-in cost; added contingency
Near Balzac	Gravel Pit Storage at Balzac Diversion	10,000	AF	1,500	15,000,000	750	10,000	10%	20%	30%	31,500,000	
Near Balzac	Balzac Storage - Fremont Butte	95,000	AF	976	92,673,750	0	0	0%	0%	30%	120,475,875	Based on SPSS all-in cost; added contingency
Near Julesburg	Julesburg Storage - Ovid Reservoir	8,000	AF	3,107	24,858,182	0	0	0%	0%	30%	32,315,636	Based on SPSS all-in cost; added contingency
Near Julesburg	Julesburg Storage - Julesberg Reservoir Enlargement	21,000	AF	2,103	44,162,329	0	0	0%	0%	30%	57,411,027	Based on SPSS all-in cost; added contingency
Storage Subtotal		429,000	AF		441,211,330						633,574,729	
Location	Conveyance	Quantity	Unit	Unit Price (\$)	Construction Cost (\$)	Land Easements / Acquisition (ac)	Land Cost (\$/ac)	Permitting (% of Const)	Engr / Legal / Admin (% of Const)	Contingency (% of Const)	Estimated Project Cost	Comments
Near Henderson	Henderson Gravel Pit Inlet Canal	52,800	LF	1,100	58,080,000	97	10,000	10%	20%	30%	93,898,000	SPROWG facilities and base unit cost
Near Henderson	Henderson Gravel Pit River Return Pipeline	5,280	LF	380	2,006,400	10	5,000	10%	20%	30%	3,258,740	66" Pipeline
Near Henderson	ASR Fill Pipeline - Fort Lupton to ASR	158,400	LF	220	34,848,000	291	5,000	10%	20%	30%	57,211,800	42" pipeline
Near Henderson	ASR Fill Pump Station	5,650	HP	2,500	14,125,000	5	10,000	5%	20%	30%	21,943,750	
Near Henderson	ASR Return Pipeline to Prairie Waters North Campus	105,600	LF	220	23,232,000	194	5,000	10%	20%	30%	38,141,200	42" pipeline
Near Henderson	ASR Return Pump Station	3,760	HP	2,500	9,400,000	5	10,000	5%	20%	30%	14,620,000	
Near Milliken	NoCo Gateway Pipeline - to Walmart Hill WTP	90,000	LF	273	24,525,000	165	5,000	10%	20%	30%	40,065,000	48" Pipeline
Near Milliken	NoCo Gateway Pump Station	7,980	HP	2,500	19,950,000	5	10,000	5%	20%	30%	30,972,500	
Near Kersey	Sandborn Reservoir Bidirectional Pipeline	65,100	LF	-	54,687,500	0	0	0%	0%	30%	71,093,750	108"; SPSS est incl land, permitting, admin
Near Kersey	Sandborn Reservoir Inlet Pump Station	15,900	HP	-	50,360,000	0	0	0%	0%	30%	65,468,000	SPSS est incl land, permitting, admin
Near Balzac	Fremont Butte Intake to Regulating Storage	5,000	LF	1,100	5,500,000	57	10,000	10%	20%	30%	9,370,000	SPROWG unit cost
Near Balzac	Freemont Butte Reservoir Inlet Pipeline	60,000	LF	350	21,000,000	110	5,000	10%	20%	30%	34,150,000	42"; SPROWG facilities and base unit cost
Near Balzac	Freemont Butte Reservoir Inlet Pump Station	3100	HP	3500	10,850,000	5	5,000	5%	20%	30%	16,842,500	SPROWG facilities and base unit cost
Near Balzac	Metro Area Pipeline: I-76 Balzac to North Campus	422,400	LF	145	61,248,000	776	7,500	10%	20%	30%	103,816,800	30" pipeline
Near Balzac	Metro Area Pipeline: I-76 Balzac to North Campus	10,920	HP	2500	27,300,000	15	7,500	5%	20%	30%	42,427,500	3 pump stations along pipeline
Near Julesburg	Ovid Inlet Canal	19,000	LF	550	10,450,000	85	5,000	10%	20%	30%	17,145,000	Peterson Canal expansion
Near Julesburg	Ovid River Return	15,000	LF	220	3,300,000	28	5,000	10%	20%	30%	5,420,000	42" Pipeline
Near Julesburg	Julesburg Reservoir Inlet Canal	79,200	LF	550	43,560,000	85	5,000	5%	20%	30%	67,943,000	Peterson Canal expansion
Near Julesburg	Julesburg Reservoir Return Pipeline	21,000	LF	220	4,620,000	39	5,000	10%	20%	30%	7,587,000	42" Pipeline
Conveyance Subtotal					479,041,900						741,374,540	
Location	Diversion Structures	Quantity	Unit	Unit Price (\$)	Construction Cost (\$)	Land Easements / Acquisition (ac)	Land Cost (\$/ac)	Permitting (% of Const)	Engr / Legal / Admin (% of Const)	Contingency (% of Const)	Estimated Project Cost	Comments
Near Henderson	Henderson Diversion to Storage	1	LS	3,000,000	3,000,000			10%	20%	30%	4,800,000	SPSS base construction cost
Near Milliken	Milliken Diversion to NoCo Gateway	1	LS	3,000,000	3,000,000			10%	20%	30%	4,800,000	SPSS base construction cost
Near Kersey	Kersey Diversion to Storage	1	LS	3,000,000	3,000,000			10%	20%	30%	4,800,000	SPSS base construction cost
Near Balzac	Balzac Diversion to Storage	1	LS	3,000,000	3,000,000			10%	20%	30%	4,800,000	SPSS base construction cost
Near Julesburg	Julesburg Diversion to Storage	0	LS	3,000,000	0			10%	20%	30%	-	SPSS base construction cost
Near Kersey	Jay Thomas/ Hewes Cook Diversion Bypass	1	LS	19,892,000	19,892,000	42	5,000	10%	20%	30%	32,037,200	SPROWG base cost
Near Balzac	North Sterling Canal Bypass	1	LS	4,154,000	4,154,000	15	5,000	10%	20%	30%	6,721,400	SPROWG base cost
Diversion Subtotal					\$36,046,000						\$57,958,600	

Estimated Capital Costs

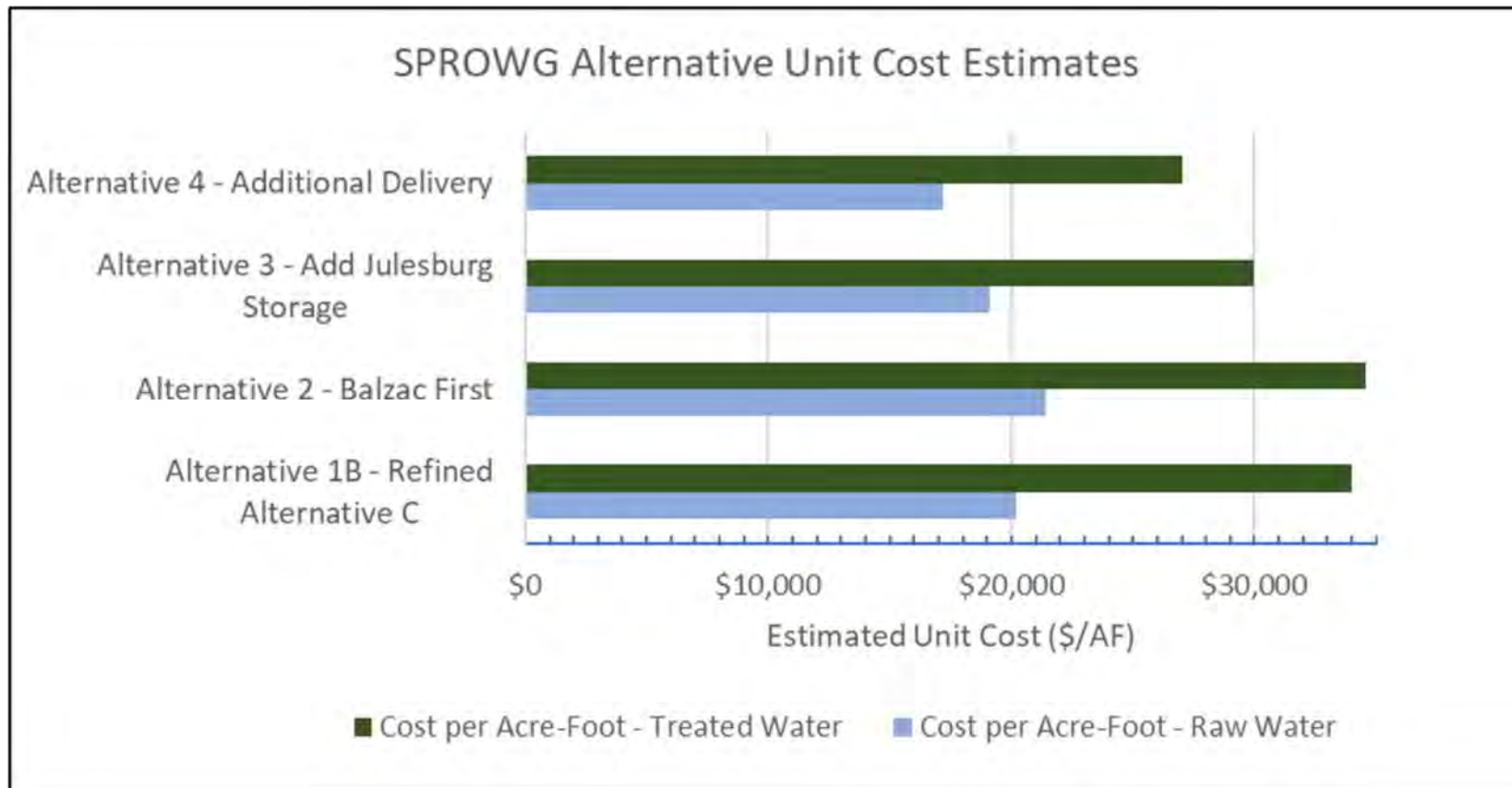


Estimated Life-Cycle Cost Estimates



Includes 20 years of O&M

Estimated Unit Costs (\$/AF)

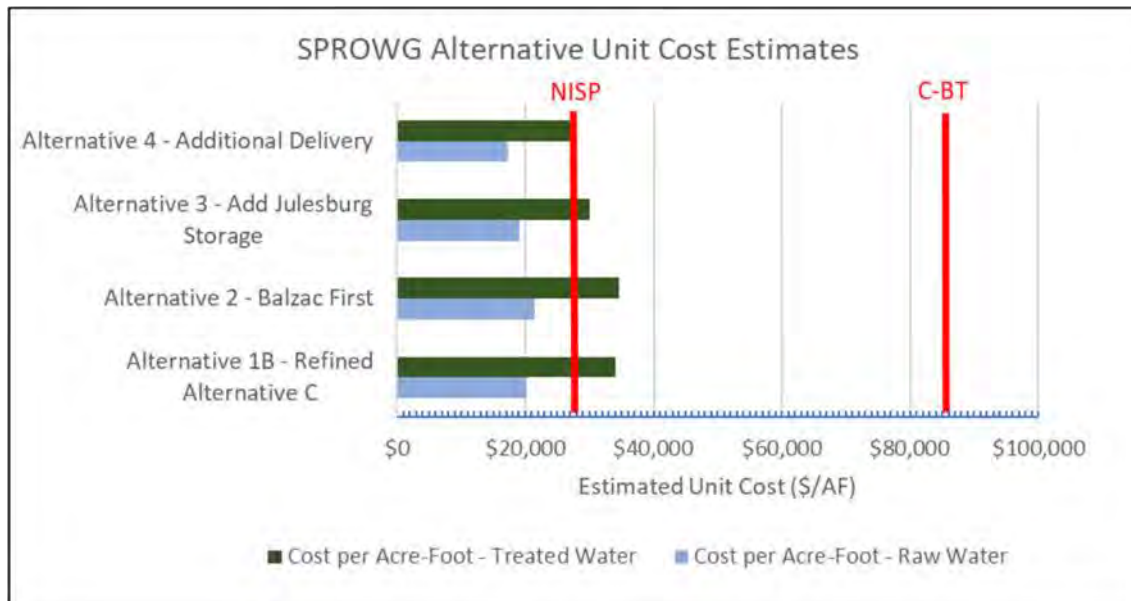


Comparison of Refined Alternative C Costs to Previous Study

- Raw Water Capital Cost
 - SPROWG 1.0 = \$1.42B, 54,600 AFY, 26,100 \$/AF
 - SPROWG 2.0 = \$1.15B, 56,750 AFY, 20,200 \$/AFY
- Treated Water Capital Cost
 - SPROWG 1.0 = \$2.44B, 54,600 AFY, 44,700 \$/AF
 - SPROWG 2.0 = \$1.93B, 56,750 AFY, 34,000 \$/AF
- Main Differences
 - Refined estimates for reservoirs based on specific sites (less cost)
 - Refined water treatment costs (less cost)

Comparison to other water supplies

- Colorado-Big Thompson Project Units - \$60,000/unit and higher for raw water; 0.7 AF/unit >> \$85,000/AF
- NISP – 40,000 AFY at \$1.1 billion = \$27,500/AF for raw water
- SPROWG - \$17,000 to \$22,000/AF raw water, \$27,000 to \$34,000/AF treated water



Notes:

- SPROWG delivers water to Gateways. Additional facilities and costs are required to deliver water to individual participants.
- C-BT and NISP supplies are similar to SPROWG treated water for TDS

Draft Communications Plan Outline



Communications Plan Outline

- **Developed a draft plan to help guide communications moving forward**
 - Communicate study results (Q1 2020)
 - Feasibility/Recruitment phase (2020+)
- **Goals**
 - Educate stakeholders and create awareness needed to refine the recommended governance, operational, and infrastructure concepts for a South Platte Basin water project.
 - Educate potential participants to facilitate recruitment for a South Platte Basin water project.
 - Educate ratepayers/taxpayers on the need and funding for a South Platte Basin water project.
 - Continue stakeholder engagement and transparency to build stakeholder support for a regional South Platte Basin water project.

Plan Components

- Stakeholders by type and representative group
- Sharing Study Findings:
 - Using existing presentation schedule to CWCB, South Platte River Basin Roundtable, Metro Basin Roundtable
 - Inviting media to attend briefings/news release/interviews
 - Updating fact sheet/posting information on southplattebasin.com
 - Target outreach to West slope
 - Distribution of report to key stakeholder list
 - Presentations at conferences

Plan Components

- **Feasibility/Participant Recruitment Phase:**
 - Communications/outreach to potential water provider participants
 - Communications/outreach to potential ATM participants
 - Outreach to recreation/environmental groups
 - Communications with South Platte Basin residents/ratepayers and water customers
 - Establishing a brand/name for a identified project

Current Status: Communications work group review and input

Near-term Activities



Near-Term Activities

- Complete research on five alternative organizational frameworks and write Technical Memorandum
- Complete Technical Memoranda on
 - Organizational structures
 - Outreach to various stakeholder groups
 - Concept refinement and modeling
 - Water treatment strategies
 - Cost estimates
- Complete Outreach and Education Plan
- Develop draft report



Topics for Next Task Force Meeting

- Presentation of draft-final report and recommendations
- Discussion of Task Force comments on the report
- Next Task Force meeting scheduled for February 13th (before the Metro BRT meeting)
 - Will send out meeting location, agenda, etc. at a later date

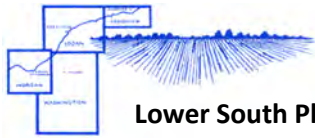
Upcoming Task Force meetings

Meeting Number	Proposed Date	Proposed Topics
1	April 3, 2019	<ul style="list-style-type: none"> Project kickoff Planning for outreach with potential partners
2	June 13, 2019 (before Metro BRT)	<ul style="list-style-type: none"> Description of organizational alternatives Report on initial outreach activities with potential partners
3	August 13, 2019 (before SPBRT)	<ul style="list-style-type: none"> Summary of findings from outreach activities Description of potential project refinements
4	October 10, 2019 (before Metro BRT)	<ul style="list-style-type: none"> Results of modeling project refinements Description of treatment strategies
5	December 10, 2019 (before SPBRT) May be rescheduled if December meeting is not held	<ul style="list-style-type: none"> Summary of cost estimate refinements Description of outreach and education plan
6	February 13, 2020 (before Metro BRT)	<ul style="list-style-type: none"> Presentation of draft-final report and discussion of Task Force comments (a draft report will be circulated to the Task Force in advance of this meeting)



Thank you.
Questions?





Lower South Platte Water
Conservancy District

Meeting Agenda

Prepared for: Lower South Platte Water Conservancy District

Project Title: South Platte Regional Opportunities Water Group Feasibility Study

Purpose of Meeting: Task Force Meeting #6

Date: February 13, 2020

Meeting Location: Denver Water
1600 West 12th Avenue
Denver, Colorado 80204

Time: 2:00 p.m.

Agenda Prepared by: Matt Lindburg, Brown and Caldwell
1527 Cole Blvd, Suite 300
Lakewood, Colorado 80401
303-239-5400

Agenda

1. Introductions

2. Overview of Final Report
 - a. Brief review of draft Final Report content
 - b. Questions and discussion

3. Review Recommendations Section
 - a. Review of draft Recommendations
 - b. Review of draft Suggested Path Forward
 - c. Questions and discussion



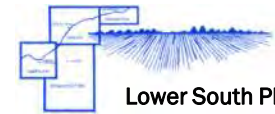
*Doug
Robotham*



Doug
Robotham

TASK FORCE MEETING #6

South Platte Regional Opportunities Water Group (SPROWG) Feasibility Study



Lower South Platte Water
Conservancy District

February 13, 2020





Draft Final Report Overview

Description and Results of Outreach

- Summary of stakeholder groups and outreach objectives
- Description of activities
- Overview of important results



Summary of Feedback from Stakeholder Meetings



Municipal/Industrial

The State Engineer should be consulted in the development of the SPROWG Concept.

Water from the SPROWG Concept should be used as efficiently as possible.

Development of an organizational framework will be iterative given the diversity of potential participants and the variety of water needs.

SPROWG Concept participation costs and timelines need to be evaluated and provided to potential participants so that they can compare with other alternatives.



Agricultural

The SPROWG Concept should not convey or manage supplies from buy and dry activities.

Water from the SPROWG Concept, as well as other sources, should be used as efficiently as possible.

Water supplies for irrigation well augmentation would be beneficial. Long term augmentation needs could total 35,000 to 40,000 acre-feet per year (AF/yr) for some augmentation plans.

ATMs are preferable to traditional buy-and-dry but need to provide significant value to agriculture and should only be used after development of unappropriated supplies.

The selected governance structure should provide flexibility on water use.

Straightforward, personal communications are preferred.



Environment/Recreation

Additional storage in various locations along the South Platte can provide much needed habitat

Water from the SPROWG Concept, as well as other sources, should be used as efficiently as possible.

Providing specific environmental and recreational strategies is difficult at this phase of concept development due to the location and operation specific nature of such opportunities.

Strategies to improve diversion structures should be considered that allow for recreational bypass, elimination of dry-up points, and the reestablishment of hydrology and habitat at existing dry-up points.

The selected governance structure should be capable of implementing best practices in environmental stewardship

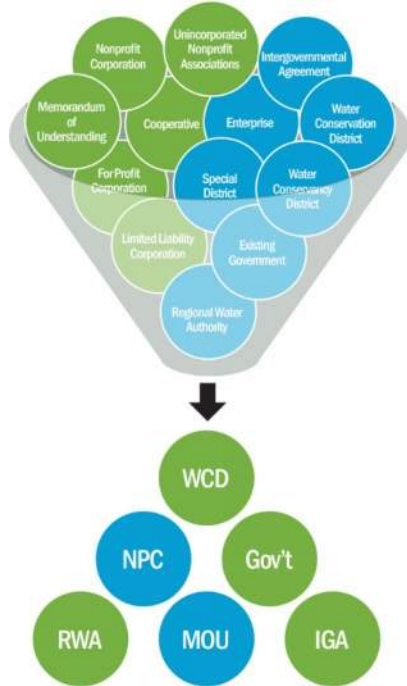
Environmental and Recreational water users appreciate being included in early project development and desire to continue to be engaged.

Key Survey Results

- Organizational Framework
 - None of the three stakeholder categories exhibited strong support for a new for-profit entity
- Water Needs
 - Survey responses generally supported original M&I delivery goals
 - Both drought supplies and firm yields are needed
 - Raw, treated, and augmentation supplies are needed
 - The survey did not suggest one type is more important than others
 - Additional reusable supplies could be available for incorporation

Evaluation of Governance Structures

Our evaluation process looked at pertinent potential structures and identified six most-relevant frameworks



1. Nonprofit Corporations
2. Water Conservancy Districts
3. Existing Governmental Entities
4. Regional Water Authorities
5. Intergovernmental Agreements
6. Memoranda of Understanding

This Study provides an evaluation of advantages and disadvantages of six organizational structures.

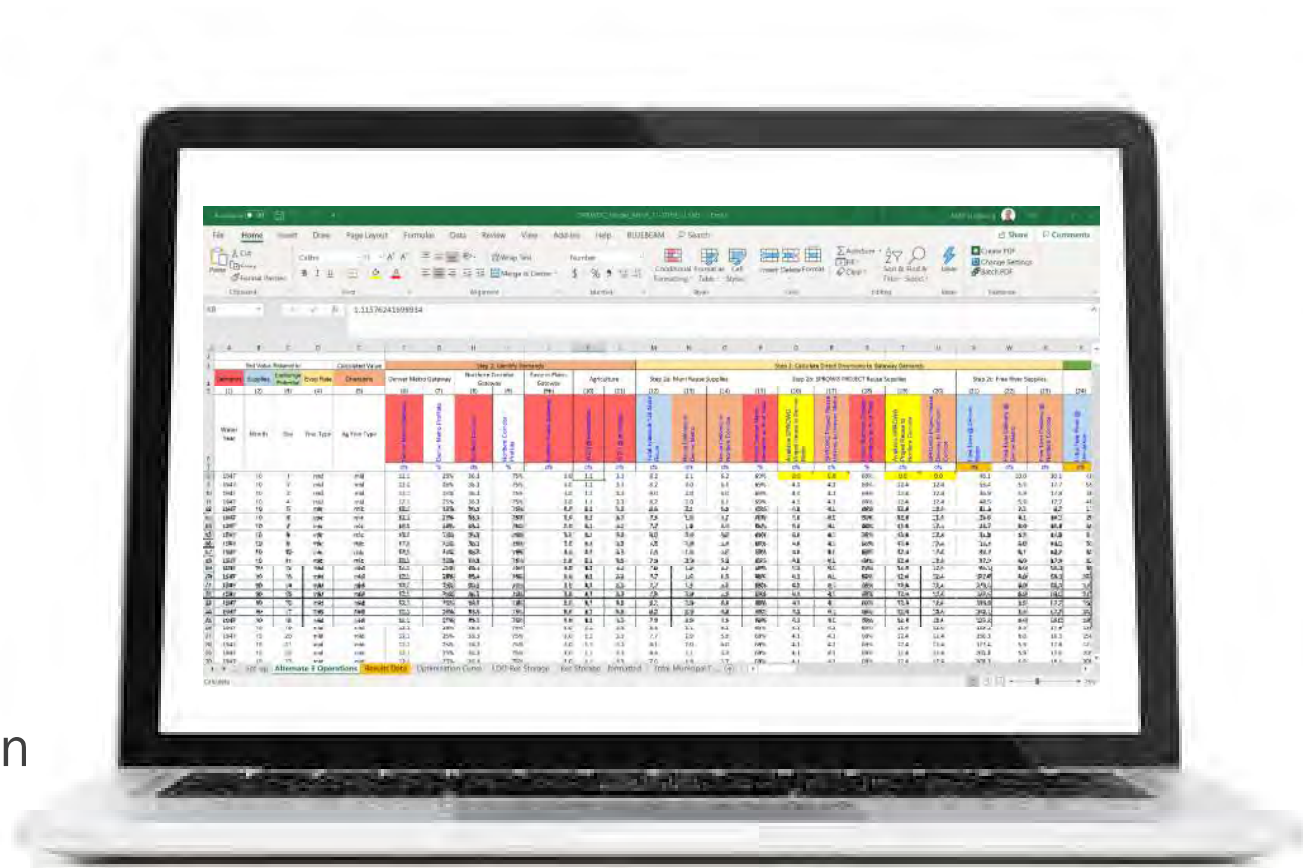
Table 14. Organizational Frameworks Qualitative Assessment

Organizational Framework	Adaptability	Flexibility	Ease of formation	Long-term certainty	Legal protections	Inclusiveness	Interim effectiveness
Nonprofit Corporation	■	■	■	■	■	■	■
Existing Government	■	■	■	■	■	■	■
Water Conservancy District	■	■	■	■	■	■	■
Regional Water Authority	■	■	■	■	■	■	■
Memorandum of Understanding	■	■	■	■	■	■	■
Intergovernmental Agreement	■	■	■	■	■	■	■

LEGEND: ■ Low (1-3) ■ Medium (4-7) ■ High (8-10)

Concept Refinement and Modeling

- Overview of modeling tool
- Summary of modeling assumptions
- Description of alternatives and modeling results
- Environment and Recreation strategies



Summary of Important Modeling Assumptions

- Depletions from Chatfield Reallocation, conditional storage rights at gravel pits, and Northern Integrated Supply Project were incorporated
- 300 cfs of exchange capacity left for existing conditional exchanges
- In dry conditions, municipal water providers would implement additional water conservation strategies
- Agricultural demands met with available supplies after municipal deliveries
- Agricultural demands are primarily for augmentation
- ATMs are used primarily for drought supply/recovery

Concept Refinement and Modeling

- M&I Deliveries
 - 42,000 AF (average to wet)
 - 82,000 AF (dry)
- Ag Deliveries
 - 3,000 AF (average and wet)
 - 10,000 AF (dry)
- Storage amounts
 - 220,000 AF

Alternative 1:

Refine the Initial Concept



Concept Refinement and Modeling

- M&I Deliveries
 - 45,000 AF (average to wet)
 - 85,000 AF (dry)
- Ag Deliveries
 - 3,000 AF (average and wet)
 - 10,000 AF (dry)
- Storage amounts
 - 215,000 AF

Alternative 2:

Balzac First



Concept Refinement and Modeling

- M&I Deliveries
 - 50,000 AF (average to wet)
 - 90,000 AF (dry)
- Ag Deliveries
 - 8,000 AF (average and wet)
 - 22,000 AF (dry)
- Storage amounts
 - 223,000 AF

Alternative 3:

Add Julesburg Storage



Concept Refinement and Modeling

- M&I Deliveries
 - 65,000 AF (average to wet)
 - 115,000 AF (dry)
- Ag Deliveries
 - 14,000 AF (average and wet)
 - 35,000 AF (dry)
- Storage amounts
 - 409,000 AF

Alternative 4:

Additional Delivery



Environment and Recreation Strategies

- Allocation of project reservoir storage for needs such as flood control, conservation/multi-use, or sediment accumulation
- Delivery of water into project reservoirs to support specific environmental needs
- Delivery of water from a SPROWG reservoir back to the South Platte River for the purpose of meeting water needs for specific resource values
- Additional project definition is needed before the SPROWG Concept is ready for consideration from the permitting perspective

Water Treatment Strategies

- TDS and nutrients are key constituents
- Nanofiltration/RO + Conventional treatment
- Brine disposal by mechanical evaporation + landfill
- Treatment at Henderson, Gold Hill and Balzac Storage (desal only)

Alternative 1, Refined Initial Concept - \$1.19 billion

Alternative 2, Balzac First - \$1.22 billion

Alternative 3, Add Julesburg Storage - \$1.22 billion

Alternative 4, Additional Delivery - \$1.48 billion

Nonpoint source measures applied to agricultural and urban lands could be a companion strategy to improve River water quality and reduce treatment costs.

Cost Estimates

Raw Water

Treated Water

Capital Cost

\$1.2 billion to \$1.8 billion

Capital cost for all facilities to deliver raw water with a unit cost of \$18,400 to \$22,800 per acre-foot.

\$2.4 billion to \$3.4 billion

Capital cost for all facilities to deliver treated water with a unit cost of \$33,600 to \$43,200 per acre-foot.

Life-cycle Cost

\$1.8 billion to \$2.6 billion

Life-cycle cost including 50 years of O&M for raw water.

\$3.2 billion to \$4.4 billion

Life-cycle cost including 50 years of O&M for treated water.

Alternative 4 is the most expensive and largest project, but due to economies of scale it has the lowest unit cost per acre-foot of water produced.

Communications and Outreach Plan



Goals

Educate stakeholders and create awareness needed to refine the recommended governance, operational, and infrastructure concepts.

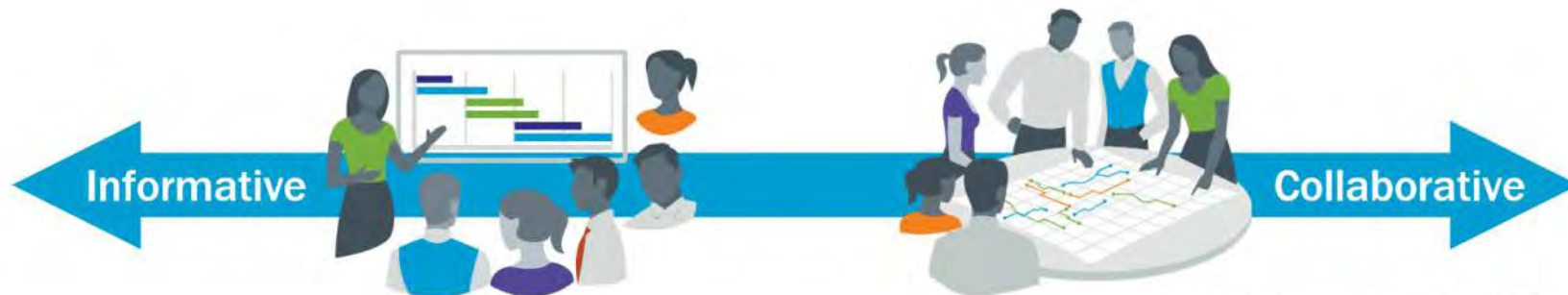
Educate potential SPROWG Concept participants to facilitate recruitment.

Educate ratepayers/taxpayers on the need for the SPROWG Concept and funding.

Continue stakeholder engagement and transparency to build stakeholder support.

Communications and Outreach Plan

- Stakeholder groups
- Recommended activities
- Key Messages
- Tracking Metrics



Colorado Legislature
Federal regulatory and permitting agencies and adjacent states

State of Colorado water policy, water quality and environmental agencies
West Slope water districts and water interests
Businesses and industry groups
Associations that represent municipalities and districts

Interbasin Compact Committee (IBCC) and Basin Roundtables
Watershed groups and coalitions
Recreation organizations
Water providers and water conservancy districts
Agriculture groups and ditch companies
Environmental/Conservation organizations

Questions and Discussion



Recommendations



Recommendations

**The Study validated previous findings
that the SPROWG Concept is
technically and financially feasible.
Additional studies are warranted.**

Recommendations



Consider the SPROWG Concept in the upcoming update of the South Platte Basin Implementation Plan

- Catalyst for “best practices” for water conservation
 - What do the full range of practices look like?
- Enable ATMs and provide augmentation supplies to meet localized needs



Evaluate the performance of the SPROWG Concept under the five future planning scenarios in the Colorado Water Plan

- How might performance change?
- How could SPROWG potentially affect risks to E/R attributes (positive and negative)
- How do changes in performance affect infrastructure and cost?

Recommendations



Continue evaluating potential organizational frameworks and eventually identify a “best-fit”

- Determined by needs of actual participants
- In the short term, an MOU or other flexible agreement can serve as a temporary platform



Implement the Communications and Outreach Plan and focus on identifying concept proponents

- Continue to raise awareness of the SPROWG Concept and continue to foster collaboration necessary for advancing the Concept
 - Maintain outreach momentum with municipal, ag, and environmental/recreation stakeholders
 - Individual meetings with an invitation to participate
 - Tailor plan to information needs and communication styles of various stakeholder groups

Recommendations



Evaluate alternatives for financing the design, construction, and operation of the SPROWG Concept

- Financing options and tools
- Compatibility of financing alternatives with governance structures
 - Financing and governance are closely tied



Continue discussions focused on ATMs

- Opportunity to figure this out in the context of a real project concept
- Build on the momentum gained by outreach with agriculture as well as municipal water providers and environmental and recreational stakeholders

Recommendations



Further evaluate regional water treatment strategies

- Incorporation of other water supplies for blending
- Diversion schedules for minimizing TDS
- Dual reservoir systems at Henderson and Balzac
- Refine estimates of treated vs raw water needs
- Integrate NoCo Gateway treatment needs with regional treatment concepts
- Continue investigating nonpoint source strategies

Suggested path forward



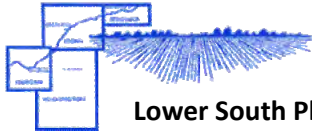
- Advancing the SPROWG Concept will require leadership
- An agreement (MOU/statement of intent) could be a vehicle for advancement
 - Defines relationships and responsibilities
 - Facilitates acquisition of future funding assistance
 - Creates an interim organization for exploring partnerships with other organizations who pursue individual water projects that could form a component of the SPROWG Concept
 - Provides a platform for inviting committed partners

Bottom line: Take measured steps to maintain momentum

Questions and Discussion



Attachment F: Agenda and Presentation for Informational Meeting



Lower South Platte Water
Conservancy District

Meeting Agenda



COLORADO
Colorado Water
Conservation Board
Department of Natural Resources

Prepared for: Lower South Platte Water Conservancy District

Project Title: South Platte Regional Opportunities Water Group Feasibility Study

Purpose of Meeting: Informational Meeting for Water Users and Stakeholders

Meeting Location: Northern Water
220 Water Ave.
Berthoud, CO 80513

Date: Thursday, May 30, 2019

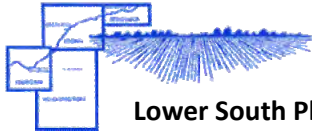
Time: 10:00am – noon

Agenda Prepared by: Mary Presecan, Leonard Rice Engineers
1221 Auraria Parkway
Denver, CO 80204
303-455-9589

Agenda

1. Introductions and Review Purpose of the Meeting
2. Overview of SPROWG
 - a. Review of project background
 - b. Description of project urgency, necessity, and benefits
 - c. Study components
3. Guiding Principles
4. Description of Feasibility Study
 - a. Project goals and schedule
 - b. Role of Task Force, Work Groups, and Advisory Committee
5. Project Outreach
 - a. Municipal Outreach
 - b. Agricultural Outreach
 - c. Environmental/Recreational Outreach
6. Information Request and Discussion about Information Use
 - a. Organizational Framework
 - b. Communications
 - c. Municipal and Industrial Needs
7. Questions and Open Discussion





Lower South Platte Water
Conservancy District

Meeting Agenda



COLORADO
Colorado Water
Conservation Board
Department of Natural Resources

Prepared for: Lower South Platte Water Conservancy District

Project Title: South Platte Regional Opportunities Water Group Feasibility Study

Purpose of Meeting: Informational Meeting for Water Users and Stakeholders

Meeting Location: Aurora Water
15151 E. Alameda Parkway
Aurora, CO 80012
Aurora Room – 1st Floor on South Side

Date: Friday, May 31, 2019

Time: 10:00am – noon

Agenda Prepared by: Mary Presecan, Leonard Rice Engineers
1221 Auraria Parkway
Denver, CO 80204
303-455-9589

Agenda

1. Introductions and Review Purpose of the Meeting
2. Overview of SPROWG
 - a. Review of project background
 - b. Description of project urgency, necessity, and benefits
 - c. Study components
3. Guiding Principles
4. Description of Feasibility Study
 - a. Project goals and schedule
 - b. Role of Task Force, Work Groups, and Advisory Committee
5. Project Outreach
 - a. Municipal Outreach
 - b. Agricultural Outreach
 - c. Environmental/Recreational Outreach
6. Information Request and Discussion about Information Use
 - a. Organizational Framework
 - b. Communications
 - c. Municipal and Industrial Needs
7. Questions and Open Discussion





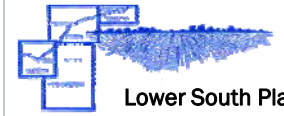
Doug
Robotham

INFORMATIONAL MEETING

South Platte Regional Opportunities Water Group (SPROWG) Feasibility Study

South Platte Regional Water Development Concept (SPRWDC) Feasibility Study

May 30 and May 31, 2019






Lower South Platte Water
Conservancy District



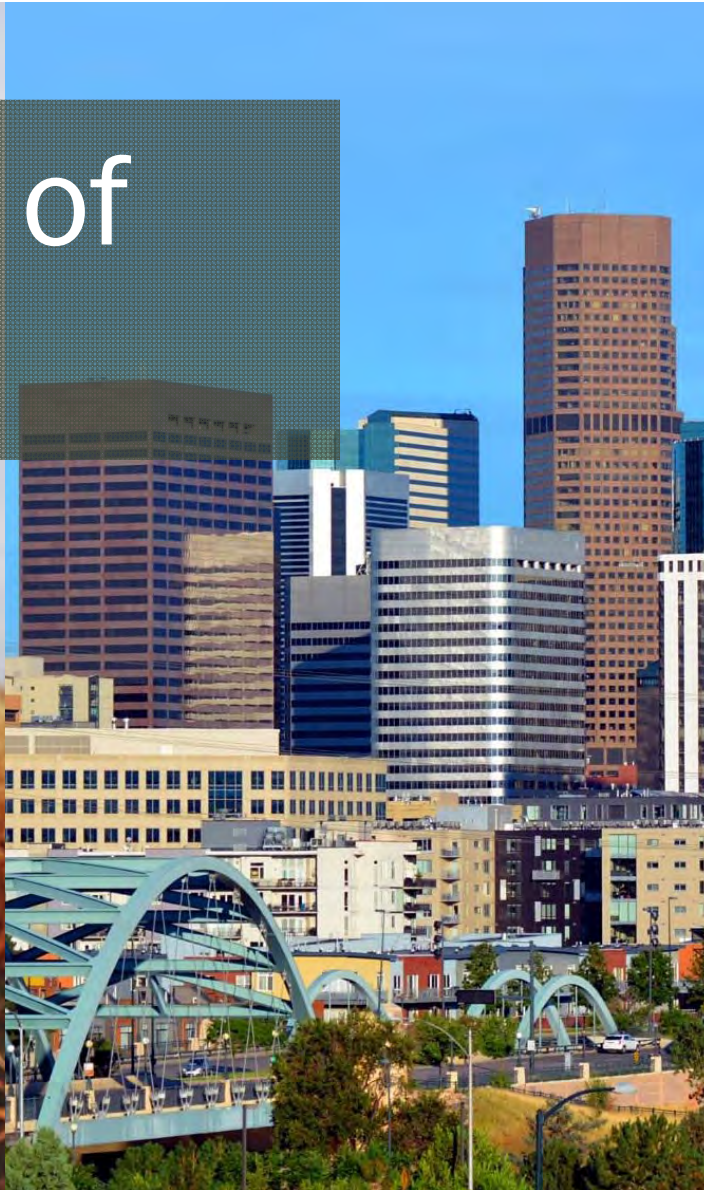
Meeting Agenda

- Introductions and Purpose of the Meeting
- Overview of SPROWG
- Guiding Principles
- Description of Feasibility Study and Project Outreach
- Description of Information Request

Purpose of the Meeting

-  Provide information about SPROWG and the current study
-  Describe an upcoming request for information
-  Gauge initial interest in SPROWG

Overview of SPROWG





South Platte Basin Implementation Plan (SPBIP) described the original “Conceptual Future In-Basin Multipurpose Project” in Section 4.6.2



South Platte Regional Opportunities Working Group (SPROWG) advanced the SPBIP concept and developed the initial regional water project

South Platte BIP Phase 2

Dec 2013 – April 2015

June 2015 – May 2018

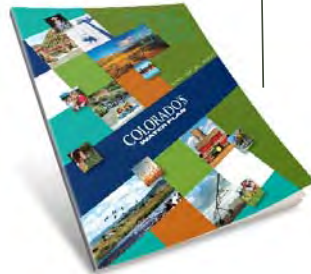
Date TBD

May 2013 – Nov 2015

Jan 2017 – Dec 2017

June 2018 – Oct 2018

Mar 2019 – Mar 2020



Colorado's Water Plan voiced the need for storage and collaborative projects



South Platte Storage Study (SPSS) identified potential South Platte River storage projects



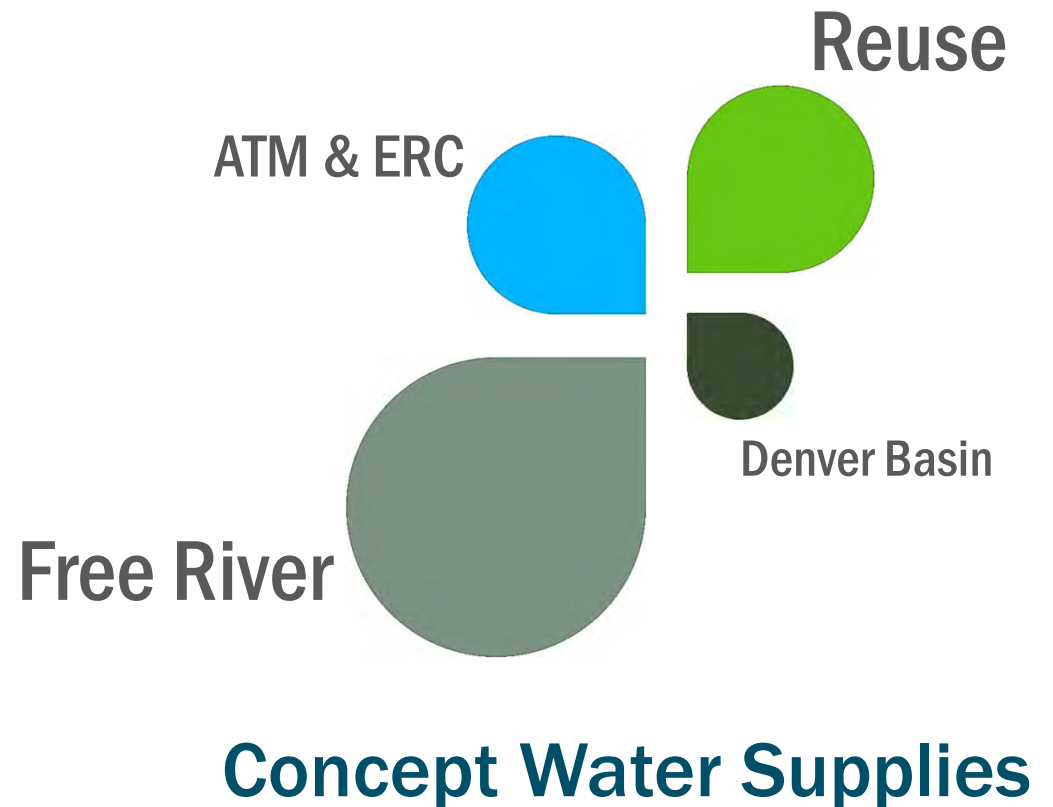
SPROWG Task Force developed scope of study and grant application for feasibility study



SPROWG Feasibility Study will conduct outreach, explore organizational alternatives, and refine the concept

Initial Concept Evaluation

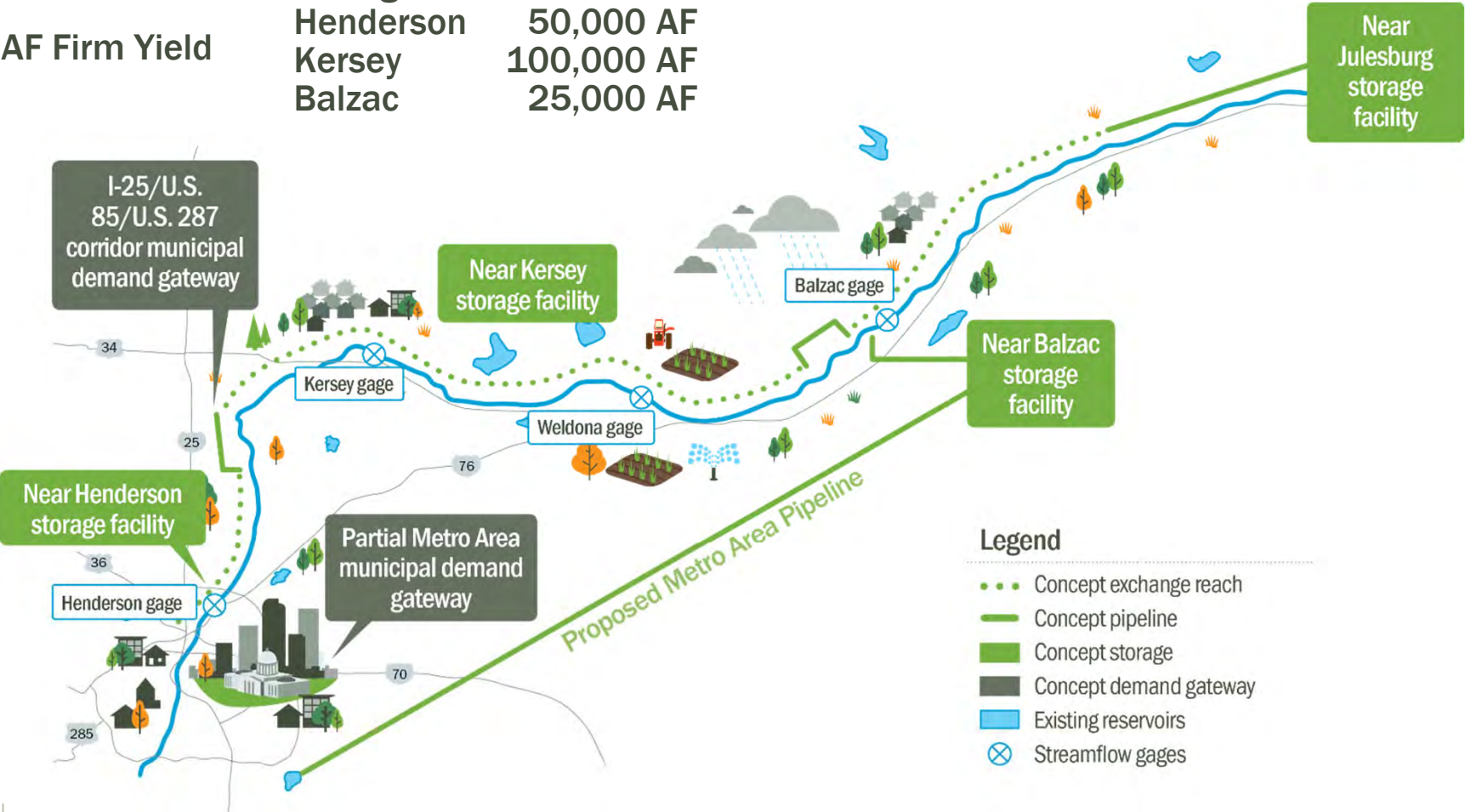
- Initially performed high-level analyses with reservoirs operating independently
- Gradually incorporated components to maximize use of water supplies:
 - Conjunctive reservoir operations
 - Additional infrastructure
 - Enhanced exchange capacity



Initial concept evaluation results:

50,000 AF Firm Yield

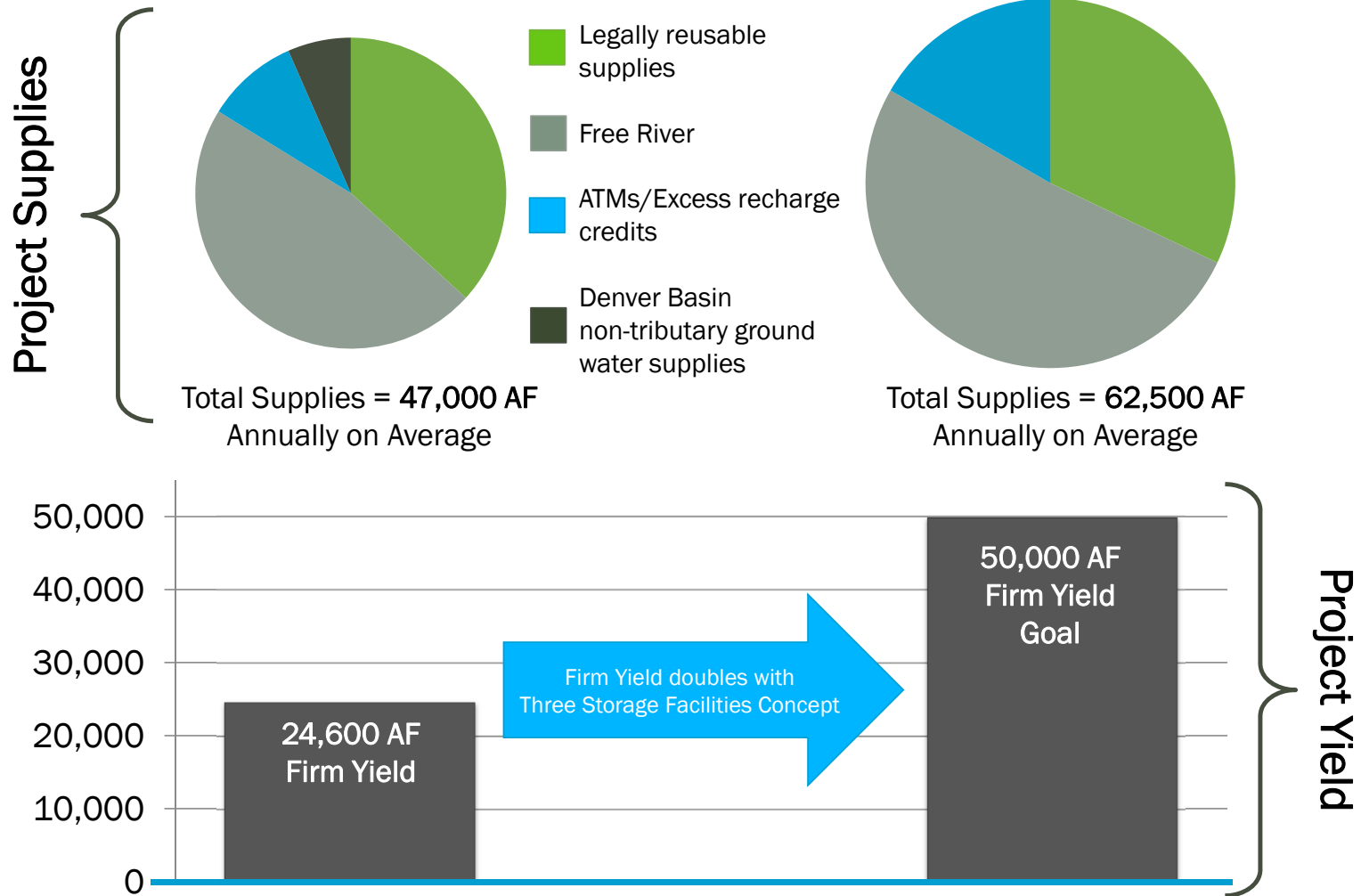
Storage:	
Henderson	50,000 AF
Kersey	100,000 AF
Balzac	25,000 AF



- Legend**
- Concept exchange reach
 - Concept pipeline
 - Concept storage
 - Concept demand gateway
 - Existing reservoirs
 - ⊗ Streamflow gages

Single Storage Facility Concept

Three Storage Facilities Concept



While communities in the South Platte River Basin continue to make great strides in meeting future water demands through aggressive conservation measures, a need remains for additional supplies.

Project Urgency and Necessity

- Basin population expected to grow to around **6 million** by the year **2050**
- Projected **M&I water supply gap by 2050 is 365,000 acre-feet annually**
 - 65% of the statewide gap
 - Largest gap of the basins in the state
- Water also needed for **agriculture** and for **environment and recreation**
- Projected water **needs exceed water supplies**, even with increased conservation
- **Water is periodically available** for future use
 - Almost 300,000 acre-feet per year has been available in recent years
- **SPROWG is not an alternative for existing or planned projects.**

SPROWG is studying ways to meet future needs by strategically managing our existing supplies

Potential Benefits

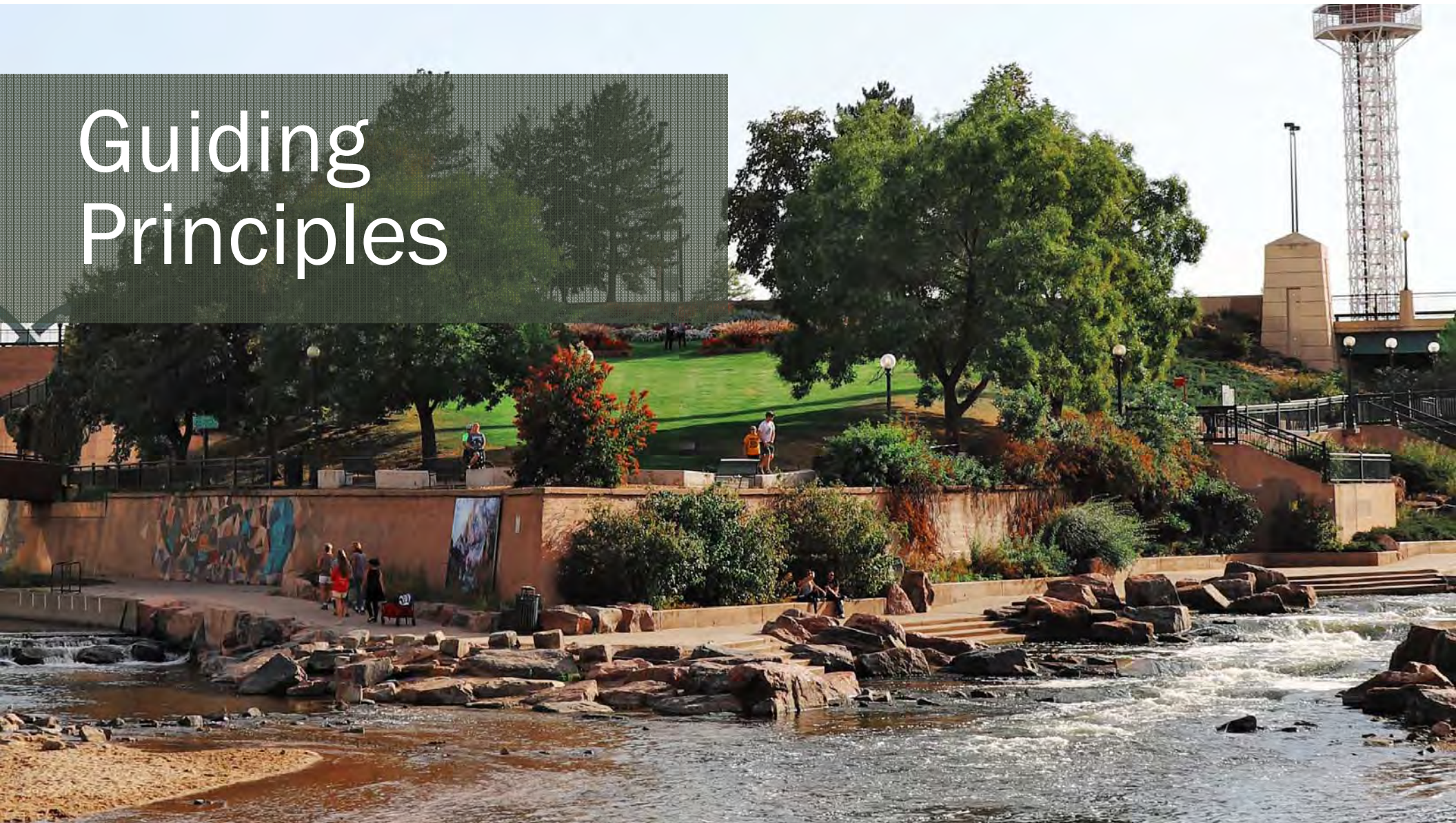
- A **regional approach** to share costs, infrastructure, and supplies
- Concept would use **multiple sources of supply** and **operationally-linked infrastructure** to maximize benefit.
- Provide at least **50,000 acre-feet of water annually** to meet future M&I needs and **additional supply** to meet agricultural needs.
- Strategies being explored to **further environmental and recreational goals** and **improve water quality**.
- Infrastructure to **enhance ATM feasibility** and reduce buy and dry
- Potentially **150,000 acre-feet of new storage**

The SPROWG feasibility study is the next step in evaluating solutions to meet the gap

Study Components

- Stakeholders include **agricultural, municipal/industrial, environmental and recreational** interests
- Builds on **previous studies**
- Will evaluate **ways to fund, administer, and operate** a new project
- **Will seek feedback** from stakeholders and refine the concept
- **Multiple ways to collaborate** and participate
 - Task Force
 - Survey participation
 - Outreach meetings

Guiding Principles



Principles describing what SPROWG *IS*

The Guiding Principles describe the framework for developing the SPROWG concept. The Principles may be modified as the project progresses.

Guiding Principles are not presented in any specific order or priority and are paraphrased. See handout for full text.

1. SPROWG will advance the goals of the **South Platte/Metro Basin Implementation Plan (BIP) and Colorado's Water Plan**.
2. SPROWG intends to provide at least **50,000 acre-feet of yield** to meet part of the projected municipal and industrial water supply project gap in the South Platte basin. **A significant portion of this yield is targeted for smaller but rapidly growing communities between Denver and Greeley and also larger communities in the Denver Metro area and northern Colorado.** The project will also explore providing supplies to smaller communities east of Greeley.
3. SPROWG intends to meet a **portion of the agricultural gap**.
4. SPROWG will identify and incorporate **strategies to address environmental and recreational needs**.

Principles describing what SPROWG *IS*

The Guiding Principles describe the framework for developing the SPROWG concept. The Principles may be modified as the project progresses.

Guiding Principles are not presented in any specific order or priority and are paraphrased. See handout for full text.

5. SPROWG intends to **enhance the ability to conduct alternative water transfers**, thus reducing the need for traditional buy-and-dry transfers.
6. SPROWG will utilize different **sources of water** available in the South Platte basin and manage them conjunctively to achieve an overall reliable yield beyond what an individual source could produce.
7. SPROWG is intended to help water supply organizations and water users **maximize the use of in-basin supplies**.
8. SPROWG intends to improve integration of **water quality** and quantity planning and management activities.

Principles describing what SPROWG *IS NOT*

9. SPROWG is **not** intended to be **a substitute for existing or planned projects**.
10. SPROWG is **not** intended to be used to deliver water developed from the **permanent dry up of irrigated lands** in the South Platte basin.
11. SPROWG is **not** intended to **store supplies** from an existing or new **transmountain diversion project** (though it will provide a means to utilize unused reusable return flows from transmountain diversions).

The Guiding Principles describe the framework for developing the SPROWG concept. The Principles may be modified as the project progresses.

Guiding Principles are not presented in any specific order or priority and are paraphrased. See handout for full text.

Project Approach and Schedule



Project Approach, Schedule, and Assignments

- Task 1: Concept Refinement



- Subtask 1.1: Organizational Framework/Institutional Structure



- Subtask 1.2: Municipal and Industrial Demands



- Subtask 1.3: Agricultural Demands and Supplies



- Subtask 1.4: Environmental and Recreational Demands



- Subtask 1.5: SPROWG Refinement and Modeling

- Task 2: Infrastructure Issues






- Subtask 2.1: Water Treatment Strategies





- Subtask 2.2: Updated Cost Estimates

Project Approach, Schedule, and Assignments

- Task 3: Communication and Reporting

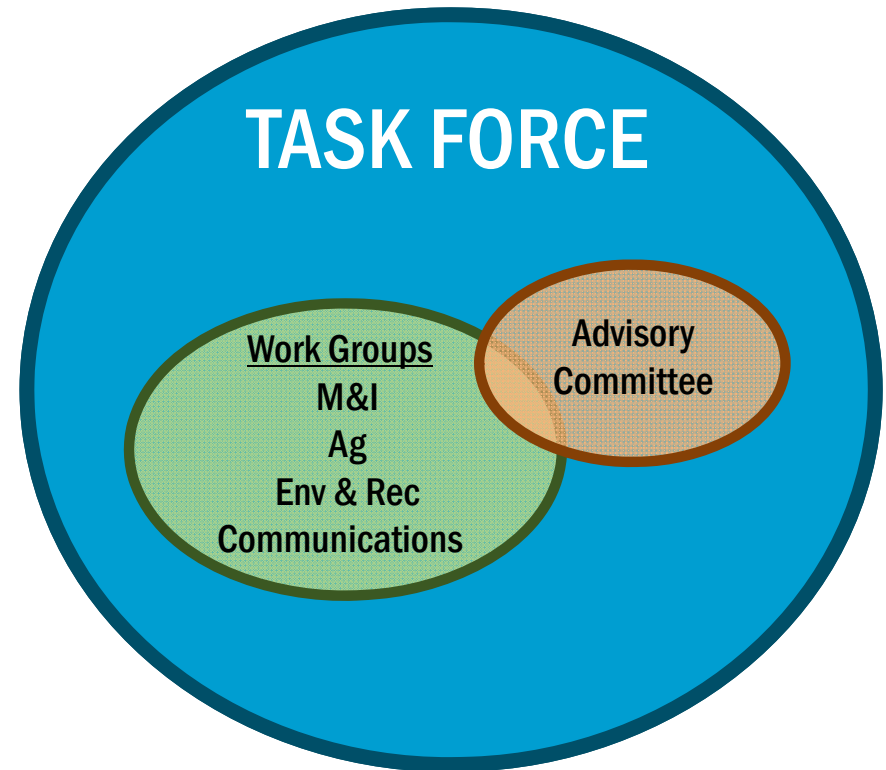
-  Stantec  – Subtask 3.1: Outreach and Education
-  – Subtask 3.2: Final Report

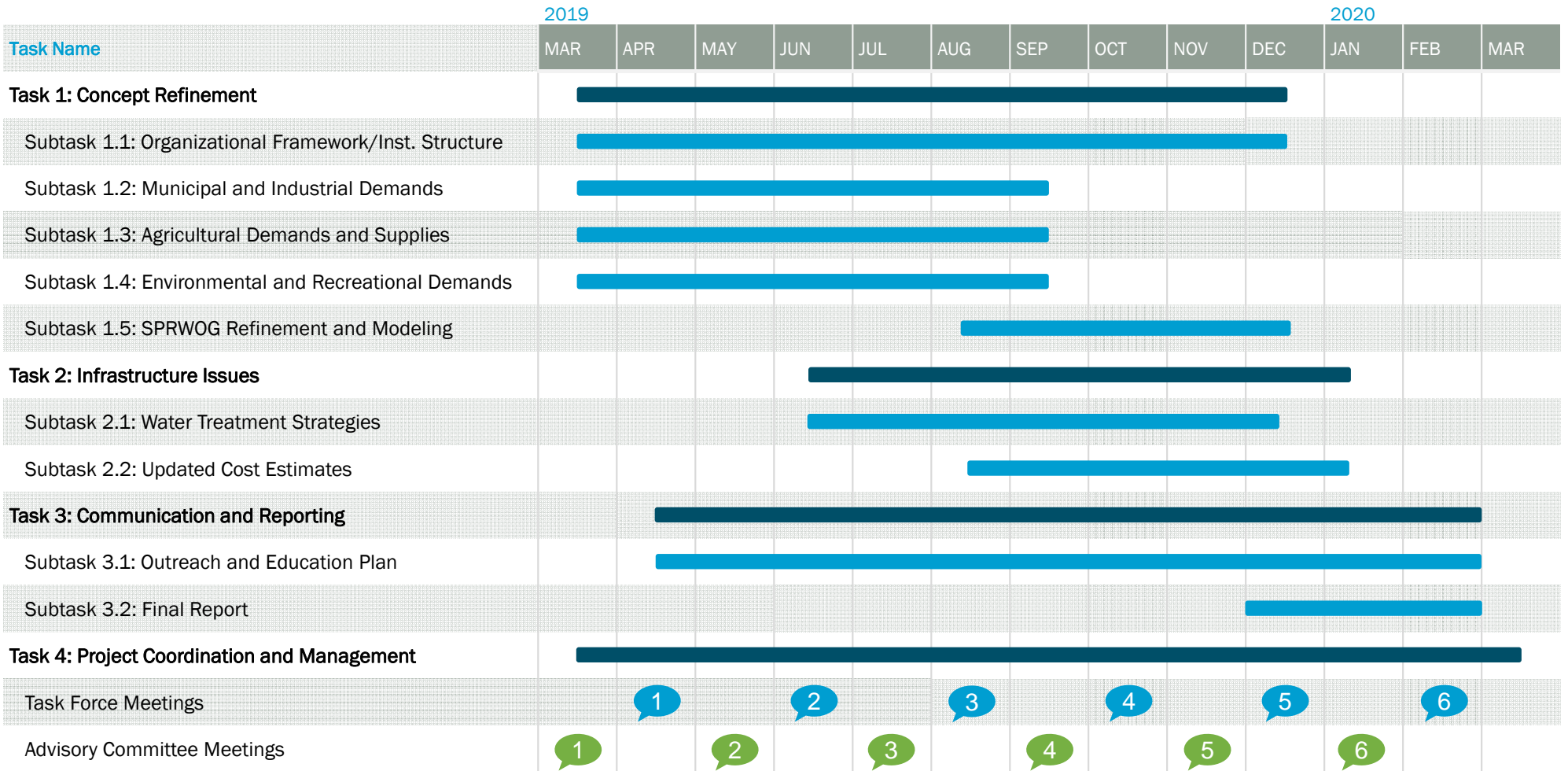
- Task 4: Project Coordination and Management

-  *Doug Robotham* – Subtask 4.1: Task Force
-  – Subtask 4.2: Project Management

Stakeholder Involvement

- **Task Force**
 - Stay informed
 - Provide succinct feedback
 - Talk to Advisory Committee members
- **Advisory Committee**
 - Provide direct guidance to consulting team
 - Participate in outreach meetings
- **Work Groups**
 - Guidance and assistance on outreach
 - Provide feedback on work products





Task Force meeting schedule and proposed topics

Meeting Number	Proposed Date	Proposed Topics
1	April 3, 2019	<ul style="list-style-type: none"> • Project kickoff • Planning for outreach with potential partners
2	June 13, 2019 (1pm – 3pm, Aurora Municipal Center)	<ul style="list-style-type: none"> • Description of organizational alternatives • Report on initial outreach activities with potential partners
3	August 13, 2019 (before SPBRT)	<ul style="list-style-type: none"> • Summary of findings from outreach activities • Description of potential project refinements
4	October 10, 2019 (before Metro BRT)	<ul style="list-style-type: none"> • Results of modeling project refinements • Description of treatment strategies
5	December 10, 2019 (before SPBRT) May be rescheduled if December meeting is not held	<ul style="list-style-type: none"> • Summary of cost estimate refinements • Description of outreach and education plan
6	February 13, 2020 (before Metro BRT)	<ul style="list-style-type: none"> • Presentation of draft-final report and discussion of Task Force comments (a draft report will be circulated to the Task Force in advance of this meeting)

Project Outreach



Municipal Outreach



Municipal Outreach

- The M&I outreach list currently includes:
 - 71 water providers
 - 10 industrial entities
- M&I entities by region:
 - 24 Denver Metro entities
 - 25 entities along the I-25/US 85/US 287 corridor
 - 7 entities in the Lower South Platte region
 - 13 entities in the Middle South Platte region
 - Other entities that have a wide reach (like the Colorado Rural Water Association)
- Work Group members will be assisting with outreach

Agricultural Outreach



**Summarize Existing
Information on
Agricultural Needs**



**Meet with Agricultural
Stakeholders to
Identify Needs and
Opportunities**



**Refine Concept
Based on Input**

Agricultural Outreach

- Outreach will take place via three meetings with agricultural water users
- Meetings will be held with entities in:
 - District 2 (Denver to Kersey)
 - Including tributaries (Districts 3, 4, 5, and 6)
 - District 1 (Kersey to Balzac)
 - District 64 (Balzac to state line)
- Each meeting will include 7 to 10 agricultural water users from each District
- Survey of agricultural water users to be distributed after meetings

Environmental/Recreational Outreach



**Identify E&R
Attributes Likely to
Benefit**




**Meet with E&R
Stakeholders to
Identify Needs and
Opportunities**



**Identify Alignments
Between E&R Needs
and Regional
Strategies**

Environmental and Recreational Outreach

- Outreach will take place via three meetings with environmental and recreational representatives
- Outreach will build on work completed in support of non-consumptive needs analysis in SP BIP
- Each meeting will include 7 to 12 representatives of various environmental/recreational organizations, state/federal agencies, etc.
- Survey of environmental and recreational representatives to be distributed after meetings



Information Request (Survey of Potential Project Participants)

M&I Survey Overview

- Survey to collect specific information from potential project participants related to key project considerations.
- Information to be used to develop specific projects designed to meet those needs.
- PDF version of survey questions will be made available. Recommend reviewing the survey questions prior to completing survey.



Key Assumptions

- SPROWG will satisfy demands that are anticipated beyond those to be met by existing supplies and identified projects and processes (IPPs).
- SPROWG could involve a combination of storage, conveyance, exchanges, and treatment infrastructure located primarily downstream (northeast) of Denver.
- SPROWG would involve construction and operation of new infrastructure but could also use existing facilities.
- SPROWG could be operated to meet M&I, agricultural, environmental, and recreational needs.
- SPROWG water supply could come from a combination of sources including unappropriated surface water, water derived from alternative transfers, excess recharge credits, reusable supplies, and groundwater from the Denver Basin.

What to expect

- You will be asked to include your name and the name of the organization you represent
 - *Results provided in response to this survey will be aggregated and the identity of respondents will not be made public*
 - *Question at end of the survey asks if individual responses can be used in a final project report*
- Responding to the survey may require input from others in your organization
 - Prior to responding, review survey questions and compile information
 - OR ask others in your organization to reply to the survey (number of survey responses per organization not limited)
- Survey to be sent out via email **next week**
- Estimated time to complete: ~30 minutes

Structural Organization Questions

Goal of Questions: Solicit input on criteria for a new organization that would eventually lead the project development, implementation, and management of a regional collaborative water project.

Topics Covered:

- Ranking of importance of organizational structure characteristics
 - i.e., Tax status, How revenue is generated, Type of governing board, Membership, Staffing
- Type of organizational structure your organization would be willing to support
- Preference for types of governing board
- Preference for how capital could be raised
- Preference for how operating expenses could be collected
- Preference for how organization is staffed
- Preference for ownership of assets
- Preference for distribution of profits

Communication Questions

Goal of Questions: To gauge the public's awareness of water issues in the South Platte Basin and preferences for communication of information.

Topics Covered:

- Types on water related issues that your rate payers/customers are concerned with
- Rate payer/customer awareness of water supply gap
- Rate payer/customer level of acceptance for new storage and infrastructure
- Primary method for communication with rate payers/customers
- Willingness to help communicate results of the SPROWG study

Water Supply Gap Questions

Goal of Questions: Understand the timing, location, and amount of water supply needs of potential project participants.

Topics Covered:

- Does your organization have a water supply gap beyond current projects and IPPs
- Amount of water supply gap at build out
- Estimated year when additional supplies need to be on-line and available for use
- Estimated year that build out will occur

Water Use Questions

Goal of Questions: Understand how your organization would use supplies made available through a regional water project

Topics Covered:

- Anticipated primary use for additional supplies
 - i.e., blending supply, firm yield, drought year supply, drought recovery, augmentation
- Preference for quality of water
- Availability of conditional or new water rights that could be developed using regional storage, conveyance, and/or treatment between Brighton and Julesburg
- Availability of unused reusable supplies that could be stored, conveyed, and/or treated in a regional project

General Project Questions

Topics Covered:

- Does your organization agree with the Guiding Principles?
- Organization's interest in participating in ATMs
- Willingness of your organization to participate in SPROWG and a future regional water storage project
- Do you authorize SPROWG to include your individual responses in a final report?

How to Get Involved



Multiple Ways to Be Involved that Fit Your Needs

- Complete the Online Survey
 - To be distributed before the end of next week.
- Express your Organizations willingness to participate in a potential regional water supply project

There is no financial or other obligations associated with participating in the project at this time. Financial and participatory obligations will arise at some point in the future if the SPROWG concept moves forward and your organization chooses to continue participation.
- Stay informed through project updates distributed via email
 - Include your email address on the Meeting Evaluation Form
- Participate on the Task Force
 - Currently 71 members
 - Indicate interest on Meeting Evaluation Form
- Reach out to an Advisory Committee Member or a member of the Project Team

**Please Complete the
Indication of Interest and
Meeting Evaluation Form!**

Advisory Committee Members

Last Name	First Name	Organization
Belanger	Laura	Western Resources Advocates
Cronin	Sean	SVLHWCD
Darling	Lisa	SMWSA
Davenport	Casey	Colorado Watershed Association
Frank	Joe	LSPWCD
Gerk	Bruce	South Platte Basin Roundtable
Hall	Jim	Northern Water
Jewell	Dawn	Aurora Water
Kopytkovskiy	Marina	Parker Water and Sanitation District
Parachini	Dick	Interested Citizen
Peters	Bob	Denver Water
Sobieski	Kara	WWG
Varra	Garrett	SP BRT/Varra Companies
Yahn	Jim	North Sterling Irrigation



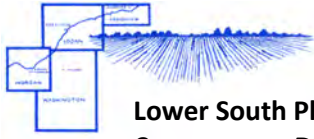
Thank you. Questions?

Contact Information:

Matt Lindburg, Project Manager, MLindburg@brwnald.com 303.239.5456

Mary Presecan, M&I Technical Lead, Mary.Presecan@LREWater.com 303.455.9589

Attachment G: Agenda and Presentation for Agricultural Outreach Meetings



Lower South Platte Water
Conservancy District

Meeting Agenda

Prepared for: Lower South Platte Water Conservancy District

Project Title: South Platte Regional Water Development Concept Feasibility Study

Purpose of Meeting: Outreach with Agricultural Water Users and Stakeholders

Meeting Locations and times:

June 24

1:30 pm to 3:30 pm

**Morgan County Quality Water
District**

17586 CR 20
Fort Morgan, CO 80701

June 26

2:00 pm to 4:00 pm

**Central Colorado Water Con-
servancy District**

3209 W 28th Street
Greeley, CO 80634

June 28

1:30 pm to 3:30 pm

**Lower South Platte Water Con-
servancy District**

100 Broadway Plaza, Suite 12
Sterling, CO 80751

Agenda

1. **Introductions and purpose of the meeting** (10 minutes)
 - a. Review overall project goals, schedule, and how the results of the meeting will inform the study
2. **Overview of SPROWG** (10 minutes)
 - a. Brief review of project background
 - b. Description of project components
3. **Guiding Principles** (15 minutes)
 - a. Do you see areas where the principles could be improved?
 - b. Could you participate in a project with these principles?
4. **Agricultural Water Needs** (30 minutes)
 - a. How do you think you or other agricultural water users could benefit from this project?
 - b. Would the project need to provide firm yield for agriculture or dry year supplies? Which is more critical?
 - c. Do you know of specific water needs (in terms of amounts and location) that we should consider?
 - d. Are there aspects of this project that should change to make it more attractive?



5. **Alternative Water Transfers** (30 minutes)

a. What do you or other water users you know think about ATMs? →

Considerations:

- Are you familiar with state ATM programs (ATM Grant Program, Lease-Fallow Pilot Program, Agricultural Water Protection Water Right)?
- Should ATMs play a role in the SPROWG concept?

b. Are you generally willing to participate in an ATM? →

Considerations:

- If so, what is appealing about ATMs? What could improve to make them more attractive?
- If not, what are your concerns with ATMs?
- Do you need more information on ATMs and would a training/education program or assistance from other agricultural organizations be helpful?

c. How much money per acre foot would be needed to make ATMs attractive? →

Considerations:

- In addition to direct payments, what other incentives would help? Irrigation infrastructure investments, technical assistance, conservation easement tax incentives. etc.?

d. Are you willing to do long term agreements or do they need to be short term?

e. Are you willing to do periodic leases (interruptible supply agreements) or leases with firm deliveries (rotational fallowing)?

f. What role would a SPROWG entity play in administering ATMs or ensuring that the project does not result in permanent buy and dry of agriculture?

6. **Governance Framework** (15 minutes)

a. Describe survey that will be distributed and provide overview of the questions.

b. Open discussion of governance considerations that are important to agricultural users.

7. **Communications** (10 minutes)

a. How concerned are your members and stakeholders about the projected water supply gap in the South Platte River Basin?

b. What are the perceptions of your members and stakeholders regarding the SPROWG concept and its ability to supply the needs of both cities and agriculture? Are they aware of the SPROWG concept?

c. What are the best ways to communicate about this study and its findings in your community and/or to your stakeholders?

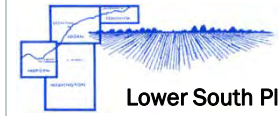
d. What entity or individual would you consider a trusted spokesperson about this project for your stakeholder group?



Doug Robotham

INFORMATIONAL MEETING FOR AGRICULTURAL WATER USERS

South Platte Regional Opportunities Water Group (SPROWG) Feasibility Study



Lower South Platte Water Conservancy District

June 24, June 26, and June 28, 2019






Meeting Agenda

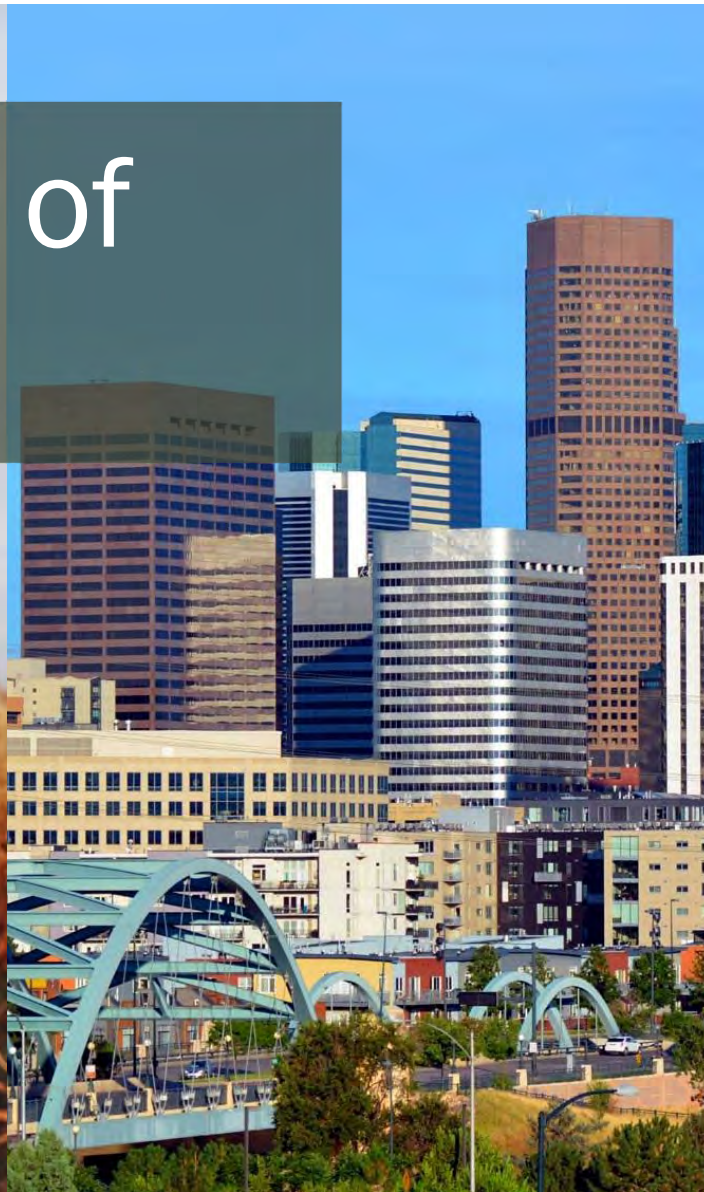
- Introductions and Purpose of the Meeting
- Overview of SPROWG
- Guiding Principles
- Agricultural Needs
- Alternative Water Transfers
- Governance Framework
- Communications



Purpose of the Meeting

-  Provide information about SPROWG and the current study
-  Get your feedback
-  Describe follow up survey

Overview of SPROWG





South Platte Basin Implementation Plan (SPBIP) described the original “Conceptual Future In-Basin Multipurpose Project” in Section 4.6.2



South Platte Regional Opportunities Working Group (SPROWG) advanced the SPBIP concept and developed the initial regional water project

South Platte BIP Phase 2

Dec 2013 – April 2015

June 2015 – May 2018

Date TBD

May 2013 – Nov 2015

Jan 2017 – Dec 2017

June 2018 – Oct 2018

Mar 2019 – Mar 2020



Colorado's Water Plan voiced the need for storage and collaborative projects



South Platte Storage Study (SPSS) identified potential South Platte River storage projects



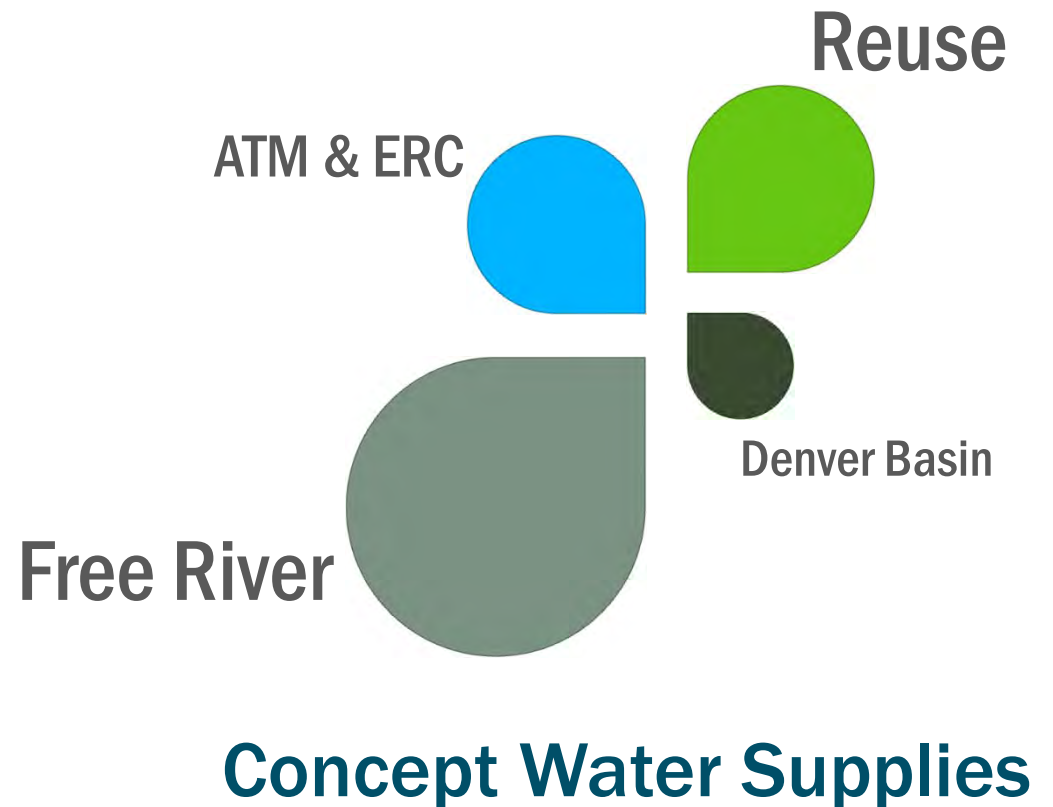
SPROWG Task Force developed scope of study and grant application for feasibility study



SPROWG Feasibility Study will conduct outreach, explore organizational alternatives, and refine the concept

Initial Concept Evaluation

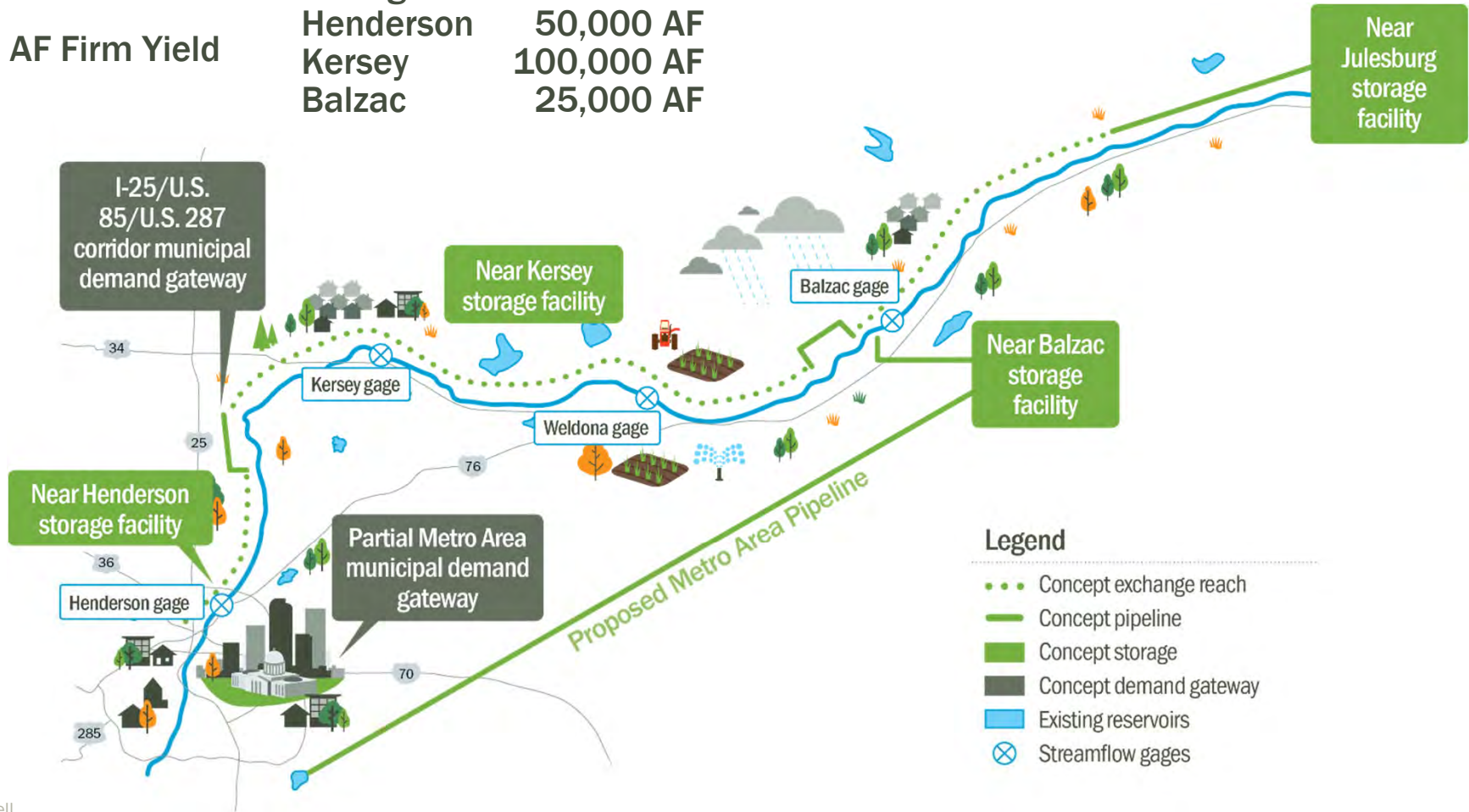
- Initially performed high-level analyses with reservoirs operating independently
- Gradually incorporated components to maximize use of water supplies:
 - Conjunctive reservoir operations
 - Additional infrastructure
 - Enhanced exchange capacity



Initial concept evaluation results:

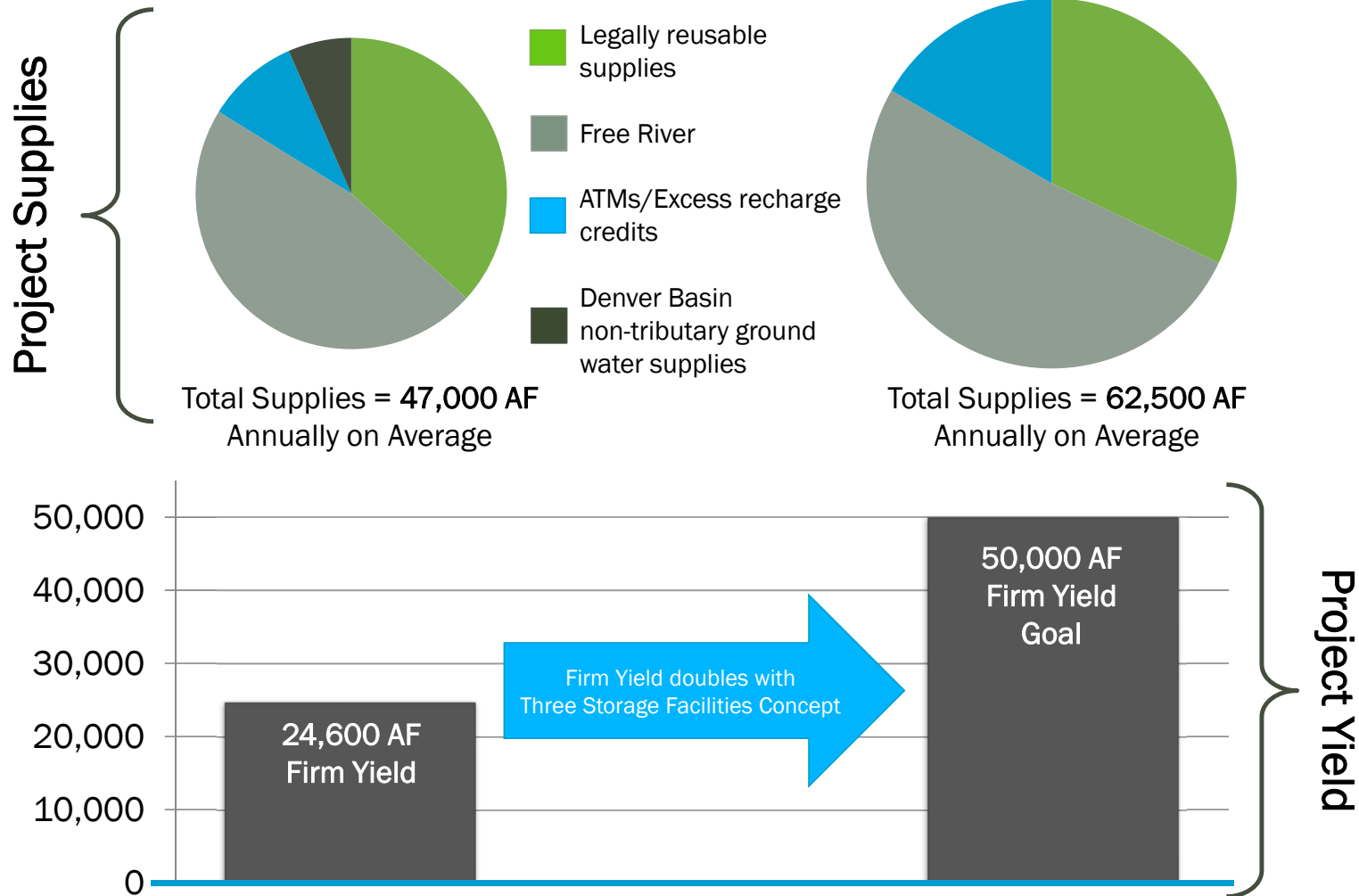
50,000 AF Firm Yield

Storage:	
Henderson	50,000 AF
Kersey	100,000 AF
Balzac	25,000 AF



Single Storage Facility Concept

Three Storage Facilities Concept



While communities in the South Platte River Basin continue to make great strides in meeting future water demands through aggressive conservation measures, a need remains for additional supplies.

Project Urgency and Necessity

- Basin population expected to grow to around **6 million** by the year **2050**
- Projected **M&I water supply gap** by 2050 is **365,000 acre-feet annually**
- Water is needed for **agriculture**
- Water is needed for **environment and recreation**
- Projected water **needs exceed water supplies**, even with increased conservation
- **Water is periodically available** for future use
 - Almost 300,000 acre-feet per year has been available in recent years
- SPROWG is **not an alternative for existing or planned projects.**

SPROWG is studying ways to meet future needs by strategically managing our existing supplies

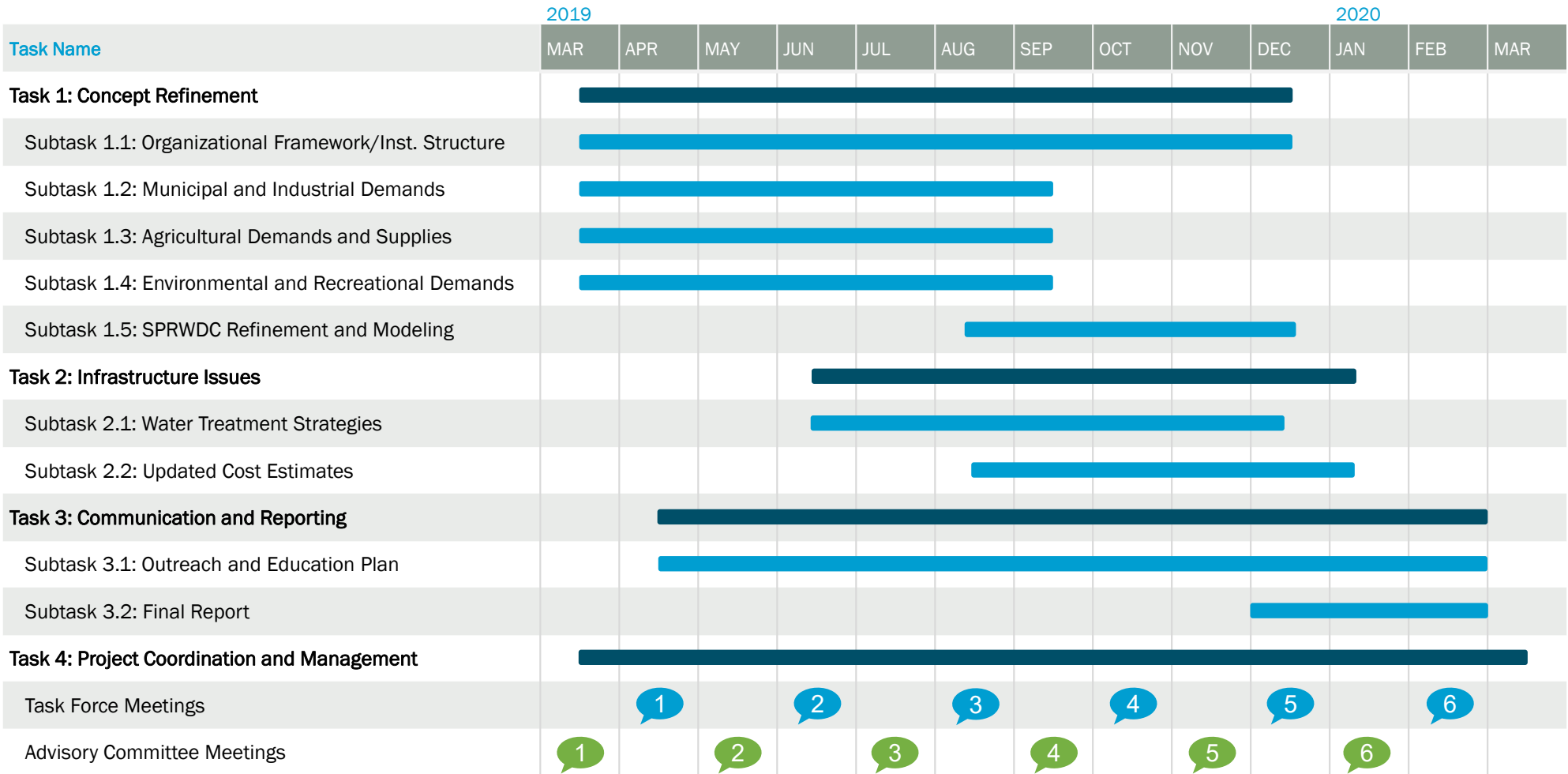
Potential Benefits to Agriculture

- A regional approach using multiple sources of supply and operationally-linked infrastructure to maximize benefit and share costs
- Firm or dry year yield for agricultural water users
- Potentially **175,000 acre-feet of new storage** (and maybe more)
 - Storage for agricultural uses
 - Augmentation
 - Firming up water rights
 - Operational flexibility
- Infrastructure to **enhance ATM feasibility** and reduce buy and dry

The SPROWG feasibility study is the next step in evaluating solutions to meet the gap

Study Components

- Stakeholders include **agricultural, municipal/industrial, environmental and recreational** interests
- Builds on **previous studies**
- Will evaluate **ways to fund, administer, and operate** a new project
- **Will seek feedback** from stakeholders and refine the concept
- **Multiple ways to collaborate** and participate
 - Task Force
 - Survey participation
 - Outreach meetings



Guiding Principles



Principles describing what SPROWG *IS*

The Guiding Principles describe the framework for developing the SPROWG concept. The Principles may be modified as the project progresses.

Guiding Principles are not presented in any specific order or priority and are paraphrased. See handout for full text.

1. SPROWG will advance the goals of the **South Platte/Metro Basin Implementation Plan (BIP) and Colorado's Water Plan**.
2. SPROWG intends to provide at least **50,000 acre-feet of yield** to meet part of the projected municipal and industrial water supply project gap in the South Platte basin. **A significant portion of this yield is targeted for smaller but rapidly growing communities between Denver and Greeley and also larger communities in the Denver Metro area and northern Colorado.** The project will also explore providing supplies to smaller communities east of Greeley.
3. SPROWG intends to meet a **portion of the agricultural gap**.
4. SPROWG will identify and incorporate **strategies to address environmental and recreational needs**.

Principles describing what SPROWG *IS*

The Guiding Principles describe the framework for developing the SPROWG concept. The Principles may be modified as the project progresses.

Guiding Principles are not presented in any specific order or priority and are paraphrased. See handout for full text.

5. SPROWG intends to **enhance the ability to conduct alternative water transfers**, thus reducing the need for traditional buy-and-dry transfers.
6. SPROWG will utilize different **sources of water** available in the South Platte basin and manage them conjunctively to achieve an overall reliable yield beyond what an individual source could produce.
7. SPROWG is intended to help water supply organizations and water users **maximize the use of in-basin supplies**.
8. SPROWG intends to improve integration of **water quality** and quantity planning and management activities.

Principles describing what SPROWG *IS NOT*

9. SPROWG is **not** intended to be **a substitute for existing or planned projects**.
10. SPROWG is **not** intended to be used to deliver water developed from the **permanent dry up of irrigated lands** in the South Platte basin.
11. SPROWG is **not** intended to **store supplies** from an existing or new **transmountain diversion project** (though it will provide a means to utilize unused reusable return flows from transmountain diversions).

The Guiding Principles describe the framework for developing the SPROWG concept. The Principles may be modified as the project progresses.

Guiding Principles are not presented in any specific order or priority and are paraphrased. See handout for full text.

Agricultural Water Needs



Agricultural Water Needs

- How do you think you or other agricultural water users could benefit from this project?
- Would the project need to provide firm yield for agriculture or dry year supplies? Which is more critical?
- Do you know of specific water needs (in terms of amounts and location) that we should consider?
- Are there aspects of this project that should change to make it more attractive?

Alternative Water Transfers



Alternative Water Transfers

- What do you or other water users you know think about ATMs?
 - Are you familiar with state ATM programs (ATM Grant Program, Lease-Fallow Pilot Program, Agricultural Water Protection Water Right)?
 - Should ATMs play a role in the SPROWG concept?
- Are you generally willing to participate in an ATM?
 - If so, what is appealing about ATMs? What could improve to make them more attractive?
 - If not, what are your concerns with ATMs?
 - Do you need more information on ATMs and would a training/education program or assistance from other agricultural organizations be helpful?

Alternative Water Transfers

- How much money per acre foot would be needed to make ATMs attractive
 - In addition to direct payments, what other incentives would help? Irrigation infrastructure investments, technical assistance, conservation easement tax incentives, etc.?
- Are you willing to do long term agreements or do they need to be short term?
- Are you willing to do periodic leases (interruptible supply agreements) or leases with firm deliveries (rotational fallowing)?
- What role would a SPROWG entity play in administering ATMs or ensuring that the project does not result in permanent buy and dry of agriculture?

Governance Structure



Structural Organization Questions

Goal of Questions: Solicit input on criteria for a new organization that would eventually lead the project development, implementation, and management of a regional collaborative water project.

Topics Covered:

- Ranking of importance of organizational structure characteristics
 - i.e., Tax status, How revenue is generated, Type of governing board, Membership, Staffing
- Type of organizational structure your organization would be willing to support
- Preference for types of governing board
- Preference for how capital could be raised
- Preference for how operating expenses could be collected
- Preference for how organization is staffed
- Preference for ownership of assets
- Preference for distribution of profits

Rank the following organizational structure characteristics in order of importance to your organization. (1 = most important; 9 = least important)

- Tax Status (e.g., Government/Tax-exempt/Taxable)
- Available methods for generating revenue (taxes/member assessments/grants and loans/investors)
- Type of governing board (elected/appointed/appointed/volunteer)
- Opportunities for membership (cities/counties/districts/for-profit organizations, non-profits)
- Capability of expansion (add new members/add new project components)
- Method of staffing (own employees/contractors/shared by participants)
- Ownership of assets (by organization/by members)
- Equity ownership in entity
- Other

What organizational structure would your organization be willing to support? (select all that apply)

- New governmental entity
- Existing governmental entity
- New for-profit private entity
- New non-profit private entity
- Intergovernmental Agreement - Cost Sharing
- Other (please specify)

Which **active/direct participants** could your organization support including in an organizational structure? (select all that apply)

- Municipalities
- County Government
- State Government
- Special Water Districts
- Conservancy Districts
- Conservation Districts
- For-Profit Organizations
- Non-Profit Organizations
- Industrial Water Users
- Private Investors
- Other (please specify)

Which **passive/indirect participants** could your organization support including in an organizational structure? (select all that apply)

- Municipalities
- County Government
- Special Water Districts
- Conservancy Districts
- Conservation Districts
- For-Profit Organizations
- Non-Profit Organizations
- Industrial Water Users
- Private Investors
- Other (please specify)

Which type(s) of governing boards could your organization support for an organizational structure? (select all that apply)

- Elected by voters in benefitting areas
- Appointed by elected representatives of participating entities
- Volunteer
- Weighted voting of all participants based on project ownership or investment
- Equal voting of all participants
- Other (please specify)

What options for raising capital could your organization support? (select all that apply)

- Mill levy or other taxing instrument
- Member assessments
- Grants
- Federal/State Loans
- Private Loans
- Equity investment by participants
- Outside investors
- Other (please specify)

What options for collection of operating expenses could your organization support? (select all that apply)

- Assessed based on Participants' pro-rata share of project based on investment/anticipated benefit/use
- Tiered dues structure based on constituent base
- Tiered dues structure based on percent of project benefit (e.g. amount of storage, capacity in pipeline)
- Revenue generated from operations/deliveries
- Other (please specify)

What options for staffing could your organization support? (select all that apply)

- Hired directly by the organization (i.e., employees)
- Hired as independent contractors
- Outside consultants
- Staff sharing between participating entities
- Other (please specify)

Who would your organization support holding ownership of assets acquired or built under the organization? (select all that apply)

- Organization
- Organization with each member holding a pro-rata share based on use of facilities/services
- Organization with members holding a percentage ownership according to investment in project
- Participating entities
- Other (please specify)

What option for distribution of potential profits could your organization support? (select all that apply)

- Distributed to participants based on equity ownership in entity
- Distributed to participants based on use of an entity's facilities or services
- No distributions, all profits held by entity or invested in entity
- Other (please specify)

Communications

A large, two-story red barn with a dark grey roof and a semi-transparent dark grey box containing the word 'Communications' in white text. The barn has several windows and a white door. The background shows a cloudy sky and a grassy field.

Communication Questions

- How concerned are your members and stakeholders about the projected water supply gap in the South Platte River Basin?
- What are the perceptions of your members and stakeholders regarding the SPROWG concept and its ability to supply the needs of both cities and agriculture? Are they aware of the SPROWG concept?
- What are the best ways to communicate about this study and its findings in your community and/or to your stakeholders?
- What entity or individual would you consider a trusted spokesperson about this project for your stakeholder group?

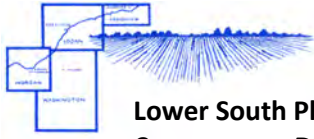


Thank you. Questions?

Contact Information:

Matt Lindburg, Project Manager, MLindburg@brwnald.com 303.239.5456

Attachment H: Detailed Notes from Agricultural Outreach Meetings



Lower South Platte Water
Conservancy District

Meeting Minutes

Prepared for: Lower South Platte Water Conservancy District

Project Title: South Platte Regional Opportunities Water Group Feasibility Study

Purpose of Meeting: Outreach with Agricultural Water Users and Stakeholders

Date: June 24, 2019

Time: 1:30 to 3:30 p.m.

Location Morgan County Quality Water District
17586 CR 20
Fort Morgan, CO 80701

1. Introductions and Purpose of the Meeting

Matt Lindburg began the meeting after distributing handouts to those present (see attached sign-in sheet). Matt explained the purpose of the South Platte Regional Opportunities Water Group (SPROWG) feasibility study and the current focus on conducting outreach and identifying water needs and potential project benefits for the agricultural community as well as municipalities and environmental and recreational stakeholders.

2. Overview of SPROWG

Matt reviewed a timeline describing the origins of the SPROWG concept and related studies that have occurred to date. He then described the current SPROWG infrastructure concept that was initially analyzed and which will be refined through the feasibility study. He discussed the data that the initial analysis and modeling used and results related to the benefits of managing water with multiple, conjunctively-managed storage facilities versus a single storage facility.

- An attendee pointed out that many types of storage could be utilized in the concept and that the concept could be evaluated with different storage alternatives. Storage alternatives include gravel pit storage, off channel reservoirs, alluvial aquifer recharge facilities, and aquifer storage and recovery (ASR).
- Another attendee added that the configuration of concept infrastructure will be dependent on where available water is in the system. Matt pointed out that the model uses the conceptual Kersey storage facility as the hub of operations, but facilities in other locations could be modeled as a hub of operations as an alternative. A comment was offered that the initial concept infrastructure modeling had been preceded by an analysis of water availability, which indicated that water is most frequently available in the South Platte Basin below the Kersey gage (an even more so below the Balzac gage), a result that was confirmed by the South Platte Storage Study. An attendee observed that smaller, strategically-located infrastructure could be placed



between larger storage facilities because of the distances involved in storing and delivering water. Matt responded, saying that several facilities could be studied and nothing set in stone at this point. Matt also referred back to the initial findings that multiple, conjunctively-operated storage facilities provide more yield than a single facility.

Project urgency and necessity was discussed along with potential benefits to agriculture. The components and timeline of the feasibility study were presented. Matt noted that the Task Force is a good means of staying involved with the project.

3. Guiding Principles

Matt described the Guiding Principles for SPROWG. The Guiding Principles provide an outline of what SPROWG is intended to accomplish, and they serve as a “constitution” for the concept. General feedback from attendees indicated that those present agreed with SPROWG’s general purpose.

- Several attendees expressed support for the Guiding Principle stating that the project should not be used to convey or manage supplies derived from traditional buy-and-dry water transactions. They said that they do not want to see the infrastructure accelerate irrigated agriculture’s loss of water to other uses
- Some attendees thought it was important to start developing/constructing the concept soon. Matt mentioned early discussions with project proponents regarding the importance of maintaining project momentum to prevent unnecessary delays. Matt explained that the overall project implementation could be phased to meet initial needs, while also allowing for future potential expansion in the future when additional demands materialize.
- Attendees noted the importance of having a major financial proponent as a part of efforts to develop the regional concept and also the idea that the municipalities involved would likely bear a significant part of the regional concept’s financial obligations in contrast to irrigated agriculture, which lacks access to significant capital resources.

4. Agricultural Water Needs

Matt discussed the demand assumptions and delivery goals used in the initial concept modeling and how that correlated to the needs of those present. Matt posed several questions related to agricultural water needs (i.e. location, amount, future timing), and attendees discussed answers to the questions and other related information:

- Water for well augmentation was cited by attendees as a water need. Specific amounts or locations were not identified. However, several of the attendees thought that District 1 augmentation needs may be greater than those lower in the river. Having recharge sites far from the river (with correspondingly long lag periods) was identified as a strategy that would allow augmentation to more effectively include recharge in operational projections that are used by augmentation plans and required in their decrees.
- Matt mentioned that work performed on behalf of the Northeast Colorado Water Cooperative (NECWC) identified several needs for augmentation supplies in District 1. He also mentioned the potential for the NECWC to play a role in the future since it is an organization consisting of numerous agricultural water users. Some attendees voice concerns that the NECWC does not have or use infrastructure at this time that could be used to manage water supplies.

-
- Another member followed those concerns with a question regarding how ditch systems will fit in and how the project concept could affect water quality. Matt explained that the feasibility study will be examining several water quality/treatment strategies that could involve mechanical water treatment or non-point source control. End user requirements will ultimately drive water quality needs.
 - Matt noted that the current agricultural gap is approximately 500,000 ac-ft in the South Platte Basin which will likely increase in dry years. An attendee pointed out that agricultural water users could benefit from any water they could get from the project. Given that agriculture operates with gaps and manages supplies in wet and dry years, providing an average yield rather than a firm yield may be more in line with how they currently operate.
 - An attendee pointed out that the municipalities plan for worst case scenarios and need firm yield and that, as a consequence, it appears they tend to have more water than they need in most years.

5. Alternative Water Transfer Methods

Alternative water transfer methods (ATMs) and preferences were discussed. Matt presented a list of information needs and questions to the attendees, and the group discussed general thoughts on the questions and ATMs.

- The general consensus of the group was that ATMs are a reasonable alternative and preferable to buy and dry practices. Although buy and dry has been the default strategy for acquiring agricultural water supplies, past outreach has indicated that some municipalities would be open to ATM practices.
- A concern was raised regarding volumetric limits that might result from a change-of-use case for an ATM. Recent decrees that allow multiple uses of water (a characteristic related to ATMs) have included terms that specify potential volumetric limits that can be imposed when water is used in the future for agricultural purposes. Limits such as these make ATMs less unappealing to agricultural water users.
- The group expressed several concerns related to uncertainties with ATMs:
 - An attendee stated more examples of successful pilots would help irrigators understand how to manage and operate ATMs and would make them more attractive.
 - Several attendees suggested ATM pricing needs some way to reflect crop prices or some sort of sliding price scale based on commodity markets.
 - Attendees thought interruptible supply agreements would be preferable to rotational fallowing programs that produce regular yield. Interruptible supply agreements may allow growers to seize good market opportunities.
 - Attendees raised concerns that ATMs shouldn't be the default strategy for acquiring water supplies for cities and perhaps a cap on water from ATMs should be discussed.
- Municipalities should consider conservation and limiting urban irrigation as a prerequisite to securing benefits from a regional project that includes ATMs as one type of water that would contribute to the project's overall yield. Attendees expressed concerns about drying agricultural fields in favor of irrigating golf courses or municipal open spaces.

6. Governance Framework

Matt reviewed several questions related to governance framework alternatives that will be included in an upcoming survey to be sent to attendees (and also those who were invited to the meeting but were not able to attend).

7. Communications

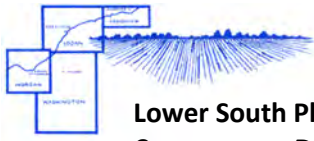
Matt reviewed several questions related to communications with the agricultural community. Attendees mentioned that smaller meetings with ditch boards are generally effective for getting feedback and the timing of meetings is important. Some attendees mentioned that daytime meetings during the growing season can be hard for agricultural producers (though a counterpoint was made that producers can oftentimes adjust their schedule to make time for meetings).

Sign-in

South Platte Regional Opportunities Water Group Meetings with Agricultural Water Users

June 24, 2019, 1:30 p.m.

Name	Organization	Email
Matt Lindburg	Brown & Caldwell	mlindburg@brwnclad.co
Jake Kungji	Brown & Caldwell	jkungji@brwnclad.com
Brian Kembel	Lower South Platte, ^{Wester Corp} Danby	Kembel@ymail.com
Jacob Wilgenburg	Wildcat Dairy/Pioneer Farms	jacob.wildcatdairy@gmail.com
Ally Wind	Piñon Water & Irrig.	alwind@County.or.us
Don Magnuson	Lower Latham Ditch Co Northern Water	don.magnuson@hotmail.com
Doug Robotham	PROJECT TEAM	doug.robtham@hotmail.com
Cindy Lefeuer	Ft. Morgan Irrig. Co	Fmrico@outlook.com
Dick Parachini	Interested Citizen	rparachini99@aol.com
Joe Frank	LSPWCD	JMFRANK@LSPWCD.ORG



Lower South Platte Water
Conservancy District

Meeting Minutes

Prepared for: Lower South Platte Water Conservancy District

Project Title: South Platte Regional Opportunities Water Group Feasibility Study

Purpose of Meeting: Outreach with Agricultural Water Users and Stakeholders

Date: June 26, 2019

Time: 2:00 to 4:00 p.m.

Location Central Colorado Water Conservancy District
3209 W. 28th Street
Greeley, CO 80634

1. Introductions and Purpose of the Meeting

Matt Lindburg began the meeting after distributing handouts to those present (see attached sign-in sheet). Those in attendance were familiar with the SPROWG project and requested that the conversation immediately move to discussing agricultural water needs (the Overview of SPROWG and Guiding Principles parts of the meeting presentation were not covered).

2. Agricultural Water Needs

Several water needs and management issues in Water District 2 and tributaries were discussed:

- An attendee expressed concerns that this project may not provide benefits for water users located higher in the tributaries, because concept storage facilities are targeted along the mainstem of the South Platte River. Matt said that water could potentially be exchanged up tributaries depending on exchange capacities and location of need. Matt also explained that the initial SPROWG concept focused on delivering water to specific locations (i.e. delivery gateways) with the assumption that it would be pumped or delivered to users upstream or downstream of the point of delivery. An outreach objective is to understand the locations of water needs.
- An attendee stated that agricultural water needs occur along the Little Thompson. Water needs associated with the Little Thompson have arisen as Colorado-Big Thompson (C-BT) supplies have been transferred to municipal use. Return flows associated with C-BT use for irrigation had previously provided stream flow that irrigators on the Little Thompson could divert. However, those return flows have diminished as C-BT supplies have moved out of irrigation use. It was observed that water delivered by the regional project, either by exchange or directly, to the intersection of the Little Thompson and the Saint Vrain Supply Canal could help address agricultural water needs on the Little Thompson sub-basin.



-
- If 10 cfs were supplied to the Little Thompson, it would satisfy the agricultural needs on that tributary.
 - Matt asked if infrastructure would be useful for retiming augmentation supplies so that they better match the timing of well depletions. Attendees generally agreed that this could be useful. An attendee mentioned that it could help reduce calls by recharge water rights with timing imbalances that have high recharge diversions in the spring relative to their depletions later in the irrigation season.
 - It is important to provide supplies for augmentation plans that can be included in a projection.
 - Water supplies for augmentation plans could be useful above the confluence of the St. Vrain and South Platte and at the confluences where Beebe Draw and Box Elder Creek enter the South Platte. Supplies of 35,000 to 40,000 could be used for augmentation. Part of the supply would replace leases of reusable effluent that are anticipated to go away as municipalities implement reuse programs. The bulk of the supply is needed east of Greeley.
 - An attendee suggested that augmentation supplies could be derived by allowing municipalities to lease return flows associated with SPROWG water supplies back to agricultural users after first use by municipal water providers.
 - Flexibility in how SPROWG water supplies are used (such as locations and amounts) would be beneficial to agricultural water users.

3. Alternative Water Transfer Mechanisms

Alternative water transfer methods (ATMs) and preferences were discussed, and the group shared general thoughts and questions related to ATMs.

- Some of the attendees felt that municipalities have enough water supply already, and they need to be more efficient with the overall use. Irrigators may be more willing to enter into ATM programs if they feel like cities are maximizing water efficiency.
- Matt asked if an interruptible supply agreement with flexible delivery schedules controlled by the agricultural participants would be attractive. For example, an agreement may require that a certain amount of agricultural supply be delivered over a 10-year period to a reservoir for municipal use, but the agricultural participant could determine the years in which deliveries are made. The concept seemed agreeable to those in attendance, but they stated that the arrangement needs to be valuable to agriculture.
 - One of the attendees expressed concerns with this arrangement in that growers may not be considered reliable suppliers if they do not deliver water regularly.
- Attendees expressed concern with change cases related to ATMs and potentially subjecting the agricultural participant to volumetric limits when they use water for traditional agricultural purposes.
- Matt asked if ATMs would be more attractive alternative if necessary infrastructure were in place to deliver water to end users and if volumetric limits were not imposed when water is being used for irrigation. After some discussion the attendees agreed that they would be more interested in ATMs if the described conditions existed.
- An attendee suggested that lower consumptive use crops might be a better option than rotational fallowing or interruptible supply agreements. The reasons for this is

that fallowing could be detrimental to the overall health of agricultural fields and a fear that fields would not be as productive after fallowing. However, the group acknowledged that a cover crop could be planted to maintain soil health (though this could reduce the amount of transferrable consumptive use from an ATM).

- An attendee said that farmers want to capitalize on high market prices and might be reluctant to enter into long term ATMs. Matt responded saying a long-term deal would likely require an adjustment to the price of water. A suggestion was made to build in price adjustments based on commodity markets, which prompted a reply that valuing water based on the commodity market isn't necessarily attractive since that doesn't add much value to the agricultural water owner. A suggestion was made that water prices could be based on the value to the end-user or the purchase price for water.
- An attendee suggested that the competition for water is becoming so great that agricultural users may be reluctant to enter into ATMs unless the price for the water is very high.
- Some attendees cited potential trust issues between agricultural water users and municipal water providers. They suggested that education could be useful in developing a better understanding of how agriculture works. Trust issues like this can be a barrier to ATMs. Matt asked if trust issues associated ATMs would be lessened if the contracting entity for an ATM were the SPROWG organization (with agricultural representation on the governing board), and the attendees agreed that this could be helpful.

4. Governance Framework

Matt described the follow up survey that will be distributed regarding governance and communication questions, and he went through each of the questions and asked if anyone had feedback. The attendees asked if the survey would be sent to ditch companies in District 2 and the tributaries, and Matt replied that several individuals involved with various ditch companies will be receiving the survey. Matt also mentioned that the NECWC will be conducting outreach with potential regional partners.

5. Communications

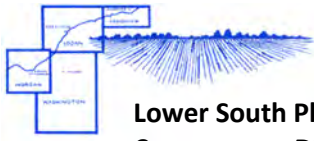
Matt also asked how to tailor communications about SPROWG to other parties. Attendees suggested that meetings with agricultural water users are difficult to coordinate during the irrigation season and that evening or non-growing season meetings might be better.

Sign-in

South Platte Regional Opportunities Water Group Meetings with Agricultural Water Users

June 26, 2019, 2:00 p.m.

Name	Organization	Email
Matt Lindburg	Brown & Caldwell	mlindburg@browncauld.com
Jake Kunugi	Brown & Caldwell	jkunugi@browncauld.com
Mary Presecan	Leonard Rice Engineers	mary.presecan@LREwater.com
Craig Godbout	CWCB	Craig.godbout@state.co.us
Jim Hall	Northern Water	jhall@northernwater.org
Larry Lempler	BTCO	admin@bigthompson.org
Doug Robertson	PROJECT TEAM	DOUG.ROBERTSON@HOTWATER.CO
Randy C Kautson	Central Water	



Lower South Platte Water
Conservancy District

Meeting Minutes

Prepared for: Lower South Platte Water Conservancy District

Project Title: South Platte Regional Opportunities Water Group Feasibility Study

Purpose of Meeting: Outreach with Agricultural Water Users and Stakeholders

Date: June 28, 2019

Time: 1:30 to 3:30 p.m.

Location Lower South Platte Water Conservancy District
100 Broadway Plaza, Suite 12
Sterling, CO 80751

1. Introductions and Purpose of the Meeting

Matt Lindburg began the meeting after distributing handouts to those present (see attached sign-in sheet). Matt explained the purpose of the South Platte Regional Opportunities Water Group (SPROWG) feasibility study and the current focus on conducting outreach and identifying water needs and potential project benefits for the agricultural community as well as municipalities and environmental and recreational stakeholders.

2. Overview of SPROWG

Matt reviewed a timeline describing the origins of the SPROWG concept and related studies that have occurred to date. He then described the current SPROWG infrastructure concept that was initially analyzed. He discussed the data that the initial analysis and modeling used and results related to the benefits of managing water with multiple, conjunctively-managed storage facilities versus a single storage facility.

- An attendee pointed out that many types of storage could be utilized in the concept and that the concept could be evaluated with different storage alternatives. Storage alternatives could include a variety of alternatives including reservoir expansion, gravel pit storage, off channel reservoirs, alluvial aquifer recharge facilities, and aquifer storage and recovery (ASR).
- An attendee asked about the types of participants that attend task force meetings. Matt replied that the meetings are usually attended by a wide variety of water users and stakeholders, including those from municipalities, agriculture, environmental groups, and the Colorado Water Conservation Board (CWCB).

3. Guiding Principles

Matt described the Guiding Principles for SPROWG. The Guiding Principles provide an outline of what SPROWG is intended to accomplish, and they serve as a “constitution” for the concept. General feedback from attendees indicated that those present agreed with SPROWG’s



general purpose. Several attendees commented on the Guiding Principle that states SPROWG is not intended to be used to deliver water from permanent dry-up of irrigated land.

- An attendee stated that land use planning should be included in the discussions regarding this project. Municipalities should use water as efficiently as possible before seeking additional supplies from agriculture. An attendee from a municipality stated that the drought of the early 2000s spurred significant increases in municipal water use efficiency. A suggestion was made that SPROWG water could only be used in areas or municipalities that met certain criteria with respect to conservation or land use planning. The attendees agreed that more conversations with city planners and developers would be beneficial.
- Attendees voiced concerns regarding financing of the concept. One attendee noted that municipalities would likely finance the project, but the state could also potentially play an active role. The state could potentially require that certain conditions be met as a result of their participation.
- With respect to the guiding principal that specifies the SPROWG concept will not be used to facilitate permanent transfers of agricultural irrigation water to municipal uses, one attendee asked if water rights that had already been purchased by a Front Range municipality prior to the development of the SPROWG concept might be eligible for delivery to end users via SPROWG infrastructure. Matt responded by clarifying that the Guiding Principle prohibiting the use of SPROWG infrastructure for the delivery of water derived from "buy and dry" activities contemplates future water rights purchases by municipalities, but that past purchases would require additional discussion

4. Agricultural Water Needs

Several water needs and management issues in Water District 64 were discussed:

- Attendees said that water for augmentation purposes would be beneficial for agriculture. Long-term supplies that could be included in an augmentation plan's projection would be especially useful.
- Storage would be beneficial in strategic locations. Strategic locations were characterized in terms of providing water primarily for augmentation purposes, but the group also mentioned some surface water demands that could use dry year supplies. Participants noted that storage infrastructure may be prohibitively expensive if agriculture users were to pursue it on their own.
- Pipelines for delivering water to the South Platte in strategic locations would be useful. Pipelines that discharge water above certain ditch headgates in District 1 (Weldon Valley, Bijou) would be useful for irrigators with augmentation plans
- Supplies for alluvial aquifer recharge are more regularly available in District 64 than in upstream districts.
- Some ditches in District 64 run short of supplies in dry years. Julesburg Irrigation District sometimes can only supply 0.6 feet of irrigation water per acre.
- In addition to agricultural needs, attendees said that growing towns on the eastern plains could also use additional supply and encouraged the study team to keep that in mind.

5. Alternative Water Transfer Methods

Alternative water transfer methods (ATMs) and preferences were discussed. Matt presented a list of information needs and questions to the attendees, and the group discussed general thoughts on the questions and ATMs.

- An attendee requested more information on what is meant by alternative water transfers. Matt replied that the term refers to a variety of strategies to compensate irrigators for a temporary reduction of water consumption on farms (for example, through rotational fallowing, interruptible supply or deficit irrigation) and allowing a municipality or other user to utilize the saved consumptive use. The initial modeling of the SPROWG concept assumed that ATMs could potentially provide supplies during drought periods (more of an interruptible supply strategy).
- Many of the attendees voiced concerns regarding volumetric limits on irrigation uses that could be imposed via a change-if-use case associated with an ATM. Several attendees mentioned that volumetric limits for irrigation uses would likely be a significant barrier to ATM implementation. Some suggested potentially discussing this type of constraint with proponents of these types of volumetric limits to see if an acceptable solution could be developed.
- Attendees said that ATMs should be the last source of supply considered when developing strategies to meet future M&I needs. They do not want agricultural supplies to be considered the default alternative for providing future supplies to cities. They recommended focusing on unappropriated supplies. It was acknowledged that the current SPROWG concept focuses on the use of unappropriated supplies and that ATMs were used as a firming or dry year source of supply.
- Concerns were expressed regarding the maintenance of return flows if a large-scale ATM program were to be implemented. Matt agreed that this could be a challenge, but strategically-placed infrastructure could allow for flexibility in providing return flows at the right volumes, locations, and time.
- Attendees stated the importance of adequate notice prior to the implementation of an ATM. Agricultural producers would like to know if a water provider needs water from an ATM well before they plan for the next growing season. Matt mentioned some provisions in an ATM contract he is aware of that include early and late notice provisions. Under the late notice provisions, a water provider could request ATM water into the spring months of the current growing season, but they would need to compensate the participating irrigator for the inputs the irrigator has already purchased. In addition, Matt described the concept of an interruptible supply agreement with flexible delivery schedules controlled by the agricultural participants. For example, an agreement may require that a certain amount of agricultural supply be delivered over a 10-year period to a reservoir for municipal use, but the agricultural participant could determine the years in which deliveries are made.
- Attendees noted that pricing of ATMs would be important and would need adjustment mechanisms to reflect the value of water and/or commodities.
- The impacts of ATMs on local communities were a concern for attendees. If farming and irrigation practices change (either continually or periodically) local businesses that support agriculture could be impacted. Attendees suggested that secondary economic impacts like this should be evaluated. On a related note, one attendee mentioned that discussion should begin soon with agricultural lenders to determine how a given producer's participation in an ATM relates to evaluations of credit worthiness.

-
- Some attendees voiced concerns that agricultural producers who rent irrigated land could be negatively impacted by ATMs if they are managed exclusively by the land owner and if part of the compensation associated with ATMs are not shared by the owner.

6. Governance Framework

Matt described the follow up survey that will be distributed regarding governance and communication questions, and he went through each of the questions and asked if anyone had feedback.

- Attendees discussed the need for the governance structure to accommodate flexibility in how municipalities and agriculture use project supplies.

7. Communications

Matt described the communications-related questions that would be on the survey.

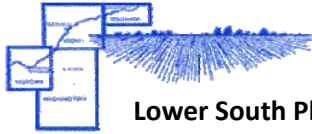
Sign-in

South Platte Regional Opportunities Water Group Meetings with Agricultural Water Users

June 28, 2019, 1:30 p.m.

Name	Organization	Email
Jake Kurugi	Brown + Caldwell	jkurugi@brwncauld.com
Matt Lindburg	Brown + Caldwell	mlindburg@brwncauld.com
Bob Peters	Denver Water	bob.peters@denverwater.org
David A. Hernandez	North Sterling	Herinc43@gmail.com
Carson Smart	LWU	CSMART65@gmail.com
Jim Yahn	North Sterling	jim@northsterling.org
Jacelyn Knutson	Premier Farm Credit	jocelyn.knutson@premieraca.com
Brad Stromberg	LWU	clearwater_bas@gmail.com
John Rusch	SEK	jrusch1@fci.net
Don Ament	SELF	daament@hotmail.com
Joe Frank	LSPWCD	JMFRANK@LSPWCD.ORG
Ken Fritzer	LSPWCD	fritz@kei.net
Kevin Vollmar	Logan Well users	Kevin.vollmar@gmail.com

Attachment I: Agenda and Presentation for Environmental and Recreation Outreach Meetings



**Lower South Platte Water
Conservancy District**

Meeting Agenda

Prepared for: Lower South Platte Water Conservancy District

Project Title: South Platte Regional Opportunities Water Group Feasibility Study

Purpose of Meeting: Outreach with Environmental and Recreational Representatives and Stakeholders

Meeting Locations, Times, and Call-In Information:

<p>July 22 10:00 am to 12:00 pm</p> <p>Central Colorado Water Conservancy District 3209 W 28th Street Greeley, CO 80634</p> <p><u>Call in and Screen Share Details</u></p> <p>Please join my meeting from your computer, tablet or smartphone. https://global.gotomeeting.com/join/771110701</p> <p>Join the conference call: Call: 970-3450-8122 No access # or passcode.</p>	<p>July 23 9:30 am to 11:30 am</p> <p>Leonard Rice Engineers 1221 Auraria Parkway Denver, CO 80204</p> <p><u>Call in and Screen Share Details</u></p> <p>Please join my meeting from your computer, tablet or smartphone. https://global.gotomeeting.com/join/995778981</p> <p>You can also dial in using your phone. Call: +1 (312) 757-3121 Access Code: 995-778-981</p>
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Agenda Prepared by: Mary Presecan, Leonard Rice Engineers, Inc.
1221 Auraria Parkway
Denver, CO 80204
303-455-9589



Agenda

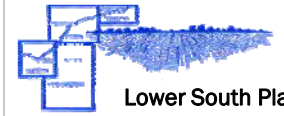
1. **Introductions and purpose of the meeting** (10 minutes)
 - a. Review overall project goals, schedule, and how the results of the meeting will inform the study
2. **Overview of SPROWG** (10 minutes)
 - a. Brief review of project background
 - b. Description of project components
3. **Guiding Principles** (10 minutes)
 - a. Do you see areas where the principles could be improved?
 - b. Could you participate in a project with these principles?
4. **Recreational Water Needs** (35 minutes)
 - a. How do you think recreational needs could be maintained or enhanced from this project?
 - b. How do you think this project could impact recreational needs?
 - c. Do you know of specific recreational water needs (in terms of amounts and location) that we should consider?
 - d. Are there aspects of this project that should change to make it more attractive?
5. **Environmental Water Needs** (35 minutes)
 - a. How do you think environmental needs could be maintained or enhanced from this project?
 - b. How do you think this project could impact environmental needs?
 - c. Do you know of specific environmental water needs (in terms of amounts and location) that we should consider?
 - d. Are there aspects of this project that should change to make it more attractive?
6. **Governance Framework** (10 minutes)
 - a. Describe survey that will be distributed and provide overview of the questions.
 - b. Open discussion of governance considerations that are important to environmental and recreational advocate groups.
7. **Communications** (10 minutes)
 - a. How concerned are your members and stakeholders about the projected water supply gap in the South Platte River Basin?
 - b. What are the perceptions of your members and stakeholders regarding the SPROWG concept and its ability to supply the needs of cities, agriculture, recreation, and the environment? Are they aware of the SPROWG concept?
 - c. What are the best ways to communicate about this study and its findings in your community and/or to your stakeholders?
 - d. What entity or individual would you consider a trusted spokesperson about this project for your stakeholder group?



Doug
Robotham

INFORMATIONAL MEETING FOR ENVIRONMENTAL AND RECREATIONAL REPRESENTATIVES

South Platte Regional Opportunities Water Group (SPROWG) Feasibility Study



Lower South Platte Water
Conservancy District

July 22 and July 23, 2019



Meeting Agenda

- Introductions and Purpose of the Meeting
- Overview of SPROWG
- Recreational Water Needs
- Environmental Water Needs
- Additional Project Considerations
- Governance Framework
- Communications
- Other



Meeting Agenda

Prepared for: Lower South Platte Water Conservancy District
Project Title: South Platte Regional Opportunities Water Group Feasibility Study

Purpose of Meeting: Outreach with Environmental and Recreational Representatives and Stakeholders

Meeting Locations, Times, and Call-In Information:




July 22 10:00 am to 12:00 pm	July 23 9:30 am to 11:30 am
<p>Central Colorado Water Conservancy District 3209 W 28th Street Greeley, CO 80634</p> <p>Call in and Screen Share Details</p> <p>Please join my meeting from your computer, tablet or smartphone. https://global.gotomeeting.com/join/771110701</p> <p>Join the conference call: Call: 970-3450-8122 No access # or passcode.</p>	<p>Leonard Rice Engineers 1221 Auraria Parkway Denver, CO 80204</p> <p>Call in and Screen Share Details</p> <p>Please join my meeting from your computer, tablet or smartphone. https://global.gotomeeting.com/join/995778981</p> <p>You can also dial in using your phone. Call: +1(312)757-3421 Access Code: 995-778-981.</p>

Agenda Prepared by: Mary Presecan, Leonard Rice Engineers, Inc.
 1221 Auraria Parkway
 Denver, CO 80204
 303-455-9589

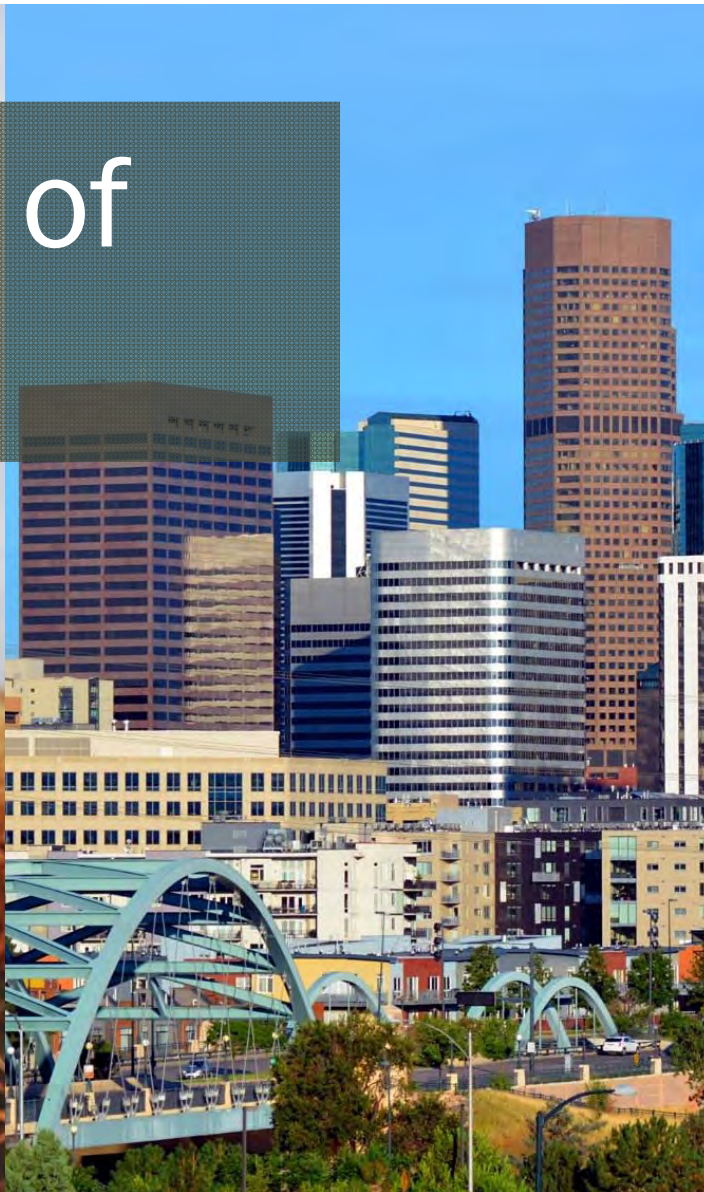


Env/Rec outreach meeting agenda No Title

Purpose of the Meeting

-  Provide information about SPROWG and the current study
-  Get your feedback
-  Describe follow up survey

Overview of SPROWG





South Platte Basin Implementation Plan (SPBIP) described the original “Conceptual Future In-Basin Multipurpose Project” in Section 4.6.2



South Platte Regional Opportunities Working Group (SPROWG) advanced the SPBIP concept and developed the initial regional water project

South Platte BIP Phase 2

Dec 2013 – April 2015

June 2015 – May 2018

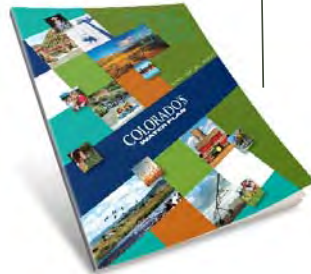
Date TBD

May 2013 – Nov 2015

Jan 2017 – Dec 2017

June 2018 – Oct 2018

Mar 2019 – Mar 2020



Colorado's Water Plan voiced the need for storage and collaborative projects



South Platte Storage Study (SPSS) identified potential South Platte River storage projects



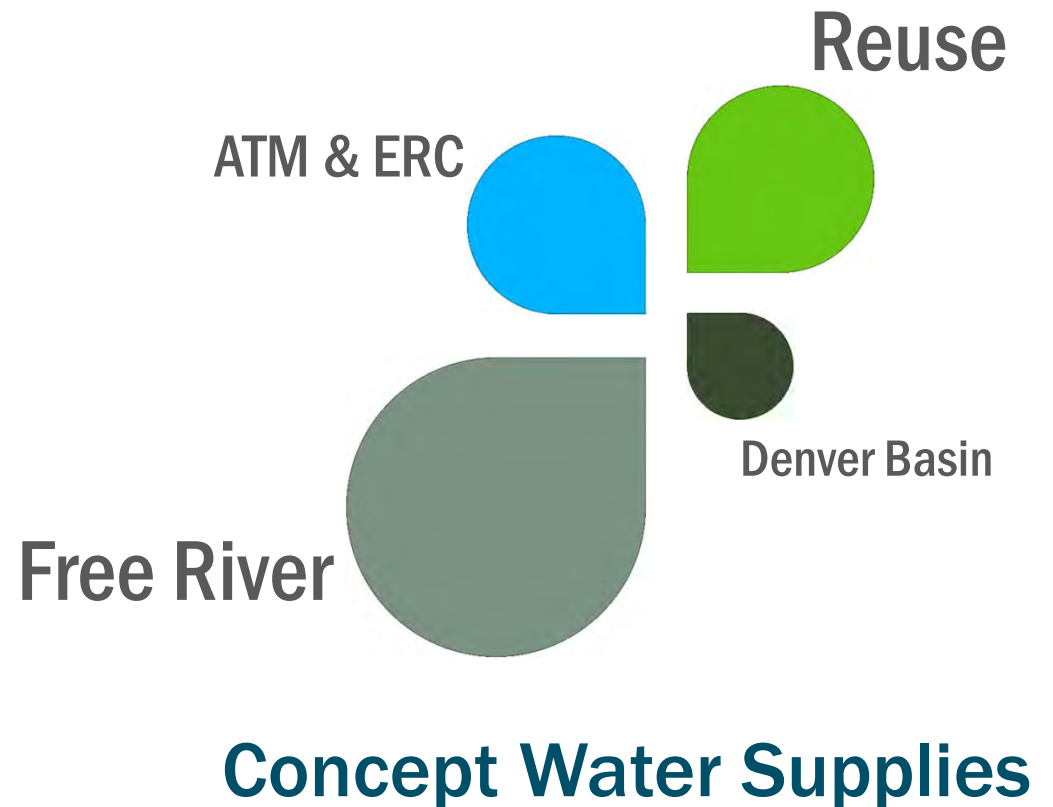
SPROWG Task Force developed scope of study and grant application for feasibility study



SPROWG Feasibility Study will conduct outreach, explore organizational alternatives, and refine the concept

Initial Concept Evaluation

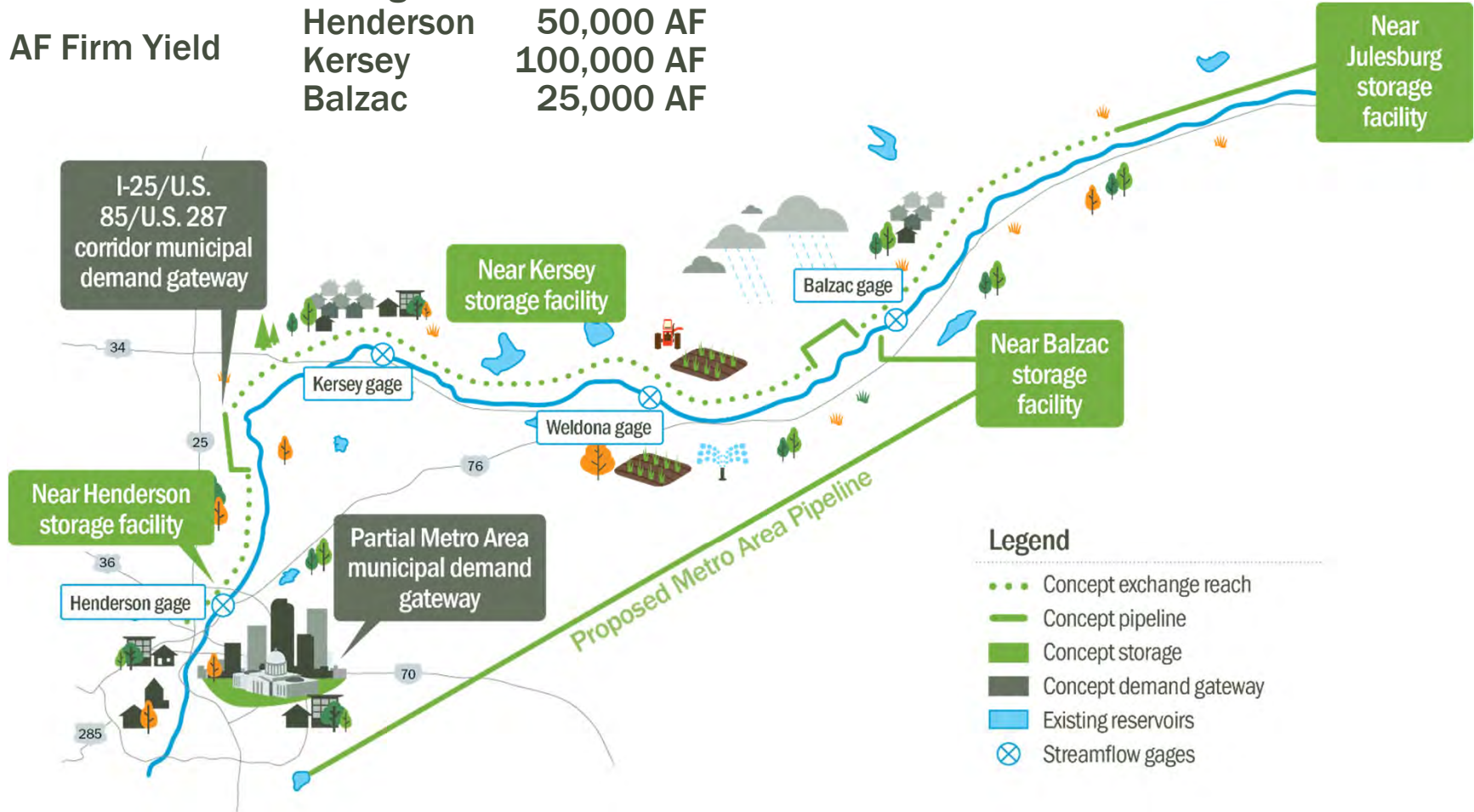
- Initially performed high-level analyses with reservoirs operating independently
- Gradually incorporated components to maximize use of water supplies:
 - Conjunctive reservoir operations
 - Additional infrastructure
 - Enhanced exchange capacity



Initial concept evaluation results:

50,000 AF Firm Yield

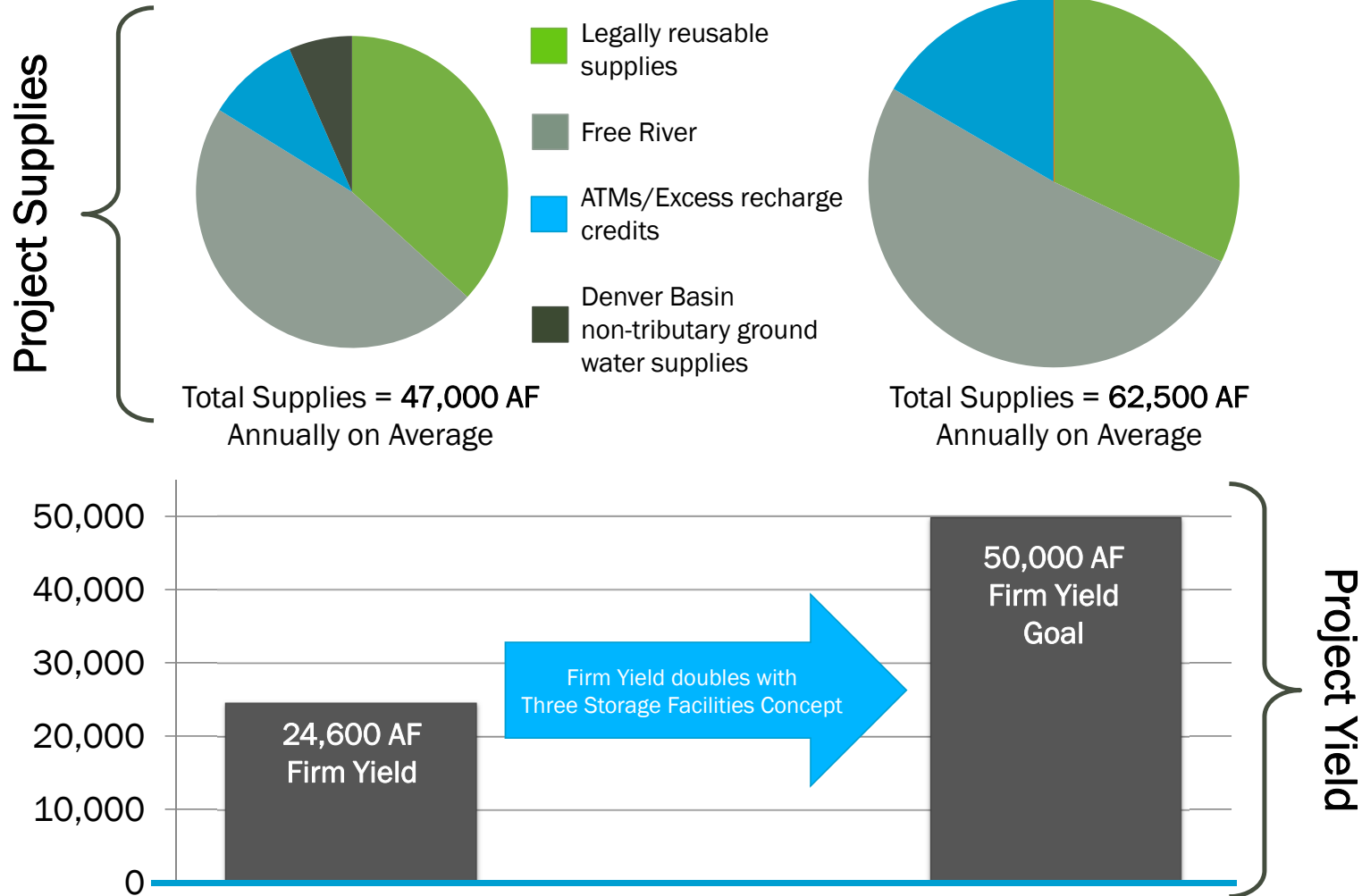
Storage:	
Henderson	50,000 AF
Kersey	100,000 AF
Balzac	25,000 AF



- Legend**
- Concept exchange reach
 - Concept pipeline
 - Concept storage
 - Concept demand gateway
 - Existing reservoirs
 - ⊗ Streamflow gages

Single Storage Facility Concept

Three Storage Facilities Concept



While communities in the South Platte River Basin continue to make great strides in meeting future water demands through aggressive conservation measures, a need remains for additional supplies.

Project Urgency and Necessity

- Basin population expected to grow to around **6 million** by the year **2050**
- Projected **M&I water supply gap** by 2050 is **365,000 acre-feet annually**
- Water is needed for **agriculture**
- Water is needed for **environment and recreation**
- Projected water **needs exceed water supplies**, even with increased conservation
- **Water is periodically available** for future use
 - Almost 300,000 acre-feet per year has been available in recent years
- SPROWG is **not an alternative for existing or planned projects.**

SPROWG is studying ways to meet future needs by strategically managing our existing supplies

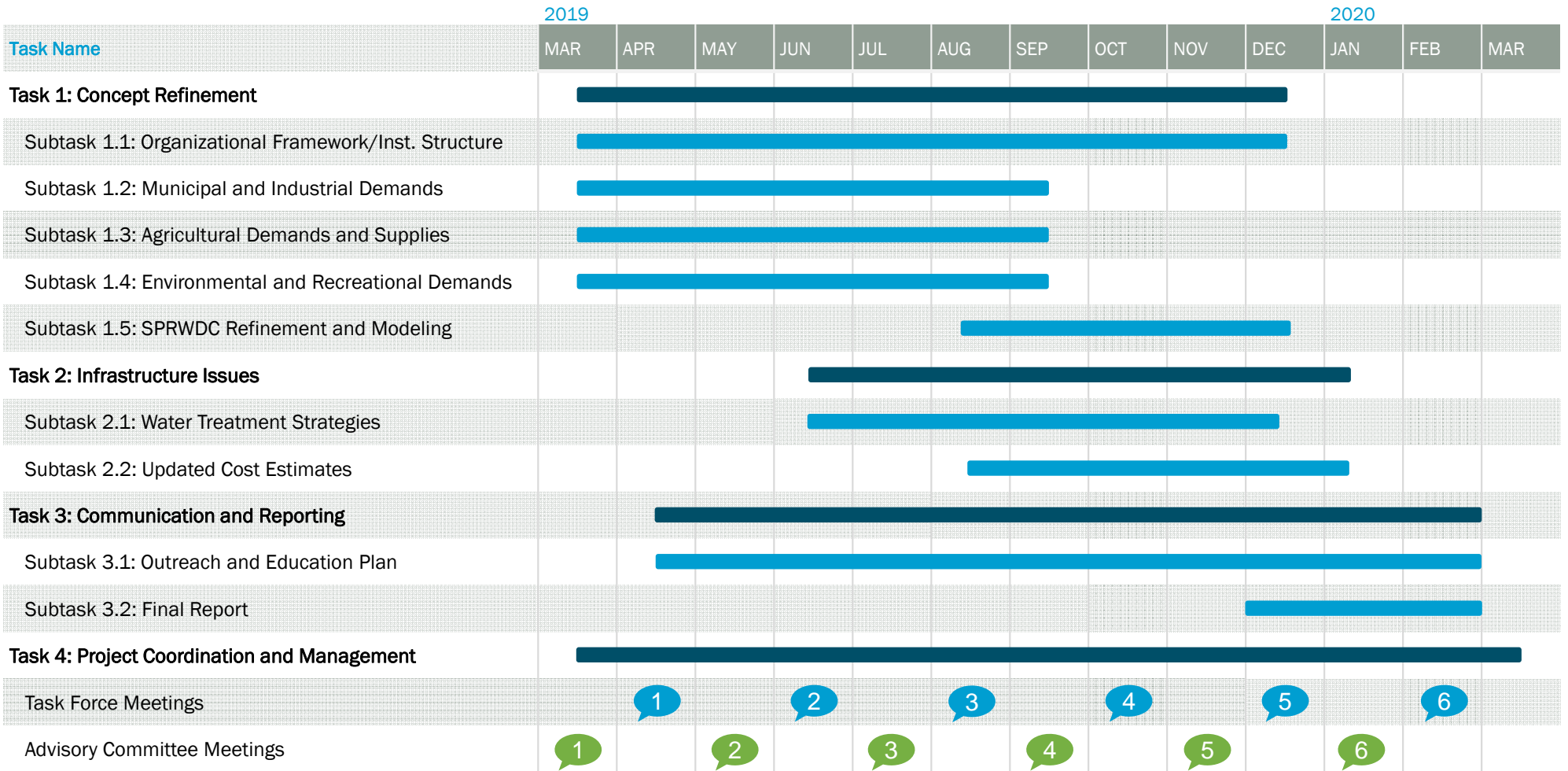
Potential Benefits to Environment and Recreation Opportunities

- A regional approach using multiple sources of supply and operationally-linked infrastructure to maximize benefit and share costs
- Potentially **175,000 acre-feet of new storage** (and maybe more)
 - Opportunities for recreation
 - Creation or enhancement of wetland and waterfowl habitat
 - Operational flexibility to maintain and enhance environmental resources
- Infrastructure to enhance ATM feasibility and **reduce buy and dry**
- Improved efficiency of water use by making use of reusable water from project participants and **reducing reliance on non-renewable water resources**
- Multi-objective approach to water resource management

The SPROWG feasibility study is the next step in evaluating solutions to meet the gap

Study Components

- Stakeholders include **agricultural, municipal/industrial, environmental and recreational** interests
- Builds on **previous studies**
- Will evaluate **ways to fund, administer, and operate** a new project
- **Will seek feedback** from stakeholders and refine the concept
- **Multiple ways to collaborate** and participate
 - Task Force
 - Survey participation
 - Outreach meetings



Guiding Principles



Principles describing what SPROWG *IS*

The Guiding Principles describe the framework for developing the SPROWG concept. The Principles may be modified as the project progresses.

Guiding Principles are not presented in any specific order or priority and are paraphrased. See handout for full text.

1. SPROWG will advance the goals of the **South Platte/Metro Basin Implementation Plan (BIP) and Colorado's Water Plan**.
2. SPROWG intends to provide at least **50,000 acre-feet of yield** to meet part of the projected municipal and industrial water supply project gap in the South Platte basin. **A significant portion of this yield is targeted for smaller but rapidly growing communities between Denver and Greeley and also larger communities in the Denver Metro area and northern Colorado.** The project will also explore providing supplies to smaller communities east of Greeley.
3. SPROWG intends to meet a **portion of the agricultural gap**.
4. SPROWG will identify and incorporate **strategies to address environmental and recreational needs**.

Principles describing what SPROWG *IS*

The Guiding Principles describe the framework for developing the SPROWG concept. The Principles may be modified as the project progresses.

Guiding Principles are not presented in any specific order or priority and are paraphrased. See handout for full text.

5. SPROWG intends to **enhance the ability to conduct alternative water transfers**, thus reducing the need for traditional buy-and-dry transfers.
6. SPROWG will utilize different **sources of water** available in the South Platte basin and manage them conjunctively to achieve an overall reliable yield beyond what an individual source could produce.
7. SPROWG is intended to help water supply organizations and water users **maximize the use of in-basin supplies**.
8. SPROWG intends to improve integration of **water quality** and quantity planning and management activities.

Principles describing what SPROWG *IS NOT*

9. SPROWG is **not** intended to be **a substitute for existing or planned projects**.
10. SPROWG is **not** intended to be used to deliver water developed from the **permanent dry up of irrigated lands** in the South Platte basin.
11. SPROWG is **not** intended to **store supplies** from an existing or new **transmountain diversion project** (though it will provide a means to utilize unused reusable return flows from transmountain diversions).

The Guiding Principles describe the framework for developing the SPROWG concept. The Principles may be modified as the project progresses.

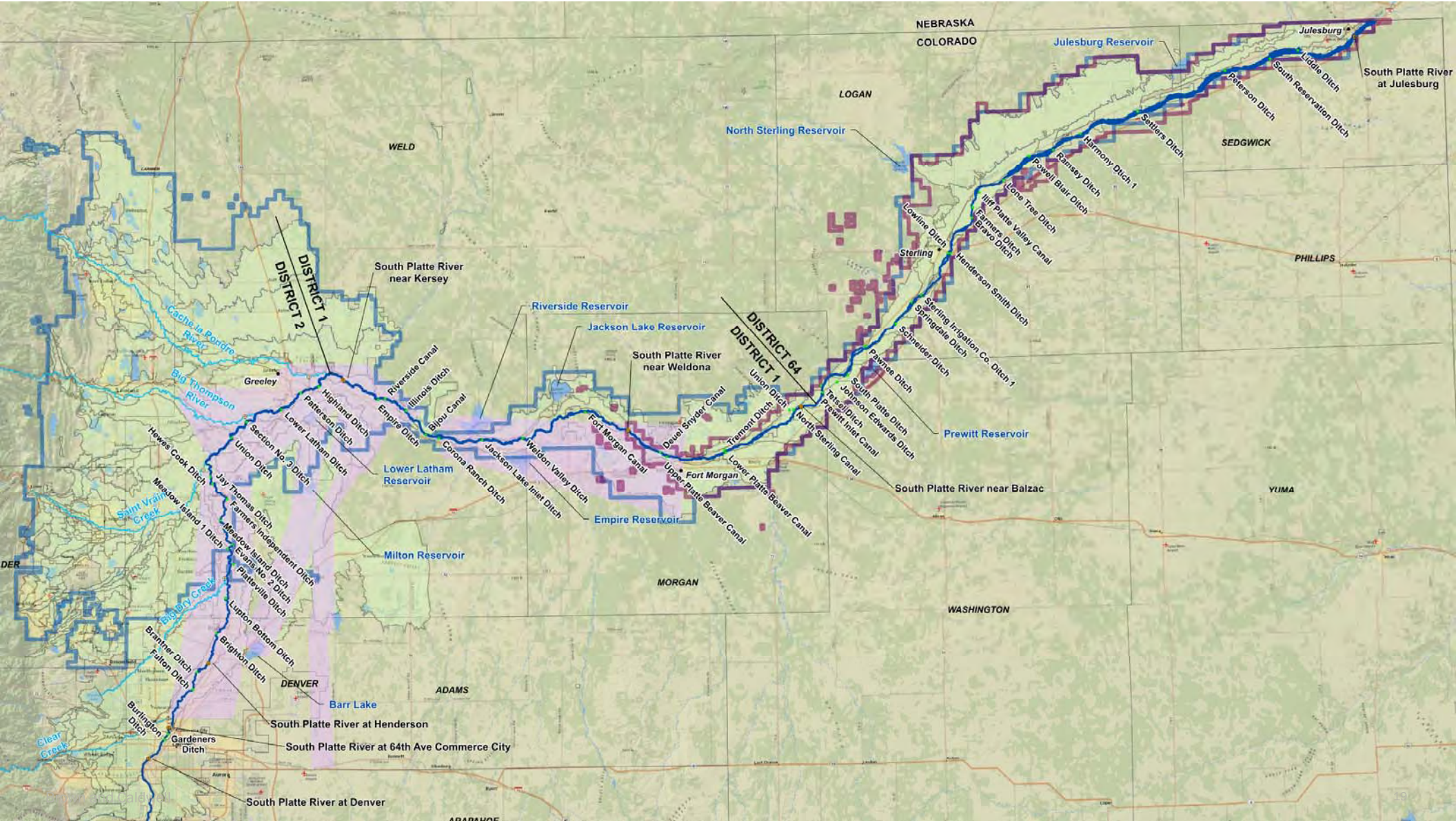
Guiding Principles are not presented in any specific order or priority and are paraphrased. See handout for full text.



Recreational & Environmental Water Needs

Recreational and Environmental Water Needs

- How do you think recreational and/or environmental needs could be maintained or enhanced from this project?
- How do you think this project could impact recreational and/or environmental needs?
- Do you know of specific recreational or environmental water needs (in terms of amount and location) that SPROWG should consider?
- Are there aspects of this project that should change to make it more attractive to recreational or environmental interests?
- Is there data that needs to be collected now (that is not already available) so to evaluate impact on recreation or the environment?



Additional Project Considerations



SPROWG and the PRRIP

PRRIP

- 2007 agreement between governors of Colorado, Nebraska, Wyoming, and the Secretary of Interior.
- Program stakeholders include water users and NGOs, including the Nature Conservancy and Audubon Society
- The Program provides ESA compliance for existing and new water user in the Platte River basin for participants of SPWRAP, while simultaneously supporting the recovery of four threatened and endangered species in Nebraska.
- Compliance with the Program is the responsibility of the State of CO
- SPWRAP assists the State in compliance with the Program
- New water-related activities may be covered by Colorado's Plan (SPWRAP) if the project
 - a) Is operated on behalf of Colorado water users (water user is a member of SPWRAP)
 - b) Does not involve a major on-stream reservoir (> 2,000 AF) located on the mainstem of the SPR downstream of Denver
 - c) Is not a hydropower diversion/return project anywhere downstream of Denver, and
 - d) Is within the average annual water supply of 98,010 AF to serve Colorado's population increase during February through July
- If an entity is not covered by SPWRAP they must comply with Section 7 of the ESA, develop a stand-alone biological opinion, and address effects associated with the individual project.
- New planned projects (having a federal nexus) that are driven by population growth would add to Colorado's replacement requirements under PRRIP

Governance Structure



Structural Organization Questions

Goal of Questions: Solicit input on criteria for a new organization that would eventually lead the project development, implementation, and management of a regional collaborative water project.

Topics Covered:

- Ranking of importance of organizational structure characteristics
 - i.e., Tax status, How revenue is generated, Type of governing board, Membership, Staffing
- Type of organizational structure your organization would be willing to support
- Preference for types of governing board
- Preference for how capital could be raised
- Preference for how operating expenses could be collected
- Preference for how organization is staffed
- Preference for ownership of assets
- Preference for distribution of profits

Rank the following organizational structure characteristics in order of importance to your organization. (1 = most important; 9 = least important)

- Tax Status (e.g., Government/Tax-exempt/Taxable)
- Available methods for generating revenue (taxes/member assessments/grants and loans/investors)
- Type of governing board (elected/appointed/appointed/volunteer)
- Opportunities for membership (cities/counties/districts/for-profit organizations, non-profits)
- Capability of expansion (add new members/add new project components)
- Method of staffing (own employees/contractors/shared by participants)
- Ownership of assets (by organization/by members)
- Equity ownership in entity
- Other

What organizational structure would your organization be willing to support? (select all that apply)

- New governmental entity
- Existing governmental entity
- New for-profit private entity
- New non-profit private entity
- Intergovernmental Agreement - Cost Sharing
- Other (please specify)

Which **active/direct participants** could your organization support including in an organizational structure? (select all that apply)

- Municipalities
- County Government
- State Government
- Special Water Districts
- Conservancy Districts
- Conservation Districts
- For-Profit Organizations
- Non-Profit Organizations
- Industrial Water Users
- Private Investors
- Other (please specify)

Which **passive/indirect participants** could your organization support including in an organizational structure? (select all that apply)

- Municipalities
- County Government
- Special Water Districts
- Conservancy Districts
- Conservation Districts
- For-Profit Organizations
- Non-Profit Organizations
- Industrial Water Users
- Private Investors
- Other (please specify)

Which type(s) of governing boards could your organization support for an organizational structure? (select all that apply)

- Elected by voters in benefitting areas
- Appointed by elected representatives of participating entities
- Volunteer
- Weighted voting of all participants based on project ownership or investment
- Equal voting of all participants
- Other (please specify)

What options for raising capital could your organization support? (select all that apply)

- Mill levy or other taxing instrument
- Member assessments
- Grants
- Federal/State Loans
- Private Loans
- Equity investment by participants
- Outside investors
- Other (please specify)

What options for collection of operating expenses could your organization support? (select all that apply)

- Assessed based on Participants' pro-rata share of project based on investment/anticipated benefit/use
- Tiered dues structure based on constituent base
- Tiered dues structure based on percent of project benefit (e.g. amount of storage, capacity in pipeline)
- Revenue generated from operations/deliveries
- Other (please specify)

What options for staffing could your organization support? (select all that apply)

- Hired directly by the organization (i.e., employees)
- Hired as independent contractors
- Outside consultants
- Staff sharing between participating entities
- Other (please specify)

Who would your organization support holding ownership of assets acquired or built under the organization? (select all that apply)

- Organization
- Organization with each member holding a pro-rata share based on use of facilities/services
- Organization with members holding a percentage ownership according to investment in project
- Participating entities
- Other (please specify)

What option for distribution of potential profits could your organization support? (select all that apply)

- Distributed to participants based on equity ownership in entity
- Distributed to participants based on use of an entity's facilities or services
- No distributions, all profits held by entity or invested in entity
- Other (please specify)

Communications



Communication Questions

- How concerned are your members and stakeholders about the projected water supply gap in the South Platte River Basin?
- What are the perceptions of your members and stakeholders regarding the SPROWG concept and its ability to supply the needs of cities, agriculture, recreation, and the environment? Are they aware of the SPROWG concept?
- What are the best ways to communicate about this study and its findings in your community and/or to your stakeholders?
- What entity or individual would you consider a trusted spokesperson about this project for your stakeholder group?



Thank you. Questions?

Contact Information:

Mary Presecan, E&R Technical Lead, Mary.Presecan@LREWater.com 303-455-9589

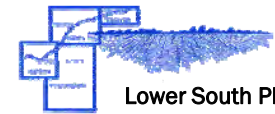
Matt Lindburg, Project Manager, MLindburg@brwncald.com 303.239.5456



Doug
Robotham

ENVIRONMENTAL AND RECREATIONAL OUTREACH MEETING #2

South Platte Regional Opportunities Water Group (SPROWG) Feasibility Study



Lower South Platte Water
Conservancy District

November 22, 2019



Meeting Agenda

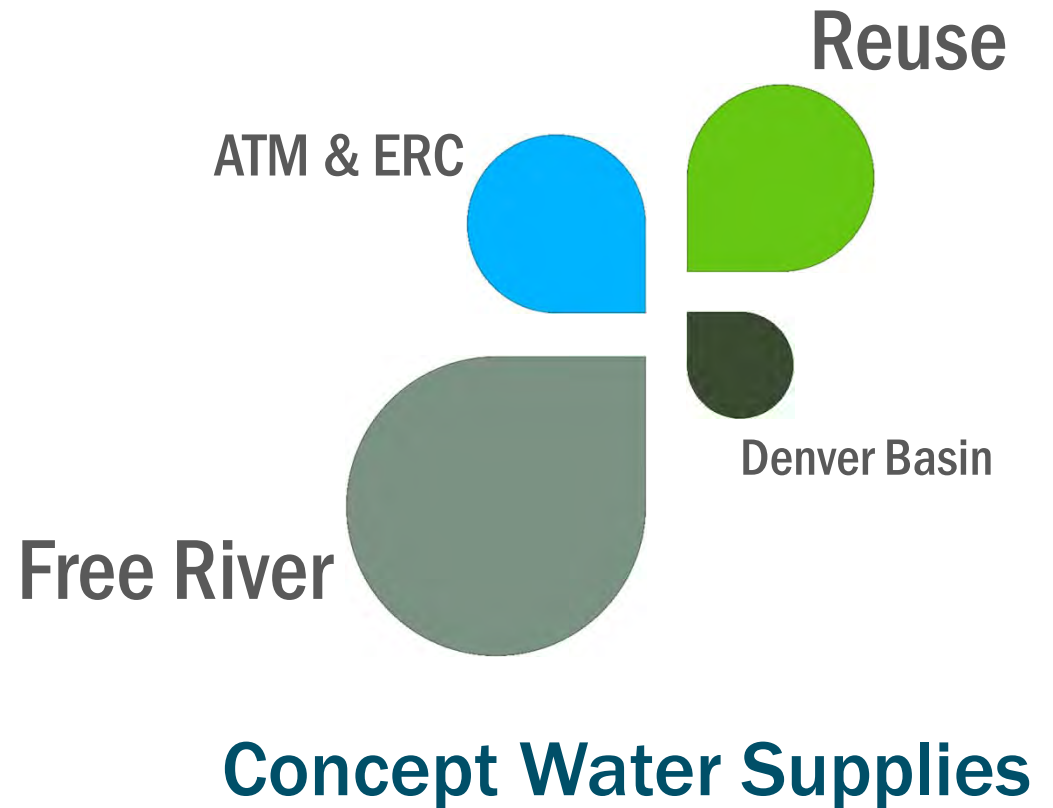
- Overview of SPROWG and M&I Survey Highlights
- Description of 4 Project Alternatives
- Discussion of Environmental and Recreation Opportunities

SPROWG Overview and M&I Survey Highlights



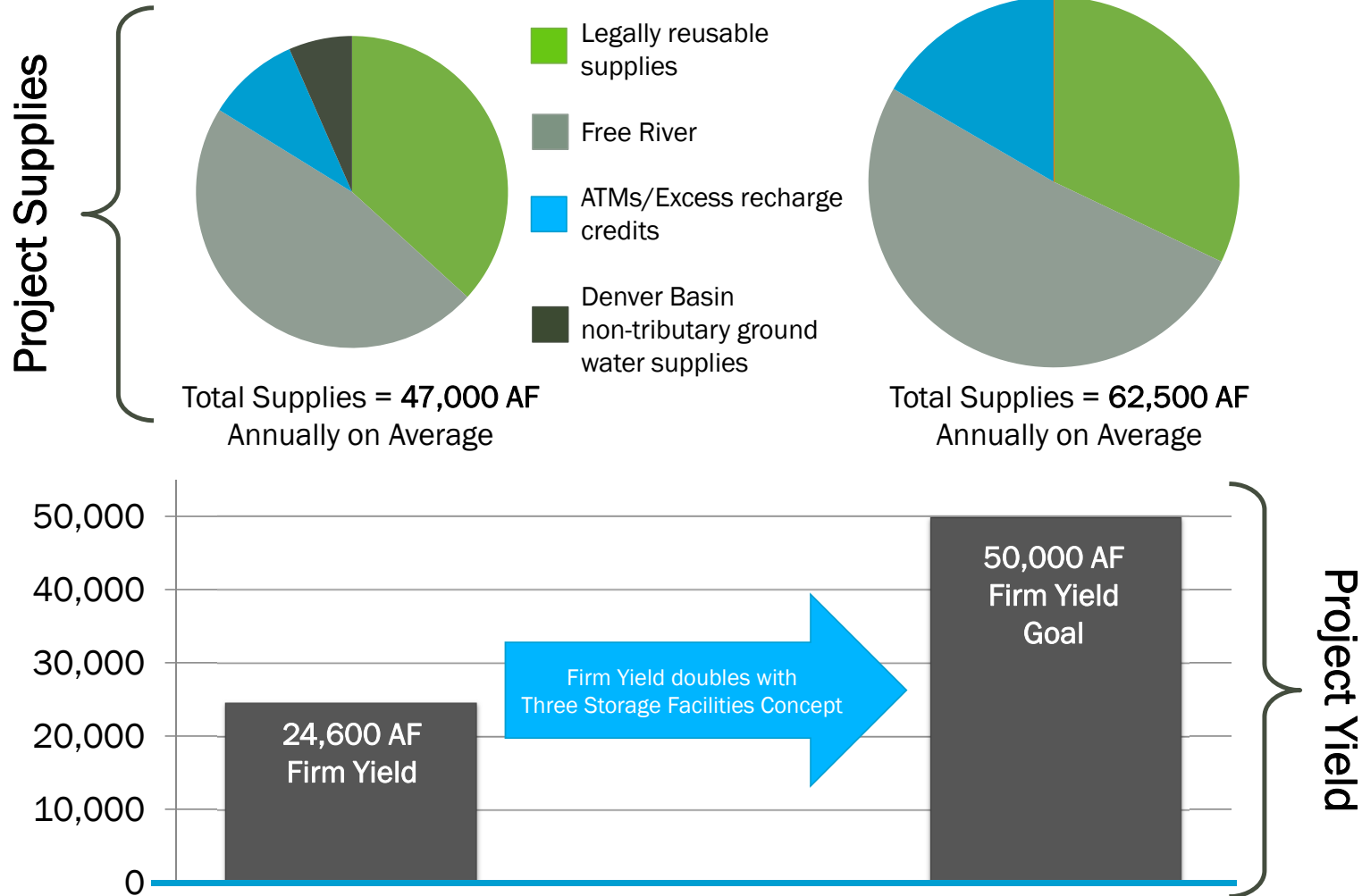
Key Components of SPROWG

- High level analysis with multiple reservoirs operating independently
- Utilizes a variety of available water sources
- Gradually incorporate components to maximize use of water supplies
 - Conjunctive reservoir operation
 - Additional infrastructure
 - Enhanced exchange capacity
- Consider elements to enhance opportunities for multi-use benefits



Single Storage Facility Concept

Three Storage Facilities Concept



While communities in the South Platte River Basin continue to make great strides in meeting future water demands through aggressive conservation measures, a need remains for additional supplies.

Project Urgency and Necessity

- Basin population expected to grow to around **6 million** by the year **2050**
- Projected **M&I water supply gap** by 2050 is **365,000 acre-feet annually**
- Water is needed for **agriculture**
- Water is needed for **environment and recreation**
- Projected water **needs exceed water supplies**, even with increased conservation
- **Water is periodically available** for future use
 - Almost 300,000 acre-feet per year has been available in recent years
- SPROWG is **not an alternative for existing or planned projects.**

SPROWG is studying ways to meet future needs by strategically managing our existing supplies

Potential Benefits to Environment and Recreation Opportunities

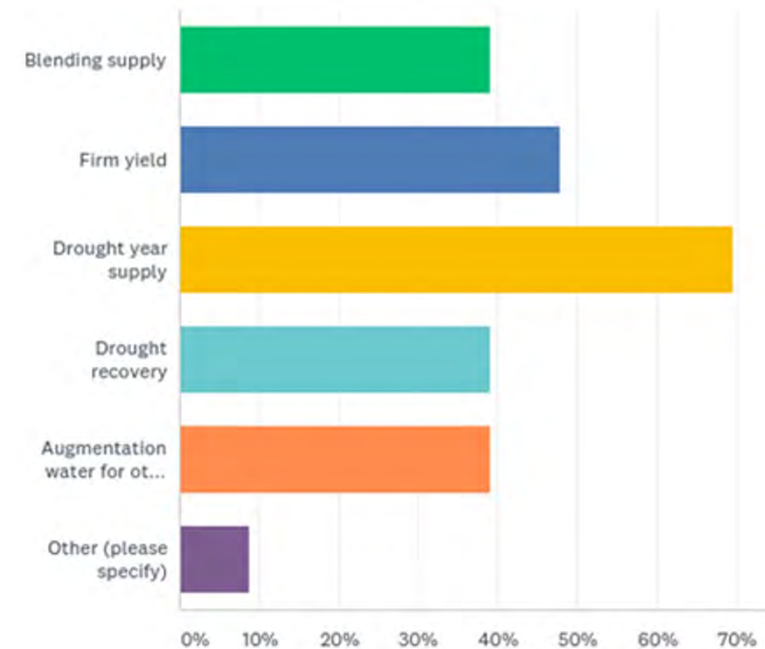
- A regional approach using multiple sources of supply and operationally-linked infrastructure to maximize benefit and share costs
- Potentially **175,000 acre-feet of new storage** (and maybe more)
 - Opportunities for recreation
 - Creation or enhancement of wetland and waterfowl habitat
 - Operational flexibility to maintain and enhance environmental resources
- Infrastructure to enhance ATM feasibility and **reduce buy and dry**
- Improved efficiency of water use by making use of reusable water from project participants and **reducing reliance on non-renewable water resources**
- Multi-objective approach to water resource management

After use of current supplies and supplies projected to be made available through IPPs, how much water supply gap does your organization project at build out?

Planning Region	Count	Low Estimate (AF/year)	High Estimate (AF/year)	Avg Yr Estimate (AF/year)
Metro	10	19,901	141,000	55,450
North Hot Zone	8	4,900	21,900	13,400
South Hot Zone	7	4,775	7,686	6,231
Lower South Platte	2	1,000	3,500	2,250
Industrial Water User	4	-	-	-
TOTAL	31	30,576	174,086	77,331

If your organization received water from a regional project, what would be the intended use? (Select all that apply)

Planning Region	Blending Supply	Firm yield	Drought Year Supply	Drought Recovery	Aug Water
Metro	2	6	8	5	3
North Hot Zone	2	2	4	3	2
South Hot Zone	4	3	5	2	2
Lower South Platte	1	1			1
Industrial Water User	1				2
Total	10	12	17	10	10



How much unused reusable supply does your organization have that can be stored, conveyed, and/or treated in a regional project?

Planning Region	Count	Avg Yr Estimate (AF/year)
Metro	10	41,075
North Hot Zone	8	6,340
South Hot Zone	7	3,400
Lower South Platte	2	650
Industrial Water User	4	9,300
TOTAL	31	60,765



Concept
Refinement and
Modeling

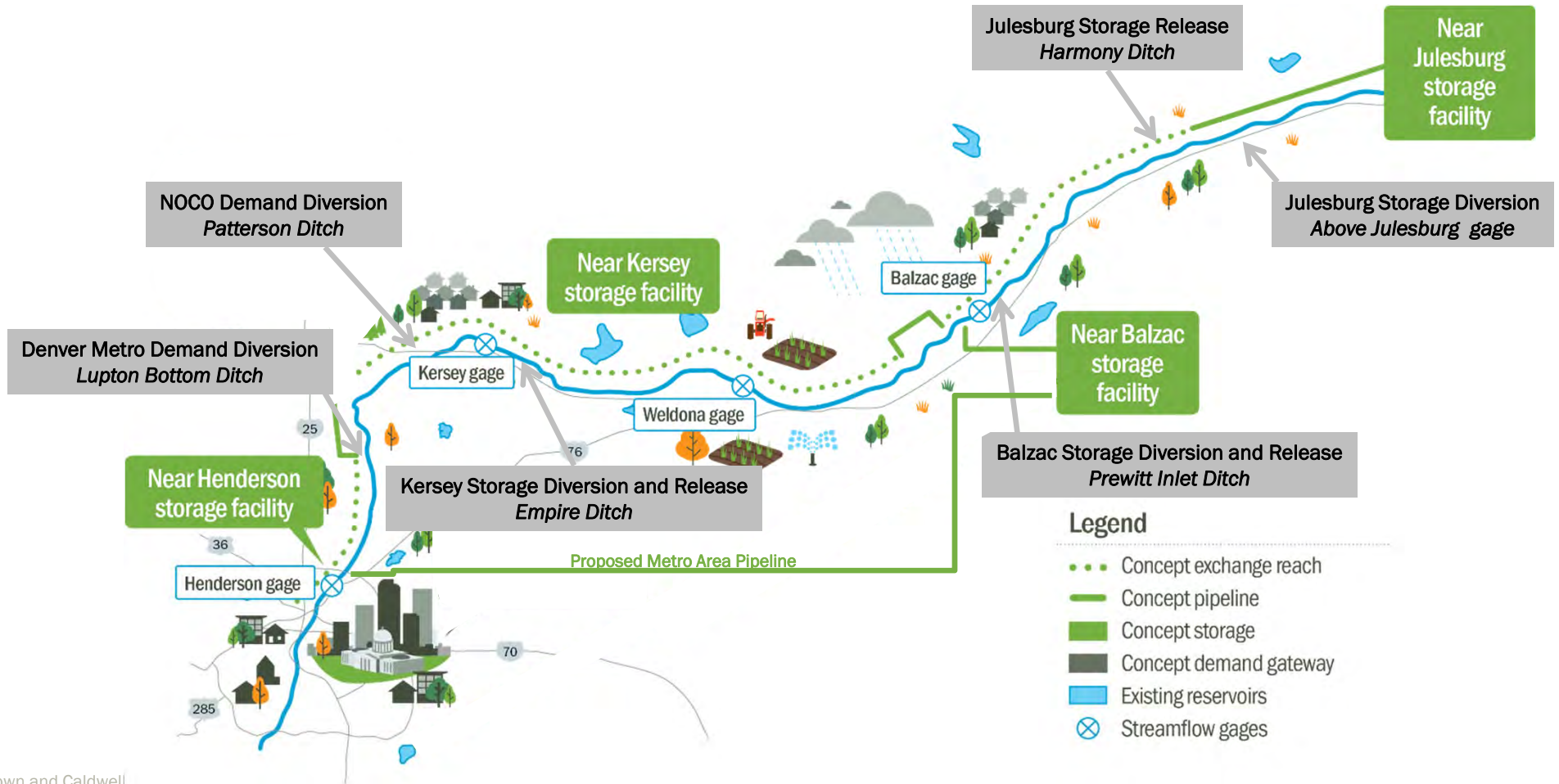
Environmental and Recreation Related Questions

- What are the environmental and recreation needs or opportunities that can be met by the Regional Concept alternative?
- What are the environmental and recreation impacts to be considered for the Regional Concept alternative?
- Are there environmental or recreation demands that can be addressed in the configuration, design, and construction of the Regional Concept alternative?
- Are there opportunities for collaboration that could result in minimizing environmental impacts, enhancing environmental and recreational benefits, and streamlining environmental permitting?

Modeling Considerations

- Reduction in exchange capacity based on SPSS analyses
 - Reduce exchange capacity by 300 cfs to account for conditional exchanges
- Other junior diversions removed from available flow include: Chatfield reallocation storage rights, NISP, and 90,000 AF of gravel pit storage near Henderson
- 40% of indoor water usage would be available for reuse by the project
- ATMs for drought recovery when reservoir storage is the lowest (30% of years)
- Meet at least 90% of municipal demands in all years
- Release water from Henderson storage, Kersey storage, and Balzac storage to agricultural users

Model Simulation Nodes

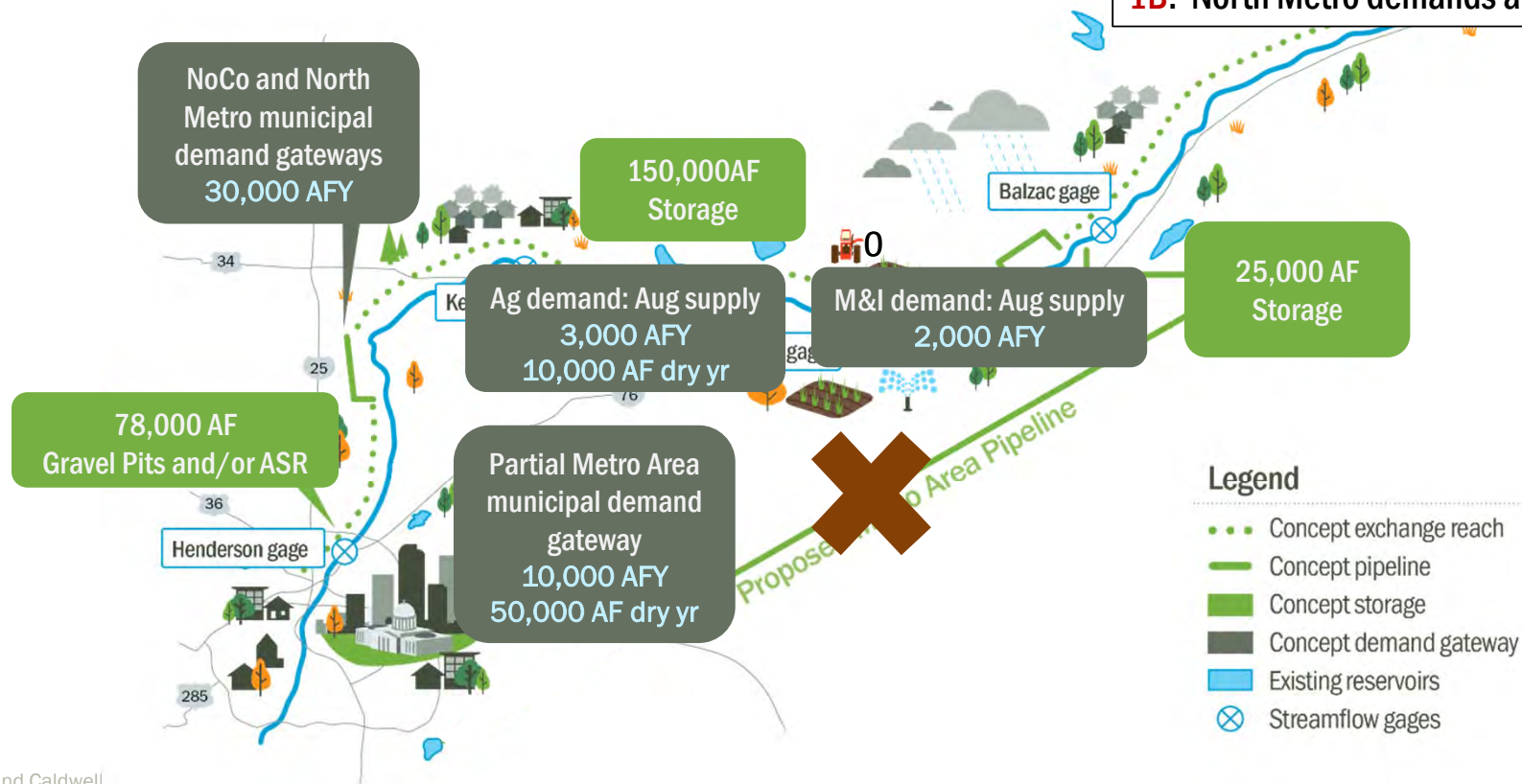


Alternative 1A: Refine the Initial Concept

Same performance objectives as initial Concept C.
Tailor demand characteristics based on outreach

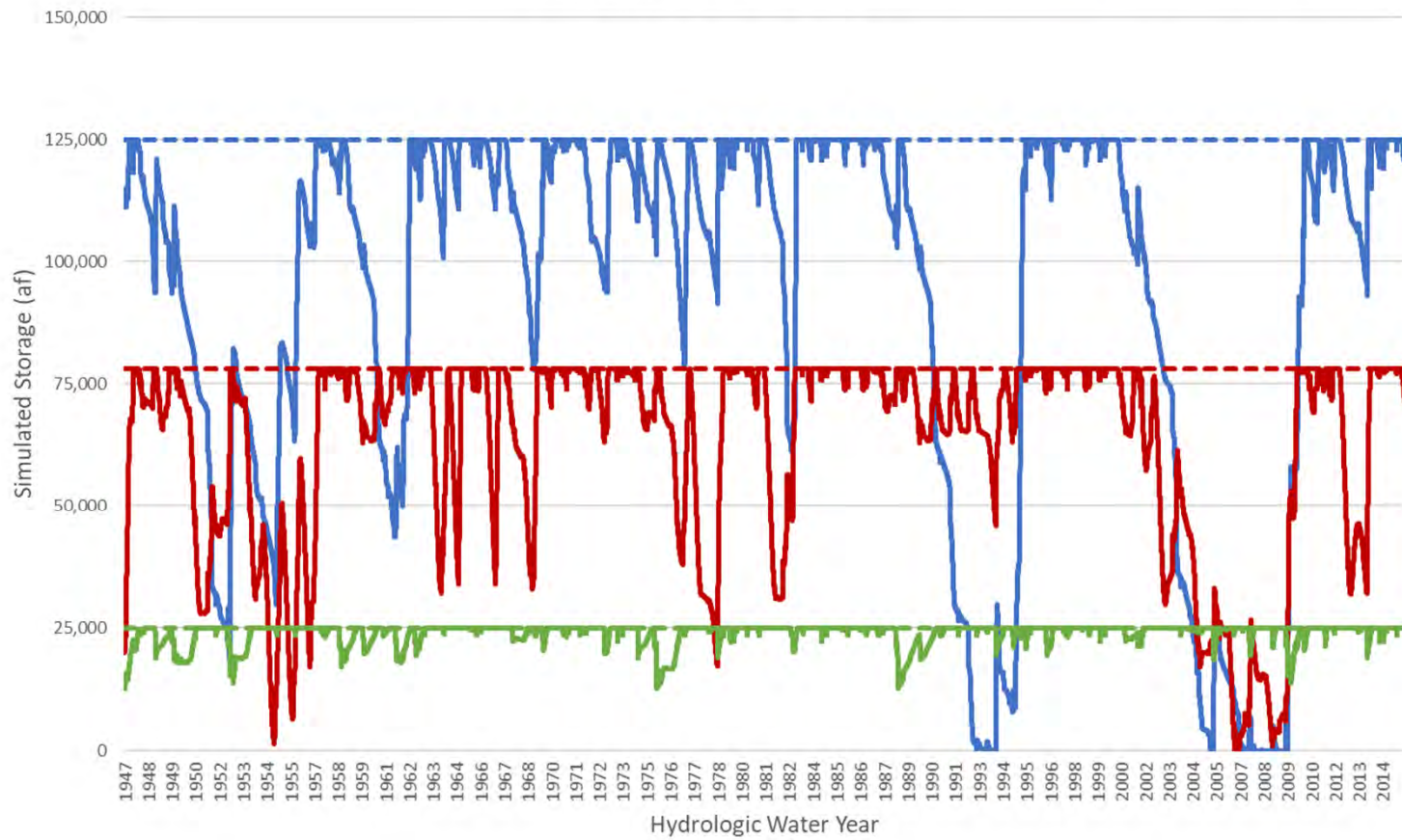
Variations on Alternative 1:

- 1A: North Metro demands at Walmart Hill
- 1B: North Metro demands at Metro Area gateway

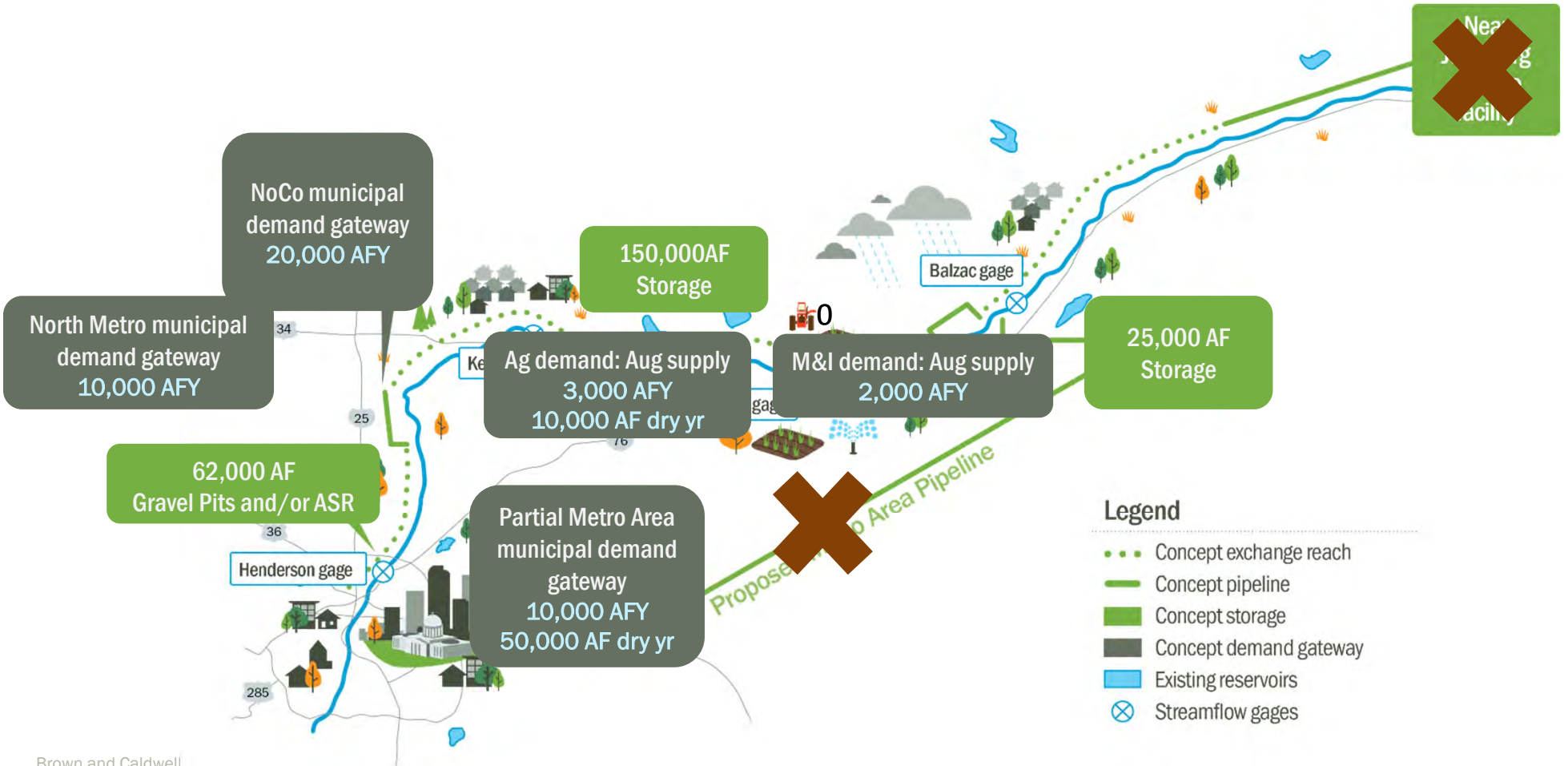


End-of-Day Storage
Alternative 1A: Refine the Initial Concept
NoCo and North Metro demand met at Walmart Hill
No Kersey-Henderson Pipeline

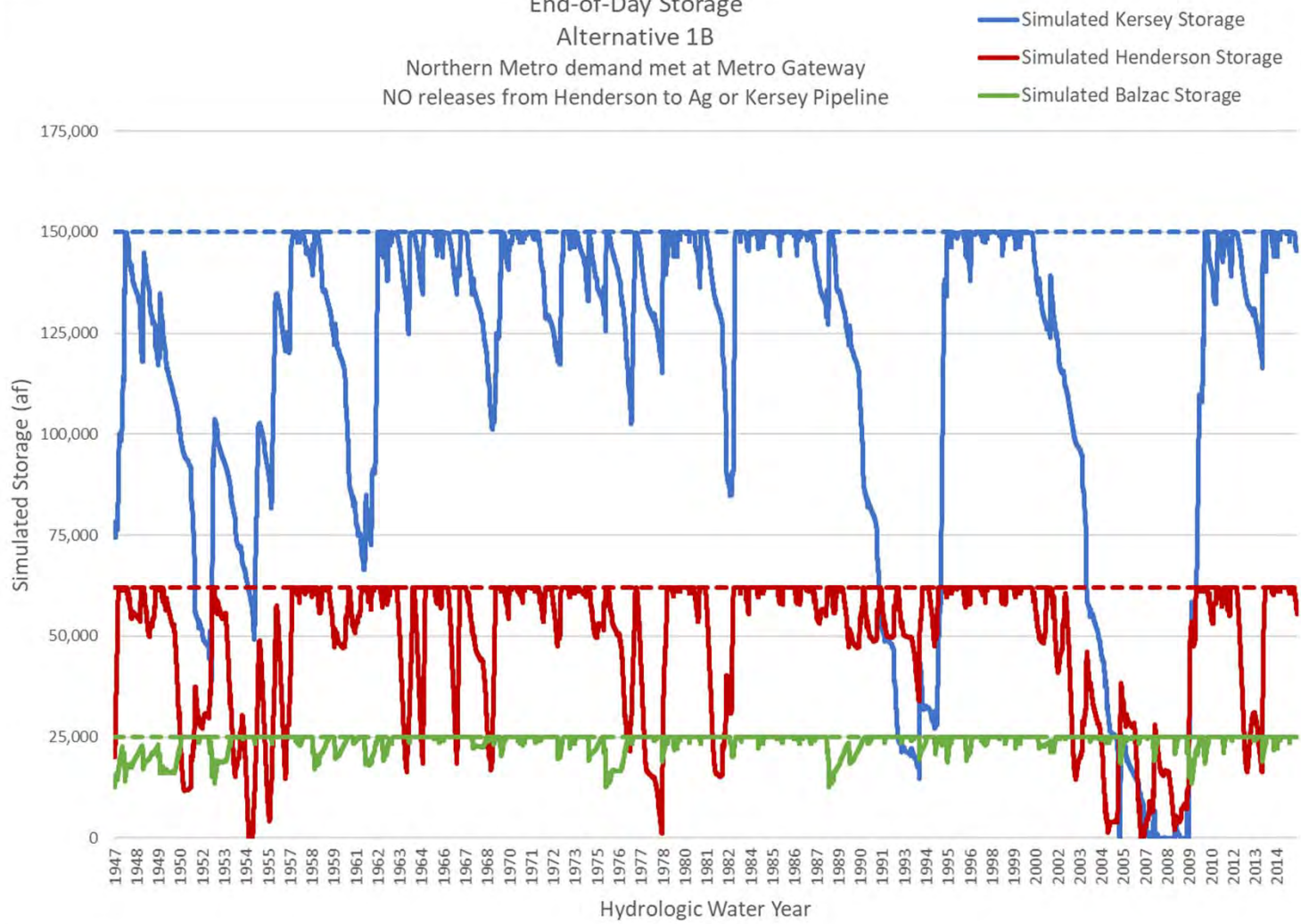
- Simulated Kersey Storage
- Simulated Henderson Storage
- Simulated Balzac Storage



Alternative 1B: Refine the Initial Concept



End-of-Day Storage
Alternative 1B
Northern Metro demand met at Metro Gateway
NO releases from Henderson to Ag or Kersey Pipeline

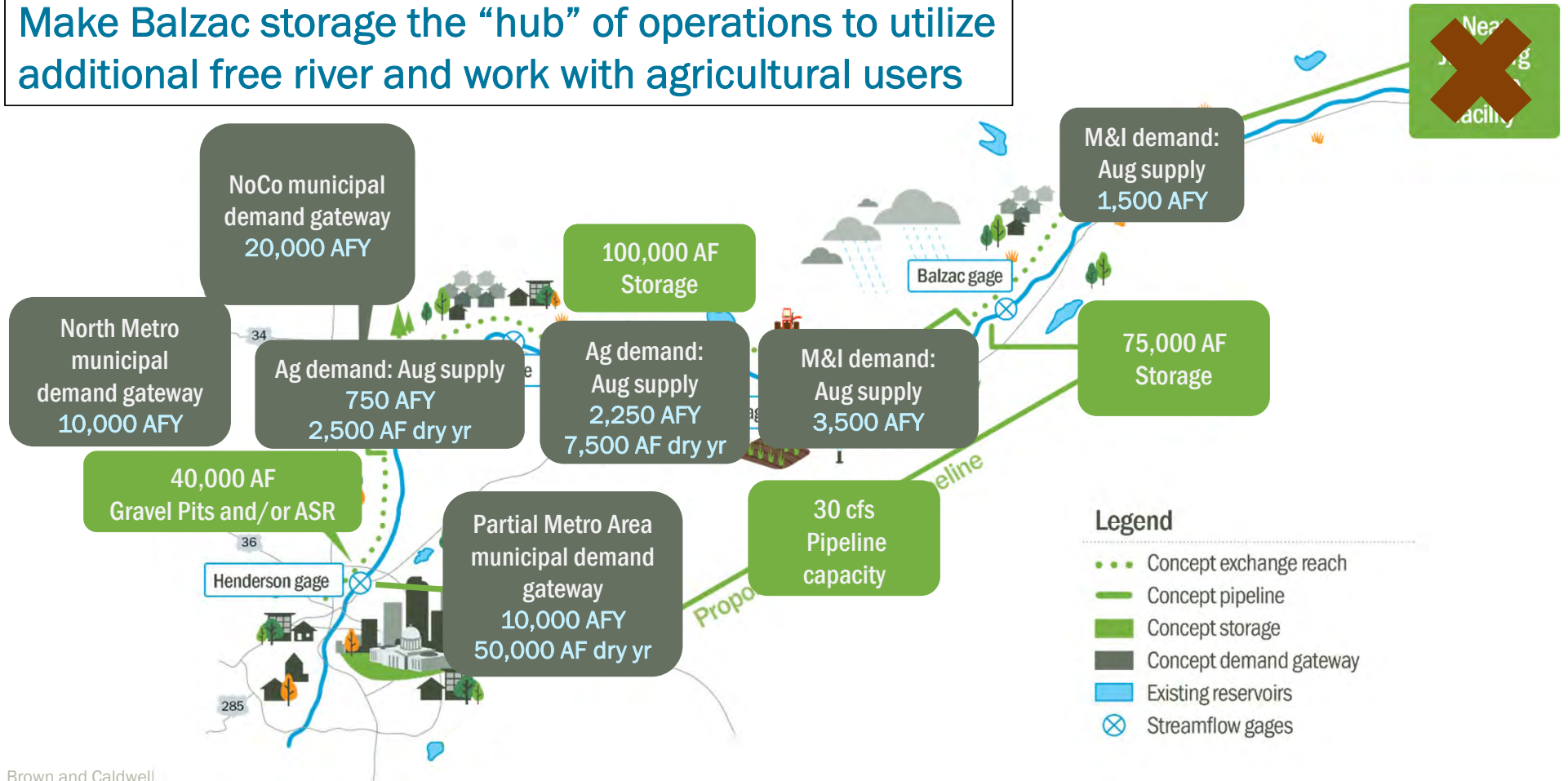


Alternative 1: Summary of Findings

- Alternative 1 modeling illuminate tradeoffs regarding the amount of flow left in river for existing conditional exchanges
 - More storage/supply needed at Henderson if exchange potential is reduced
 - A pipeline from Kersey to Henderson reduces Henderson storage needs
 - Adding releases from Henderson to Ag strains Henderson storage
- 1B (delivering more M&I at Denver Metro) reduces storage needs at Henderson
- Ag demands in WD 1 are almost always met, Henderson release helps to satisfy ag demand in WD 2

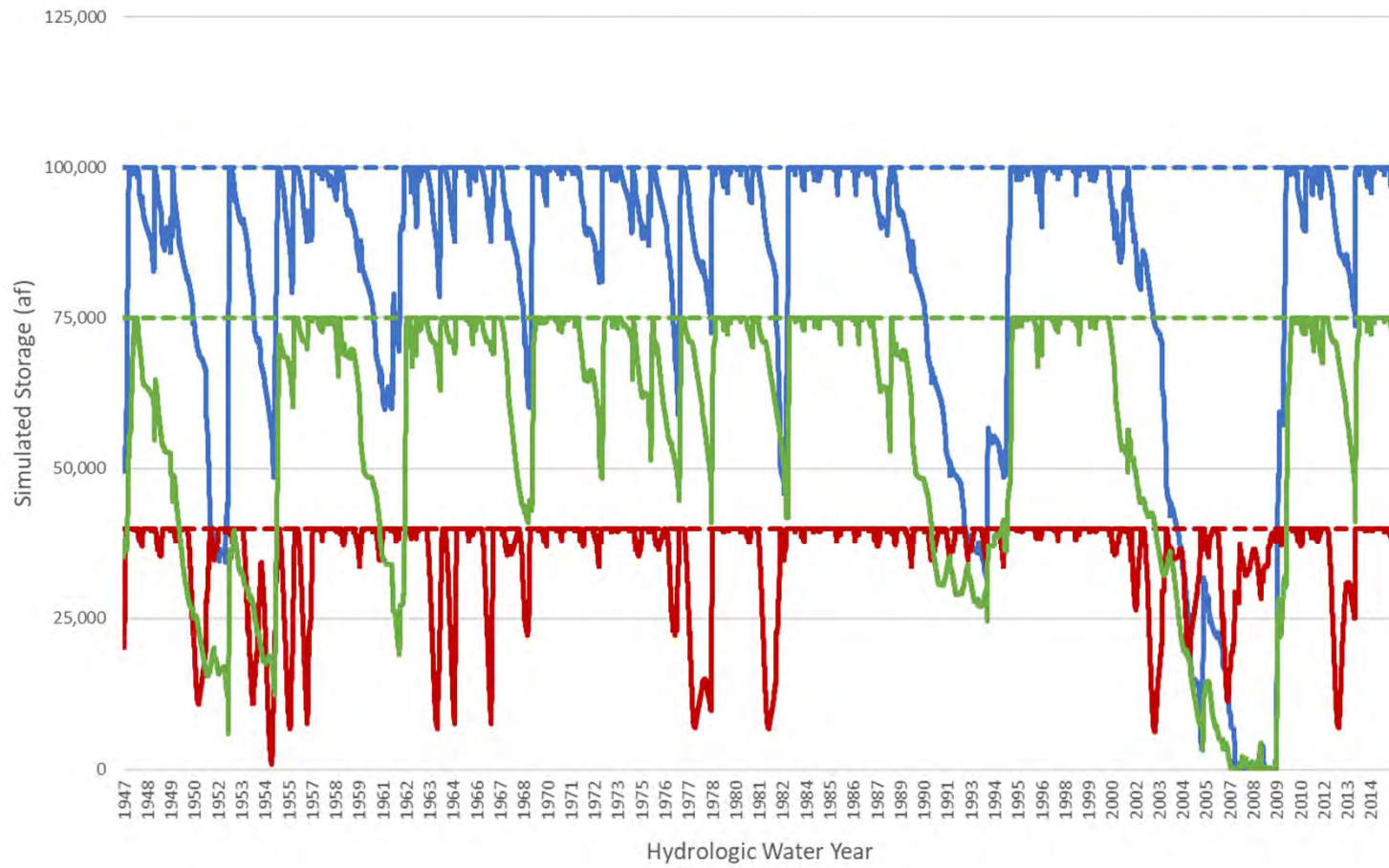
Alternative 2: Balzac First

Make Balzac storage the “hub” of operations to utilize additional free river and work with agricultural users



End-of-Day Storage
Alternative 2: Balzac First
Reduced Ag demands to match Alt 1
Henderson release to Ag demand

- Simulated Kersey Storage
- Simulated Henderson Storage
- Simulated Balzac Storage

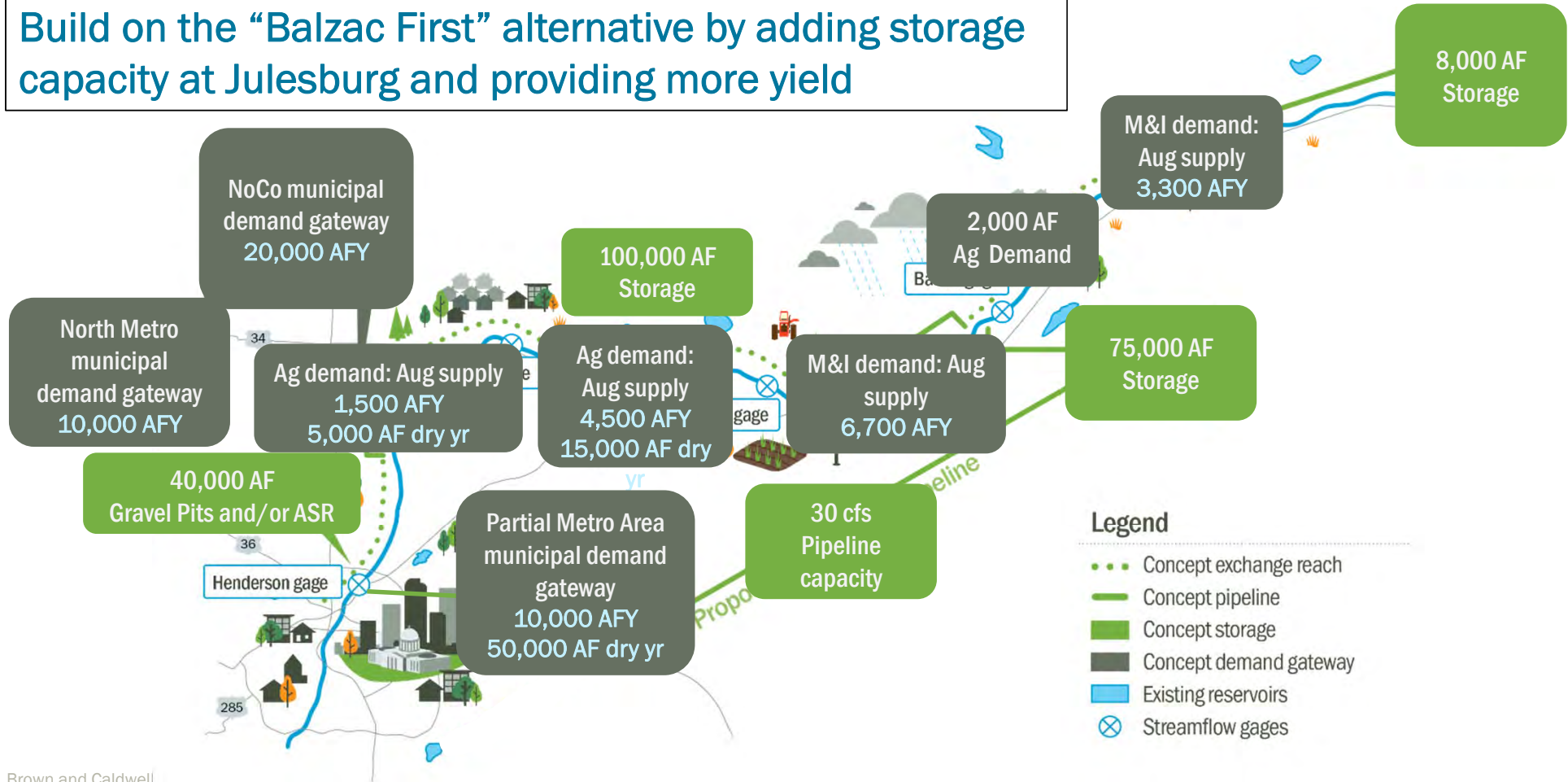


Alternative 2: Summary of Findings

- Less storage than Alternative 1, but 50,000 AF of storage shifted from Kersey to Balzac
- Tried modeling higher ag demands but this just cuts into muni demands and increased years that reservoirs go dry
- Nearly all municipal demand met all the time
- Exchange capacity issues somewhat relieved with Balzac pipeline but is still a limitation
- Ag demands WD 1 are almost always met, Henderson release helps meet demands in WD 2

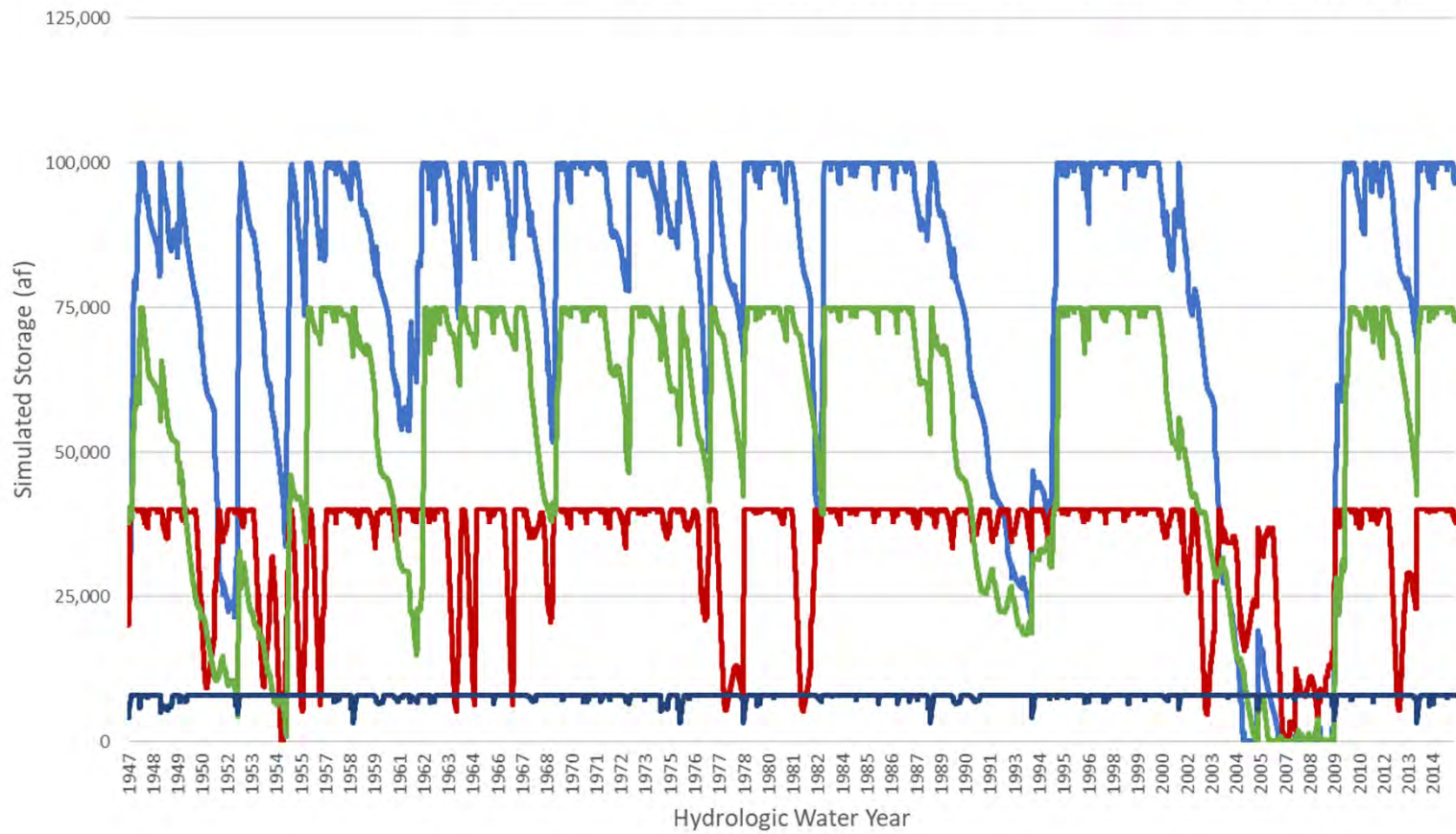
Alternative 3: Add Julesburg Storage

Build on the “Balzac First” alternative by adding storage capacity at Julesburg and providing more yield



End-of-Day Storage
 Alternative 3: Add Julesburg
 Balzac Pipeline at 30 cfs
 Increased Ag and EP demands from previous alternatives
 Releases from Henderson to meet WD 2 ag demands

- Simulated Kersey Storage
- Simulated Henderson Storage
- Simulated Balzac Storage
- Simulated Julesburg Storage

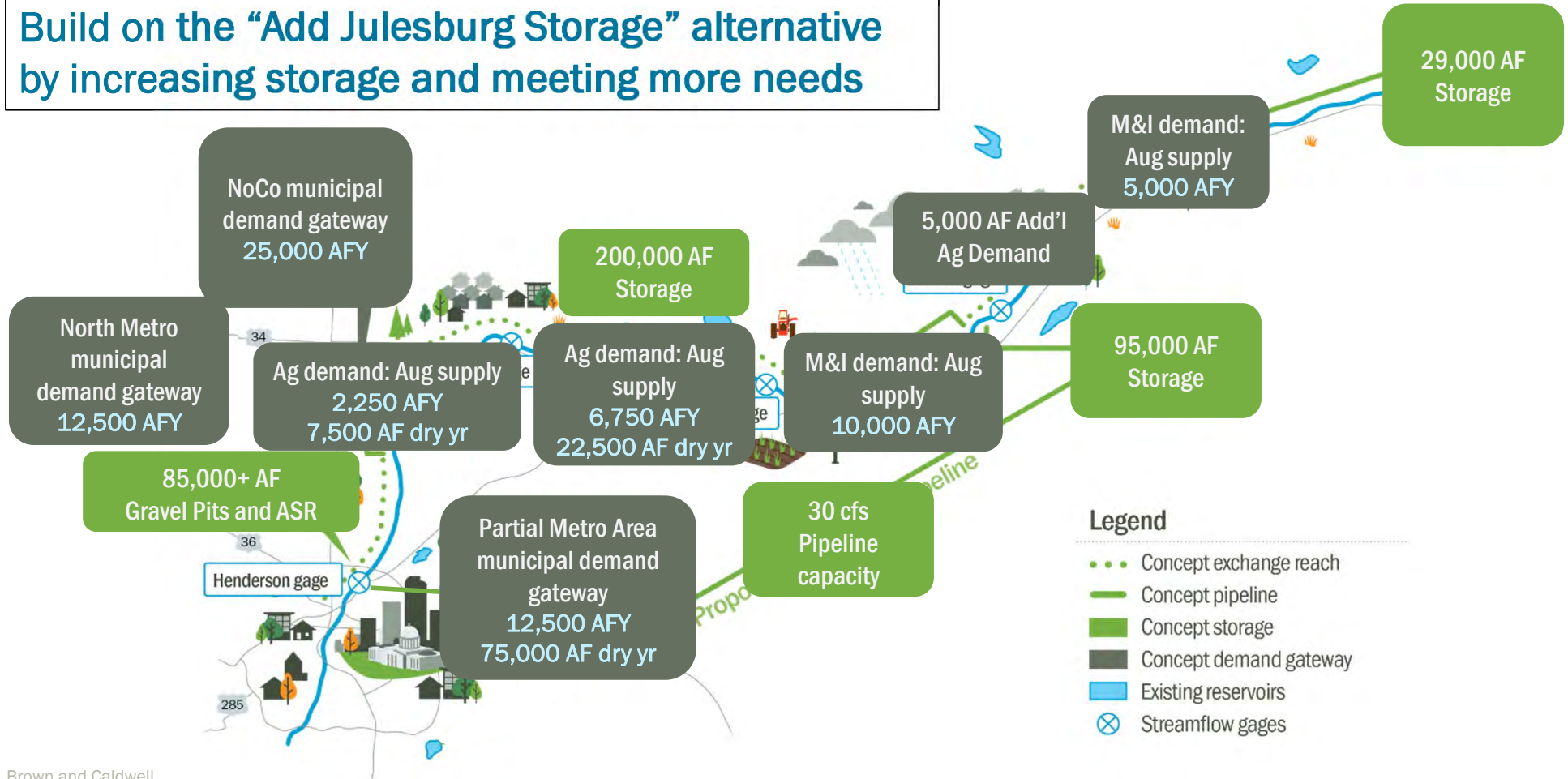


Alternative 3: Summary of Findings

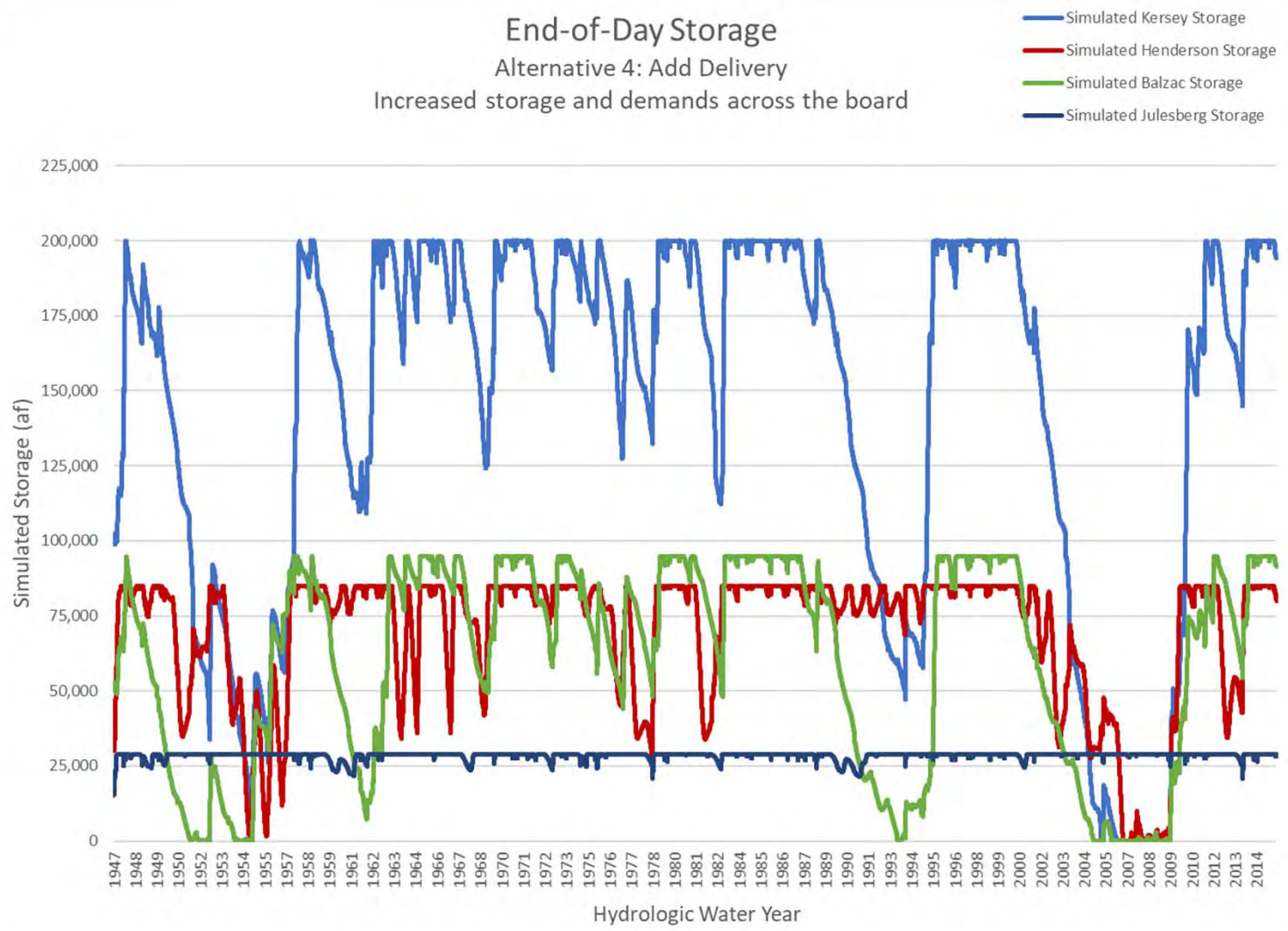
- Nearly all municipal demand met all the time
- Water is readily available for Julesburg-area reservoir and it remains full most of the time
 - Primarily used to meet local demands
- Balzac-area storage can meet more WD 1 demands when downstream demands met with Julesburg-area storage
- Ag demands WD 1 and 64 are almost always met, Henderson release to ag helps but slight impact to muni deliveries

Alternative 4: Additional Delivery

Build on the "Add Julesburg Storage" alternative by increasing storage and meeting more needs



End-of-Day Storage Alternative 4: Add Delivery Increased storage and demands across the board



Alternative 4: Summary of Findings

- Demands met nearly all of the time:
 - 50,000 AF in wet/average years on Front Range
 - 100,000 AF in dry years on Front Range (Only 85% met in 2008)
 - 15,000 AF in all years on the eastern plains
- Water is readily available for Julesburg-area reservoir and it remains full most of the time
 - Primarily used to meet local demands
- Ag demands WD 1 and 64 are almost always met, Henderson release helps to satisfy ag demands

Summary of Modeled Alternatives

	Alternative 1A (North Metro Demands at Walmart Hill)	Alternative 1B (North Metro Demands at Metro Area Gateway)	Alternative 2 (Balzac First)	Alternative 3 (Add Julesburg Storage)	Alternative 4 (Go Big)
Project Components - Storage & Pipeline					
Modeled Storage Volumes (AF)					
Henderson	78,000	62,000	40,000	40,000	85,000
Kersey	150,000	150,000	100,000	100,000	200,000
Balzac	25,000	25,000	75,000	75,000	95,000
Julesburg	none	none	none	8,000	29,000
Balzac to Henderson Pipeline	none	none	Yes - 30 cfs	Yes - 30 cfs	Yes - 30 cfs
Demands					
M&I Demand (avg yr/dry yr) (AF)					
Denver Metro	10,000/50,000	20,000/60,000	20,000/60,000	20,000/60,000	25,000/75,000
NOCO	30,000/30,000	20,000/20,000	20,000/20,000	20,000/20,000	25,000/25,000
Eastern Plains	2,000/2,000	2,000/2,000	5,000/5,000	10,000/10,000	15,000/15,000
Agricultural Demands (avg yr/dry yr) (AF)					
WD2	750/2,500	750/2,500	750/2,500	1,500/5,000	2,250/7,500
WD1	2,250/7,500	2,250/7,500	2,250/7,500	4,500/15,000	6,750/22,500
WD64	0	0	0	2,000/2,000	5,000/5,000

Environmental and Recreation Opportunities



Environmental and Recreation Related Questions

- What are the E/R needs or opportunities that can be met by the Regional Concept alternative?
- What are the E/R impacts to be considered for the Regional Concept alternative?
- Are there E/R demands that can be addressed in the configuration, design, and construction of the Regional Concept alternative?
- Are there opportunities for collaboration that could result in minimizing environmental impacts, enhancing environmental and recreational benefits, and streamlining environmental permitting?
- What recommendations do you have for working with E/R stakeholders in subsequent phases of SPROWG?



Thank you. Questions?

Contact Information:

Mary Presecan, E&R Technical Lead, Mary.Presecan@LREWater.com 303-455-9589

Matt Lindburg, Project Manager, MLindburg@brwncald.com 303.239.5456

Attachment J: Detailed Notes from Environmental and Recreation Outreach Meeting



Meeting Minutes

Prepared for: Lower South Platte Water Conservancy District

Project Title: South Platte Regional Opportunities Water Group Feasibility Study

Purpose of Meeting: Outreach with Environmental and Recreation Stakeholders

Date, Location, & Time:

July 22, 2019 @ Central Colorado Water Conservancy District 10am – noon

July 23, 2019 @ LRE Water

Meeting Minutes

Initial reactions/questions to SPROWG background info

Needs and Concerns:

- Need a way to ensure that historical return flow regimes stay in tact
- The increased reuse of reusable supplies may have a detrimental impact to downstream water users in terms of amount, quality, and timing.
- There are several potentially harmful impacts to Nebraska from this project
- Project concepts appear to all take water out of the river and not be putting water back in the river. Will there be any areas of increased flow? If so, where?

Questions:

- What does operational flexibility mean in the context of SPROWG? Could operational flexibility include operating systems outside of SPROWG to alter flows through Denver? i.e. changing the timing/amount of flows released from Chatfield.
- Does new recreation focus only on reservoirs? Are there opportunities to provide an increase in recreation opportunities on the South Platte or along the banks of the South Platte?
- How does water get back to agriculture? Will agricultural use rely upon or utilize the same infrastructure as SPROWG project? Is this existing or new infrastructure?
- The discussion about ATMs and SPROWG appear to focus on leasing water from agriculture for M&I use. What about other types of ATMs (e.g. agricultural to industrial use, M & I to agricultural or industrial)
- Efficiencies upstream will hurt downstream agricultural users. Can the downstream reservoirs (Julesburg or Balzac) be used to make these agricultural water users whole?
- What feedback/interest has there been in the project from water users along the 285 corridor?

Clarifications:

- SPROWG is not intended to store supplies from existing or new transmountain diversions



Other:

- It was identified that one of the biggest benefits this project could provide is the reduction of future demands on west slope and local river supplies.
 - A reduction in west slope diversions is a big benefit and would be well received as a benefit of the project.
 - If project participants are asked to commit to no more transmountain diversions it could be a deal killer.
- Any project that can incorporate multiple benefits is attractive.
- Water conservation needs to somehow be incorporated into the project.

Recreational and Environmental Water Needs

The following questions were asked related to recreational and environmental water needs? A summary of the discussion that followed is presented below.

- How do you think recreational and/or environmental needs could be maintained or enhanced from this project?
- How do you think this project could impact recreational and/or environmental needs?
- Do you know of specific recreational or environmental water needs (in terms of amount and location) that SPROWG should consider?
- Are there aspects of this project that should change to make it more attractive to recreational or environmental interests?

Needs:

- Augmentation plans in the lower reaches would benefit from long-term recharge credits (placing water into a recharge facility that will provide recharge credit back to the river 4-5 years after recharge occurs). Is it possible to incorporate recharge facilities in locations to facilitate longer recharge patterns?
- Recharge facilities that enhance habitat for waterfowl and balance M&I needs would be beneficial.
 - Exposed water (both in recharge ponds and in the River itself) in mid/late April through May is beneficial to migrating waterfowl
 - Exposed water (both in recharge ponds and in the River itself) in late September/Early October is beneficial to migrating waterfowl
 - Area between Wiggins and Fort Morgan is considered the Golden Triangle for waterfowl use.
 - South Platte River downstream of Julesburg is important habitat for shore birds
 - Habitat elements that benefit waterfowl include:
 - Minimize standing water in recharge pond between late May to mid-September to minimize cattail growth
 - Locate recharge facilities new active agriculture
 - Leave forage in the agriculture fields as a food source
 - Any wetlands (including recharge wetlands) located on the Eastern Plains are highly used by migrating waterfowl.
- SPROWG should consider the protection of fish species of concern. Potential mechanism that provide protection for fish species could include:

- Incorporate fish passages into new diversions or modifications to existing diversion structures
- Plains fish have adapted to living in sloughs, which are maintained by return flows. Identify ways to maintain water in sloughs for plains fish. Incorporation of recharge projects could benefit wetland habitat in sloughs.
- Need to maintain habitat connectivity (fish passage).
- Peak flows are important. A way to maintain peak flows is needed.
- A recreation plan for the project/project elements should be established at the beginning of the project, not as an afterthought.

Concerns:

- Discussion related to the possibility of SPROWG including or supporting a greenway downstream of Greeley.
 - A greenway downstream of Greeley is not something that ag users have heard about. If this is being considered ag users will want to understand the purpose, value, and benefit. Need to communicate the opportunity for Greenway development back to the Agricultural community as soon as possible and get input.
 - Much of the land along the lower South Platte River below Greeley is privately owned and used for hunting...may not be good for a river corridor.
 - Trails can be hard to create in rural areas – rails-to-trails are a nice concept, but they can break up ag lands. A Rails to Trails program in Eastern Colorado was previously attempted by failed to get any local support.
 - Riverside trails tend to work better in urban areas than in rural areas.
- If SPROWG was used to develop “water trails” (floating, kayaking, canoes) the project would need to consider portage points.
 - The idea of floating from Denver to the NE Stateline is attractive, but it is not currently possible
- Lots of stretches of the river below Henderson are being used for hunting by hunting clubs. They don’t want boaters floating through the hunting property.
- The selection of where the project is located may impact access by community and could limit recreational opportunities.
- Existing recreational opportunities on reservoirs in the eastern plains may be impacted as a result of pressure for leases for recreation – When State leases come up for renewal the State may be getting priced out.
- Concerns about running exchanges and diminishing flows in exchange reaches
- Concerns about maintaining compliance with PRRIP if using excess recharge.
- Lots of times, we see a desire to stock trout, but they can be damaging to native species. SPROWG reservoirs should not be used to stock fish that are non-native to the South Platte River.

Questions:

- Would it be possible to create an environmental pool at Bear Creek to benefit SPROWG and enhance greenways along the South Platte River?
- Are greenways outside of the scope of the consulting group?

-
- Specifically, yes, but with SPROWG operation it may be possible to manage flows in a way that supports a healthy greenway/river corridor.
 - What are the flows required to support a healthy greenway/river corridor?

Other:

- When asked how SPROWG can be constructed/operated to maintain or enhance E&R the following ideas were presented:
 - Provide access to river corridors
 - Maintaining greenways
 - Create or maintaining habitat for water fowl
 - Create or maintain habitat for hunting and fishing
 - Incorporate an environmental pool into design/operation of project reservoirs
 - Develop wetlands in flood plains (provides water quality improvement)
 - Provide water to the South Platte River for the maintenance of flood flows or scouring flows
 - Provide enhanced flows in South Platte River at critical times to support spawning
 - Consider river corridor enhancements both upstream and downstream of Denver
 - Improve diversion structures to allow for recreational bypass / fish passage / elimination of dry-up points / and reestablishment of hydrology and habitat at existing dry-up points
 - Enhancements to the river corridor in Denver Metro area could build more public support for the project
 - Charge fee for use of new recreation created by SPROWG – money earned could then be used to fund additional recreation opportunities
 - Use Arkansas Voluntary Flow Management as a model for the South Platte River
 - Address current temperature issues: in shoulder months the temperature in the South Platte River is too warm even for warm water fish.
- Flood and drought resiliency is a project benefit that should be emphasized
 - General agreement from the group
- CPW has developed an evaluation of river infrastructure on the South Platte that can be used in future development of SPROWG concepts (format is GIS shapefile).

Data Gaps & Needs

The following question was asked related to data gaps and needs.

- Is there Data that needs to be collected now so to evaluate impact on recreation or the environment?

The following is a summary of the discussion that followed.

- Audubon – It would be good to have baseline dataset on bird abundance and location that could be used to compare pre- and post-project.
 - eBird app – citizen science app that reports data from birders. Scientific studies often discount the data since it is citizen science
 - Could be an opportunity for Audubon and Ducks Unlimited to partner: pick key areas to complete bird presence/counts and ground truth citizen science
- More data is needed related to South Platte River warm water fish species.

- What temps are needed? Especially in shoulder seasons.
- CPW identified that there is a lack of data from Kersey to Fort Morgan related to small body plains fish.
 - River Watch – Could some additional sampling support this data gap?
- Standards for Chlorophyll-a are expected in 2022. Existing chlorophyll-a data needs to be compiled, data gaps identified, and new data collected in support of development and implementation of future regulations
- Existing water quality impairments identified included: arsenic, temperature, e coli
 - Existing water quality data should be reviewed. May want to classify water quality parameters as high, medium or low priorities?
 - Water quality data should be evaluated by segment.
 - SPROWG presents an opportunity to restore impaired water quality.

Discussion related to SPROWG and the PRRIP

A summary of the Platte River Recovery Implementation Program (PRRIP) and South Platte Water Related Activities Program (SPWRAP) was provided. A summary of the discussion that followed is presented below.

- At this time the possibility of a federal nexus for SPROWG is unknown.
- It is anticipated that the final SPROWG project will comply with Compact requirements.
- If the final proponent(s) is able to utilize a streamlined Section 7 Endangered Species Act consultation and the template Biological Opinion through its participation in SPWRAP through the PRRIP, the project participants will need to be SPWRAP members.
- Audubon Society comments:
 - The bird/crane tourism industry in Nebraska is substantial (estimated to be approximately \$25 million).
 - Altering the natural flow regimes in the South Platte River in Colorado could potentially impact sediment flows, reduce the scouring flows, change channel behavior. How can these concerns be mitigated?
 - 50% of peak flow in the central Platte River comes from Colorado. Development of future storage projects in the South Platte basin may reduce flows in the South Platte River, thereby impacting scour and sediment transport. In turn, there could be impacts to cranes and plovers.
 - PRRIP currently provides 114 KAF to the associated habitat area in Nebraska. The PRRIP has set the milestone to acquire 130 to 150 KAF by 2023.
- We are continually learning more about the endangered species need (habitat, specific WQ needs/impacts, flow targets), and PRRIP is conducting innovative science through adaptive management.

Complementary Demand Side Opportunities discussion

It was identified that at prior outreach meetings related to SPROWG there has been discussion about water efficiency in the context of SPROWG. The following is a summary of the discussion related to water efficiency and the opportunities for demand side management.

- The requirement for additional conservation by M&I water providers going forward is of special interest for NGOs.

-
- Project should look at the commitments parties have agreed to in other regional water project (eg WISE). Is there a similar agreement in Ark Valley Conduit? Colorado River cooperative agreement? State water plan?
 - Could an agreement for SPROWG be developed analogous to the CO River Cooperative Agreement?
 - Maybe require that participants sign on to some specific goals.
 - Water Plan supports some of this – need to review the Plan and build on these ideas and figure out how to make them operational
 - Look at structure of governance structure – evaluate various options to develop project and identify the structure that would have the most potential to implement best practices.
 - Need to have this conversation once the project is better defined and the benefits are more known.
 - Further develop the proof of concept so people know what they are expecting or getting out of the project. Then have the conversation about land use.
 - Need to be careful about how the conversation is rolled out.
 - If there are too many strings attached, then it might be a turn off.
 - Buy and dry may be seen as easier alternative.



Meeting Minutes

Prepared for: Lower South Platte Water Conservancy District

Project Title: South Platte Regional Opportunities Water Group Feasibility Study

Purpose of Meeting: Outreach with Environmental and Recreation Stakeholders

Date, Location, & Time:

November 22, 2019 @ LRE Water, 9am - 11am

Meeting Minutes

Meeting Participants:

Mary Presecan – Leonard Rice Engineers, Inc.
Hanna Anderson – Leonard Rice Engineers, Inc.
Britta Strother - Stantec
Devon Buckels – The Water Connection
Jim Dorsch – Metro Wastewater
Tom Econopouly - US Fish and Wildlife Service
Kelsea Holloway – Bird Conservancy of the Rockies
Pete Conovitz – Colorado Parks & Wildlife
Lindsay Griffith – Brown and Caldwell
David Nickum – Colorado Trout Unlimited

Doug Robotham
Casey Davenhill – Chatfield Watershed Authority
Laura Belanger – Western Resource Advocates
Chuck Reid – Cherry Creek Basin Water Quality Authority
Allan Barryman - SPWRAP
Jennifer Kovecses – Coalition for the Poudre Watershed
Hattie Johnson – American Whitewater
Andy Schultheiss – Colorado Water Trust

Discussion on Environmental and Recreation Opportunities

- Any additional open water is good for waterfowl and migratory pathways.
- Think about how habitats can be developed for waterfowl and aquatic animals.
- If recharge or ASR is used, there is an opportunity to put water in during early spring and late fall to create habitat and time deliveries as to not promote growth of unwanted vegetation such as cattails. Wetting early and being able to dry out is best for wetland vegetation growth.
- With respect to a new 30 cfs pipeline, there are concerns with greenhouse gas emissions due to the significant length of pipeline and pumping required.
- Question: How does recharge couple with this project?
 - Potentially put water into recharge that is timed for the purpose of meeting the augmentation requirement for M&I well depletions.
 - For agricultural uses - time it for replacement for augmentation use.
 - One concept in modeling was to flip the agricultural demands. What if a lot of water is available to agricultural demands in average and wet years and reduced in dry years? Assumption would be to take water in wet years into recharge facilities and provide that water in the dry years. Potential with this model finding is that may need to



-
- rethink that the demand might not need to go sky high in dry years and use water wiser in wet years.
- To what extent could existing recharge projects be used with this? When moving forward with quantifying, look into existing projects instead of developing all new projects.
 - As part of outreach by Brown and Caldwell to irrigators, the most emphasized future need was unmet augmentation, which is part of the justification of the flip flop that Lindsay mentioned.
 - There is a need for meeting augmentation requirements years out, so looking into moving recharge facilities further away from the river to slow down the lagging time.
 - The thinking for precise location of recharge sites and how they relate to current river operations has not been done yet.
 - Question: Have you considered suitable places for storage at Henderson?
 - Storage estimated for Julesburg, Balzac, and Kersey are based on storage studies already done for those areas. There has not been much work done for storage locations in the Henderson area. As part of this, SPROWG is in discussions with Denver Water and City of Aurora regarding if the storage will be on the South Platte River, or a tributary such as Saint Vrain Creek.
 - The 78,000 AF of storage may be a potential limiting factor that will need to be considered in the future.
 - Aquifer storage recovery is also being considered when looking into storage.
 - When looking at the other alternatives, it is easier to see how different project concepts will affect the storage requirements at Henderson. It is important to keep in mind when thinking about storage at Henderson, that disaggregating the storage across a number of facilities is an option.
 - Henderson is the pinch point, it is hard to get water up to it, it has a lot of limitations.
 - Question: Have you considered the sensitivity of climate change and how it affects the project? Climate change will potentially change in the call regime, which ripples though.
 - Not at this time.
 - Sensitivity for conditional water rights – increase from 150 cfs to 300 cfs left in the river for conditional exchanges.
 - Suggest the BIP update could be a good opportunity to explore that question. The technical update is intended to inform the next BIP analysis and updates.
 - Reductions in return flows due to climate change that could impact wetlands and hurt habitats. This may be a potential environmental demand that could be met with increased storage locations.
 - Also important when thinking about sloughs, does SPROWG impact the water going into the sloughs that go into those critical habitats?
 - Patterns of return flows at critical points on the river. Where to focus, are there specific places?
 - Potential for a Metro South Platte gravel pit water users group to look at issues collectively. Maybe another BIP recommendation is to look at collaborative options.
 - Question: Often times the seep from existing reservoirs and ditches tied to the reservoirs provides habitat benefits. Is there an opportunity to plan ahead and build systems that incorporate seep and use that seep to build habitats below the sources.
 - There is a need to identify the patterns of low flows on the river, where are the important geographic locations to focus on, through SPROWG maybe look at this and also the potential consequences, what areas do we want to be looking out for.
 - Where would ATMs occur? What impact does that have on return flows?
 - Is there detailed mapping of riparian habitats that are important to pay attention to?

-
- Yes, there is a lot of mapping through the round tables of riparian habitats and wetlands. How they rely on agricultural uses around and recharge is something to get a handle on.
 - Understanding the relationships of agricultural uses, sloughs, riparian habitats, wetlands – this is beyond SPROWG. Perhaps a BIP process to obtain some view of this question.
 - Taking lessons from other basins – down in the Arkansas there was a large change case under the Catlin Canal where there were large recharge projects and the need to operate large exchanges. The case ended with concerns that return flows would not be satisfied in time and amount, so Catlin Canal Company/Super Ditch had to put water into recharge ponds for deep percolation. Logic of putting return flows in recharge ponds to help with maintaining the location of return flows and linking them to habitats.
 - If infrastructure needs to be changed in the river, there is an opportunity for thinking about the need for fish passage, and other improvements. We always hear that fish passage is needed, but are there places where there is a need to prevent migration of species?
 - There has been talk in the transition zones and keeping undesirable species out. Depends on where water is being diverted and where it is being sent.
 - Maybe keeping fish from going into intakes by using screens, etc. Avoid fish getting into ditch systems.
 - Not aware of barriers needed to keep species out in the main stem of the South Platte River.
 - There may be an opportunity as the concept is flushed out to identify critical passage issues and areas that can be address as design of the project. Impose environmental and recreational demands on the entire project – so just as constructing infrastructure for demands, we need to construct/deconstruct for habitat issue. Bring in the owners of those habitat infrastructures into the overall design of the concept. Include the critical passage areas that can be addressed and address them in overall design and cost.
 - If exchanges are a big mechanism, need to identify where fish would be affected by dry-up points. Use infrastructure around these points to allow connectivity.
 - With the number of conditional exchange rights on the river and bumping the amount left in the river to 300 cfs, storage is required near Henderson if relying solely on exchanges. A way to get around this storage might be a pipeline. Looking at the Kersey to Henderson pipeline, but Balzac to Henderson addresses most M&I and agricultural demands.
 - Possibly bring in owners of conditional exchanges as partners.
 - Engaging stakeholders
 - Is one place of engagement regarding conditional exchanges?
 - The Chatfield project is a good example. Keeping the dialogue open along the way is a good way to address concerns and meet everyone's needs.
 - The opportunity to provide feedback is appreciated.
 - As the project advances, enable ways for project participants to be efficient with their water use. Having a commitment to conservation, and helping the communities involved be more efficient.
 - Education and outreach specific to conservation can be part of future SPROWG.
 - Water Quality Control Commission could be important to have involved. There are concerns they might be able to surface which could drive other treatment levels, or use natural capacities for water quality, not just recharge.
 - Get federal entities involved.

Attachment K: PRRIP and An Overview of How the Program Benefits Colorado's Water Users

Overview

- A partnership established in 2007 between Colorado, Wyoming, Nebraska, the Department of Interior, water users, and non-governmental organizations.
- Supports recovery of four threatened and endangered “target” species through collaborative efforts to maintain, improve, and conserve habitat in the Central Platte River in Nebraska.
- Provides a means for Endangered Species Act Compliance for the four target species for existing South and North Platte water uses (in place as of July 1, 1997) and for new water uses through water user membership in the South Platte Water Related Activities Program (SPWRAP).
- The target species are the endangered interior least tern, pallid sturgeon, whooping crane, and threatened piping plover.

Target Species



Piping Plover



Interior Least Tern



Pallid Sturgeon



Whooping Crane

For more information, please contact:

JOJO LA

Endangered Species Policy Specialist
Colorado Water Conservation Board
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DAN GALLEN

Executive Director
South Platte Water Related Activities Program
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www.cospwrap.org

Platte River Recovery Implementation Program

*How the Program Benefits
Colorado's Water Users*



COLORADO
Colorado Water
Conservation Board
Department of Natural Resources



Benefits To Water Users

The Platte River Recovery Implementation Program:

- ✓ Provides a vehicle for streamlined Endangered Species Act Section 7 compliance associated with four threatened and endangered species for projects undergoing federal permitting.
- ✓ Provides an alternative to the "stand-alone" consultation requirement that individual projects replace depletions on a one-for-one basis at the Colorado-Nebraska state line.
- ✓ Avoids the potential for prohibited "take" of the target species under Endangered Species Act Section 9.
- ✓ Satisfies Colorado's water-related mitigation requirements through the Tamarack Plan. Excess water from the Tamarack Plan is re-timed and is diverted for beneficial use in Colorado before accruing to benefit species downstream.
- ✓ Provides benefits to two other South Platte River issues:
 - (1) Benefits Colorado's minnow Species of Concern.
 - (2) The Tamarack Plan enhances augmentation plan effectiveness and water usage in the lower South Platte River through increased management and use of return flows.
- ✓ Reduces pressure toward dry up of lower South Platte agricultural lands to meet Endangered Species Act requirements.
- ✓ Encourages improved science through adaptive management, monitoring, and research to test hypotheses concerning species and habitat needs on the central Platte River.

Role of South Platte Water Related Activities Program, Inc. (SPWRAP)

Formed by Colorado water user Program participants, the South Platte Water Related Activities Program, Inc. (SPWRAP) is a nonprofit corporation that assists the State in fulfillment of various Program responsibilities, including:

- (1) Accounting and reporting requirements.
- (2) Obtaining interests in facilities, water rights and/or recharge credits
- (3) Potentially assisting with the State's cash contributions to the Program.

Through SPWRAP membership, Colorado water users have representation on the Program Governance Committee and advisory groups. Membership in SPWRAP is the exclusive means by which individual water users may participate in the Program and thereby be afforded the option of streamlined procedures for Endangered Species Act consultation and the ability to rely on Program activities to cover their project's effects on the target species.

To help meet SPWRAP's costs in assisting the State in meeting its Program responsibilities outlined above, water users in the basin must pay assessments. Water users who delay membership will be required to pay assessments for prior years at the time they join.

The majority of stand-alone Section 7 consultations, independent of the Program, have entailed time-intensive negotiations and mitigation by the individual water user. In contrast, the programmatic approach toward Endangered Species Act compliance:

- (1) Allows water users in Colorado to contribute money for membership in SPWRAP, not water, to address their depletive impacts on target species.
- (2) Provides offsetting measures to avoid jeopardy to species and adverse modification of critical habitat under Section 7.
- (3) Provides streamlined procedures for documenting Endangered Species Act compliance to projects.

New Water Related Activities Coverage

New water-related activities may use the Program's template documentation for a streamlined Section 7 Endangered Species Act consultation, which is covered by the Colorado Plan for Future Depletions if the project:

- (1) Is operated on behalf of Colorado water users (the water user is a South Platte Water Related Activities Program member).
- (2) Does not involve a major on-stream reservoir (>2000 acre-feet) on the South Platte River mainstem downstream of Denver (not including new diversion facilities that may impound a small amount of water). Reservoirs adjacent to the mainstem or on its tributaries are not considered to be on the "mainstem".
- (3) Is not a hydropower diversion/return project diverting water including sediments from the mainstem anywhere downstream of Denver and returning clear water to the South Platte River.

Colorado's Plan for Future Depletions annually monitors the cumulative usage and corresponding depletive/accretive effects of new water related activities to serve Colorado's population increases in the South Platte basin through a Program-approved interactive tool. Of note, Colorado's Plan for Future Depletions has a limit within the interactive tool which ceases coverage of additional new depletions once reached. Current Annual Reporting (2019) shows that Colorado is about 44% into the limitation after the initial 13 years of the program. Colorado can propose an amendment to its Plan for Future Depletions in the future to allow additional coverage above the current limitation.

If an entity is not covered by the Colorado Plan for Future Depletions, they must address any Endangered Species Act compliance needs separately from the Program. Nothing in the plan limits development of projects or Colorado water rights.

NOTE: The Endangered Species Act compliance covered by the Program only concerns consultations on the four target species. If a federal nexus activity has potential impact on "non-target" listed species, then impacts to those species must be addressed separately.

Attachment L: SPROWG M&I Water User Survey

SPROWG M&I Survey

Survey Introduction

This survey has been designed to support the South Platte Regional Opportunities Water Group (SPROWG) feasibility study and the evolution of a conceptual, future, multipurpose, regional water project in the South Platte River Basin. It is being provided to Municipal and Industrial (M&I) water providers in the region to gather information related to preferences for organizational structure to support a regional water project, the availability of existing communication resources that could be used to disseminate information, and future water demands. Input from agricultural water users and environmental and recreational interests will be solicited at a later time.

Preliminary planning efforts for SPROWG have focused on projects along the mainstem of the South Platte River, generally downstream of Denver, capable of providing water to regional delivery points from which demands along the front range (from Denver Metro to the North) may be satisfied.

The information collected through this survey will support the evaluation of potential source(s) of water supply and the necessary organizational structure and physical infrastructure to satisfy demands that are anticipated in the South Platte River Basin beyond those to be met by existing supplies and identified projects and processes (IPPs).

The SPROWG feasibility study is a preliminary study, additional work will be necessary for implementation of any identified concept. At this stage in the project we are looking to obtain general opinions from potential project participants; answers provided in response to this survey will not be interpreted as formal positions or opinions of your organization. Thus, for the purpose of the SPROWG study, results provided in response to this survey will be aggregated and the identity of respondents will not be made public. However, if authorization is provided (see question at end of survey), individual responses may be used in a final project report.

Your input is a critical and valued part of the SPROWG feasibility study and we thank you ahead of time for your contribution to this study.

For further information, or if you have questions about this survey, please contact Mary Presecan or Matt Lindburg.

Mary Presecan 303.455.9589 Mary.Presecan@LREWater.com

Matt Lindburg 303.239.5456 MLindburg@brwncaled.com

SPROWG M&I Survey

* 1. What is your name?

* 2. What is your email address?

* 3. Which entity are you completing this survey on behalf of?

STRUCTURAL ORGANIZATION QUESTIONS

The SPROWG team is reviewing possible organizational frameworks for implementing and managing a regional collaborative water project going forward. We are soliciting input on criteria for new organizations that would eventually lead the project development, implementation, and management of a regional collaborative water project. At this stage of the SPROWG process the objective is to identify and compare different organizational options, not to recommend a specific option for adoption.

4. Rank the following organizational structure characteristics in order of importance to your organization. (1 = most important; 9 = least important)

- Tax Status (e.g., Government/Tax-exempt/Taxable)
- Available methods for generating revenue (taxes/member assessments/grants and loans/investors)
- Type of governing board (elected/appointed/appointed/volunteer)
- Opportunities for membership (cities/counties/districts/for-profit organizations, non-profits)
- Capability of expansion (add new members/add new project components)
- Method of staffing (own employees/contractors/shared by participants)
- Ownership of assets (by organization/by members)
- Equity ownership in entity
- Other: Please specify in comment question below

5. What organizational structure would your organization be willing to support? (select all that apply)

- New governmental entity
- Existing governmental entity
- New for-profit private entity
- Other (please specify)
- New non-profit private entity
- Intergovernmental Agreement- Cost Sharing

Consider the following definitions when responding to the next two questions.

Active/Direct Participant: Individuals or organizations that are contractually bound together by the identified organizational structure. For example, in the case of the South Metro Water Supply Authority “Active or Direct Participants” include the contracted membership.

Passive/Indirect Participant: Individuals or organizations who are not bound contractually under the identified organizational structure but who may wish to participate or be a beneficiary. For example, a party who is not a member of the overarching organization may be allowed to participate in a project through a memorandum of understanding with the lead organization.

6. Which **active/direct participants** could your organization support including in an organizational structure? (select all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Municipalities | <input type="checkbox"/> Conservation Districts |
| <input type="checkbox"/> County Government | <input type="checkbox"/> For-Profit Organizations |
| <input type="checkbox"/> State Government | <input type="checkbox"/> Non-Profit Organizations |
| <input type="checkbox"/> Special Water Districts | <input type="checkbox"/> Industrial Water Users |
| <input type="checkbox"/> Conservancy Districts | <input type="checkbox"/> Private Investors |
| <input type="checkbox"/> Other (please specify) | |

7. Which **passive/indirect participants** could your organization support including in an organizational structure? (select all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Municipalities | <input type="checkbox"/> For-Profit Organizations |
| <input type="checkbox"/> County Government | <input type="checkbox"/> Non-Profit Organizations |
| <input type="checkbox"/> Special Water Districts | <input type="checkbox"/> Industrial Water Users |
| <input type="checkbox"/> Conservancy Districts | <input type="checkbox"/> Private Investors |
| <input type="checkbox"/> Conservation Districts | |
| <input type="checkbox"/> Other (please specify) | |

8. Which type(s) of governing boards could your organization support for an organizational structure? (select all that apply)

- Elected by voters in benefitting areas
- Appointed by elected representatives of participating entities
- Volunteer
- Weighted voting of all participants based on project ownership or investment
- Equal voting of all participants
- Other (please specify)

9. What options for raising capital could your organization support? (select all that apply)

- Mill levy or other taxing instrument
- Member assessments
- Grants
- Federal/State Loans
- Private Loans
- Equity investment by participants
- Outside investors
- Other (please specify)

10. What options for collection of operating expenses could your organization support? (select all that apply)

- Assessed based on Participants' pro-rata share of project based on investment/anticipated benefit/use
- Tiered dues structure based on constituent base
- Tiered dues structure based on percent of project benefit (e.g. amount of storage, capacity in pipeline)
- Revenue generated from operations/deliveries
- Other (please specify)

11. What options for staffing could your organization support? (select all that apply)

- Hired directly by the organization (i.e., employees)
- Hired as independent contractors
- Outside consultants
- Staff sharing between participating entities
- Other (please specify)

12. Who would your organization support holding ownership of assets acquired or built under the organization? (select all that apply)

- Organization
- Organization with each member holding a pro-rata share based on use of facilities/services
- Organization with members holding a percentage ownership according to investment in project
- Participating entities
- Other (please specify)

13. What option for distribution of potential profits could your organization support? (select all that apply)

- Distributed to participants based on equity ownership in entity
- Distributed to participants based on use of an entity's facilities or services
- No distributions, all profits held by entity or invested in entity
- Other (please specify)

14. Comments related to organizational structure.

COMMUNICATIONS QUESTIONS

The purpose of these communication questions is to gauge the public's awareness of water issues in the South Platte Basin and to gather information on existing communication resources that could be used to disseminate information related to the project.

15. Which of the following water related issues are your rate payers/customers most concerned with? (select all that apply)

- Cost of water infrastructure projects
- Raising water rates
- Availability of water supplies to meet current demands
- Availability of water supplies to meet future demands
- Sustainability of water supply
- Quality of delivered water
- Other (please specify)

16. Are your rate payers/customers aware of the projected water supply gap in the South Platte River Basin?

- Very aware
- Somewhat aware
- Neutral
- Somewhat unaware
- Very unaware

17. How supportive are your rate payers/customers of adding additional storage/ reservoirs/infrastructure to help meet future water needs?

- Very supportive
- Somewhat supportive
- Neutral
- Somewhat unsupportive
- Very unsupportive

18. What are the primary ways you communicate with your rate payers/customers about the need for water projects/infrastructure? (select all that apply)

- Bill stuffers
- Newsletters
- News media
- Website
- Public meetings
- Advertising
- Social media

19. Would your organization be willing to help communicate the results of the SPROWG study?

- Yes
- No
- Maybe

20. What communications channels would you be willing and able to make available to SPROWG for information sharing? (select all that apply)

- Bill stuffers
- Newsletters
- News media
- Website
- Public meetings
- Advertising
- Social media

21. What entity or individual would you consider a trusted spokesperson about this project for your stakeholder group? (select all that apply)

- State Agency (Colorado Water Conservation Board)
- Local partner on SPROWG Advisory Committee
- Representative from Basin Roundtable
- Representative of your specific organization only
- Other (please specify)

22. Comments related to communications.

WATER SUPPLY GAP QUESTIONS

The purpose of these water supply gap questions is to understand the timing, location, and amount of water supply needs of potential project participants.

23. Following development of current supplies and supplies projected to be made available through IPPs, does your organization project it will have a water supply gap?

- Yes
- No
- Unknown

24. After use of current supplies and supplies projected to be made available through IPPs, how much water supply gap does your organization project at build out?

Low Estimate (AF/year)

High Estimate (AF/year)

25. Based on the supplies you have available (through existing projects, current and planned conservation measures, and planned IPPs), when does your organization need additional supplies on-line and available for use?

- By 2030
- By 2040
- By 2050
- By 2070
- After 2070

Comments

26. In what year does your organization project that build out will occur?

- Already built out
- By 2030
- By 2040
- By 2050
- By 2070
- After 2070

Comments

27. If your organization is an industrial entity, is there a time in the future when it will no longer have a demand for water?

- Does Not Apply
- Yes
- No
- Unknown

Comments

28. If so, when?

- Does Not Apply
- By 2030
- By 2040
- By 2050
- By 2070
- After 2070

Comments

WATER USE QUESTIONS

The purpose of these water use questions is to understand how organizations would use supplies made available through a regional water project.

29. If your organization received water from a regional project, what would be the intended use? (Select all that apply)

- Blending supply
- Firm yield
- Drought year supply
- Drought recovery
- Augmentation water for other water sources
- Other (please specify)

30. Identify your organization's preference for the type of water available through a regional project. (select all that apply)

- Untreated, raw water to be treated by you locally
- Treated water
- Augmentation supplies
- Non-potable supply

31. If your organization would prefer receiving treated water from a regional project, what level of treated water quality would it need to receive?

- Meets the current quality of treated water in my distribution system
- Meets the current quality of my raw water supplies
- Meets all primary and secondary drinking water standards
- Other (please specify)

32. Does your organization currently have (or expect to have in the future) conditional or new water rights that could be developed using regional storage, conveyance, and/or treatment infrastructure between Brighton and Julesburg?

Yes

No

REUSABLE SUPPLY QUESTIONS

33. Does your organization currently have (or expect to have in the future) unused reusable supplies that could be stored, conveyed, and/or treated in a regional project?

- Yes
- No

34. If yes, please provide the average annual amount of unused, reusable supply (AF/Year).

35. If yes, please provide the typical hydrologic conditions during which these supplies are available.

- Dry year
- Normal year
- Wet year
- All years

36. If yes, please provide the time of year are these supplies generally available.

- Irrigation Season (April – October)
- Non-Irrigation Season (November – March)
- Year round

SPROWG GUIDING PRINCIPLES QUESTIONS

The Guiding Principles describe the framework for developing the SPROWG concept. The Principles may be modified as the project progresses. They are not presented in any specific order or priority.

Guiding Principles describing what SPROWG is:

1. SPROWG will advance the goals of the South Platte/Metro Basin Implementation Plan (BIP) and Colorado's Water Plan. Specifically, SPROWG will be based on and expand the BIP and the Conceptual Future In-Basin Multipurpose Project described in Section 4.6.2. It is envisioned to include infrastructure such as reservoirs, pipelines, pump stations, canals, diversion structures, water treatment plants, and aquifer storage and recovery facilities, and it will seek to maximize the use of available exchange potential in the South Platte River to minimize long-term operational costs. It will operate within Colorado's water law and prior appropriation system.
2. The SPROWG concept intends to provide at least 50,000 acre-feet of yield to meet part of the projected municipal and industrial water supply project gap in the South Platte basin quantified in Colorado's Water Plan (note that the yield estimate may be refined during project development). A significant portion of this yield is targeted for smaller but rapidly growing communities along the I-25, Highway 85 corridor between Denver and Greeley and also larger communities in the Denver Metro area and northern Colorado. The project will also explore providing supplies to smaller communities east of Greeley.
3. The SPROWG concept intends to meet a portion of the agricultural gap identified in the BIP and in Colorado's Water Plan.
4. The SPROWG concept will identify and incorporate strategies to address environmental and recreational needs in parallel with closing a portion of the supply gaps.
5. The SPROWG concept intends to enhance the ability to conduct alternative water transfers, thus reducing the need for traditional buy-and-dry transfers in the South Platte basin. Alternative water transfer strategies and amounts will be informed by agricultural water user preferences and input from local communities.
6. The SPROWG concept will utilize different sources of water available in the South Platte basin and manage them conjunctively to achieve an overall reliable yield beyond what an individual source could produce. The sources of water include unappropriated surface water (a.k.a. free river), water derived from alternative transfers, excess recharge credits, reusable supplies, and groundwater from the Denver Basin (if needed) and other aquifers.
7. The SPROWG concept is intended to help water supply organizations and water users in the South Platte basin continue long-standing efforts to maximize the use of in-basin supplies.
8. The SPROWG concept intends to improve integration of water quality and quantity planning and management activities as identified in the Colorado Water Plan and South Platte Basin Implementation Plan.

Guiding Principles describing what SPROWG is not:

1. The SPROWG concept is not intended to be a substitute for existing or planned projects. It is a new concept for addressing water supply needs in the South Platte Basin beyond what will be met with existing or planned projects (often referred to Identified Projects and Processes or IPPs).
2. The SPROWG concept is not intended to be used to deliver water developed from the permanent dry up of irrigated lands in the South Platte basin.
3. The SPROWG concept is not intended to store supplies from an existing or new transmountain diversion project (though it will provide a means to utilize unused reusable return flows from transmountain diversions).

37. Does your organization agree with the Guiding Principles?

Yes

No

Comments related to the Guiding Principles.

ATM QUESTIONS

Alternative Transfer Methods (ATMs) - Also referred to as Alternative Water Transfers, include various methods, activities, and frameworks to transfer water on a temporary or intermittent basis, primarily from agriculture to other uses.

38. Is your organization interested in participating in alternative water transfers also known as alternative transfer mechanisms (ATMs)?

- Yes
- No
- Maybe

39. If Yes, how would your organization use water derived from an ATM project?

- Firm yield
- Drought year supply
- Drought recovery
- Augmentation water for other water sources
- Other (please specify)

40. In your opinion, what are the most important questions that need to be resolved to make ATMs a viable option for your organization?

- Who ultimately owns the water?
- What is the price of the water?
- What is the length or term of the delivery agreement?
- Who pays for legal/engineering costs associated with legal approval for an ATM?
- How flexible are deliveries of water in terms of monthly or annual amounts?
- Other factors or general comments:

PROJECT PARTICIPATION QUESTIONS

Indication of willingness to participate in a South Platte regional water project does not commit you or your organization to the project. There are no financial or other obligations associated with participating in the project at this time. Financial and participatory obligations will arise at some point in the future if the SPROWG concept moves forward and your organization chooses to continue participation.

41. Would your organization be willing to participate in the SPROWG project?

- Yes
- No
- Unknown at this time

* 42. Do you authorize the SPROWG Project Team to include your individual responses in a final project report?

- Yes
- No

43. Please share any other comments you have below:

Attachment M: SPROWG Agricultural Water User Survey

SPROWG Agricultural Water User Survey

Survey Introduction

This survey has been designed to support the South Platte Regional Opportunities Water Group (SPROWG) feasibility study and the evolution of a conceptual, future, multipurpose, regional water project in the South Platte River Basin. It is being provided to agricultural water users and managers in the region to gather information related to preferences for organizational structure to support a regional water project, the availability of existing communication resources that could be used to disseminate information, and opinions related to alternative water transfer methods (ATMs).

Preliminary planning efforts for SPROWG have focused on projects along the mainstem of the South Platte River, generally downstream of Denver, capable of providing water to regional delivery points from which demands along the front range (from Denver Metro to the North) may be satisfied. In addition, planning efforts to date have incorporated deliveries to meet a portion agricultural needs.

The information collected through this survey will support the evaluation of potential source(s) of water supply and the necessary organizational structure and physical infrastructure to satisfy demands that are anticipated in the South Platte River Basin beyond those to be met by existing supplies and identified projects and processes (IPPs).

The SPROWG feasibility study is a preliminary study, additional work will be necessary for implementation of any identified concept. At this stage in the project we are looking to obtain general opinions from potential project participants; answers provided in response to this survey will not be interpreted as formal positions or opinions of your organization. Thus, for the purpose of the SPROWG study, results provided in response to this survey will be aggregated and the identity of respondents will not be made public. However, if authorization is provided (see question at end of survey), individual responses may be used in a final project report.

Your input is a critical and valued part of the SPROWG feasibility study and we thank you ahead of time for your contribution to this study.

For further information, or if you have questions about this survey, please contact Matt Lindburg.

Matt Lindburg
303.239.5456
MLindburg@brwncald.com

SPROWG Agricultural Water User Survey

* 1. What is your name?

* 2. What is your email address?

* 3. Which entity are you completing this survey on behalf of?

SPROWG Agricultural Water User Survey

STRUCTURAL ORGANIZATION QUESTIONS

The **SPROWG** team is reviewing possible organizational frameworks for implementing and managing a regional collaborative water project going forward. We are soliciting input on criteria for new organizations that would eventually lead the project development, implementation, and management of a regional collaborative water project. At this stage of the **SPROWG** process the objective is to identify and compare different organizational options, not to recommend a specific option for adoption.

4. Rank the following organizational structure characteristics in order of importance to your organization. (1 = most important; 9 = least important)

- Tax Status (e.g., Government/Tax-exempt/Taxable)
- Available methods for generating revenue (taxes/member assessments/grants and loans/investors)
- Type of governing board (elected/appointed/appointed/volunteer)
- Opportunities for membership (cities/counties/districts/for-profit organizations, non-profits)
- Capability of expansion (add new members/add new project components)
- Method of staffing (own employees/contractors/shared by participants)
- Ownership of assets (by organization/by members)
- Equity ownership in entity
- Other: Please specify in comment question below

5. What organizational structure would your organization be willing to support? (select all that apply)

- New governmental entity
- Existing governmental entity
- New for-profit private entity
- Other (please specify)
- New non-profit private entity
- Intergovernmental Agreement- Cost Sharing

Consider the following definitions when responding to the next two questions.

Active/Direct Participant: Individuals or organizations that are contractually bound together by the identified organizational structure.

Passive/Indirect Participant: Individuals or organizations who are not bound contractually under the identified organizational structure but who may wish to participate or be a beneficiary. For example, a party who is not a member of the overarching organization may be allowed to participate in a project through a memorandum of understanding with the lead organization.

6. Which **active/direct participants** could your organization support including in an organizational structure? (select all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Municipalities | <input type="checkbox"/> Conservation Districts |
| <input type="checkbox"/> County Government | <input type="checkbox"/> For-Profit Organizations |
| <input type="checkbox"/> State Government | <input type="checkbox"/> Non-Profit Organizations |
| <input type="checkbox"/> Special Water Districts | <input type="checkbox"/> Industrial Water Users |
| <input type="checkbox"/> Conservancy Districts | <input type="checkbox"/> Private Investors |
| <input type="checkbox"/> Other (please specify) | |

7. Which **passive/indirect participants** could your organization support including in an organizational structure? (select all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Municipalities | <input type="checkbox"/> For-Profit Organizations |
| <input type="checkbox"/> County Government | <input type="checkbox"/> Non-Profit Organizations |
| <input type="checkbox"/> Special Water Districts | <input type="checkbox"/> Industrial Water Users |
| <input type="checkbox"/> Conservancy Districts | <input type="checkbox"/> Private Investors |
| <input type="checkbox"/> Conservation Districts | |
| <input type="checkbox"/> Other (please specify) | |

8. Which type(s) of governing boards could your organization support for an organizational structure? (select all that apply)

- Elected by voters in benefitting areas
- Appointed by elected representatives of participating entities
- Volunteer
- Weighted voting of all participants based on project ownership or investment
- Equal voting of all participants
- Other (please specify)

9. What options for raising capital could your organization support? (select all that apply)

- Mill levy or other taxing instrument
- Member assessments
- Grants
- Federal/State Loans
- Private Loans
- Equity investment by participants
- Outside investors
- Other (please specify)

10. What options for collection of operating expenses could your organization support? (select all that apply)

- Assessed based on Participants' pro-rata share of project based on investment/anticipated benefit/use
- Tiered dues structure based on constituent base
- Tiered dues structure based on percent of project benefit (e.g. amount of storage, capacity in pipeline)
- Revenue generated from operations/deliveries
- Other (please specify)

11. What options for staffing could your organization support? (select all that apply)

- Hired directly by the organization (i.e., employees)
- Hired as independent contractors
- Outside consultants
- Staff sharing between participating entities
- Other (please specify)

12. Who would your organization support holding ownership of assets acquired or built under the organization? (select all that apply)

- Organization
- Organization with each member holding a pro-rata share based on use of facilities/services
- Organization with members holding a percentage ownership according to investment in project
- Participating entities
- Other (please specify)

13. What option for distribution of potential profits could your organization support? (select all that apply)

- Distributed to participants based on equity ownership in entity
- Distributed to participants based on use of an entity's facilities or services
- No distributions, all profits held by entity or invested in entity
- Other (please specify)

14. Comments related to organizational structure.

SPROWG Agricultural Water User Survey

COMMUNICATIONS QUESTIONS

The purpose of these communication questions is to gauge the public's awareness of water issues in the South Platte Basin and to gather information on existing communication resources that could be used to disseminate information related to the project.

15. Which of the following water related issues most concern your organization? (select all that apply)

- Cost of water infrastructure projects
- Raising water rates
- Availability of water supplies to meet current demands
- Availability of water supplies to meet future demands
- Sustainability of water supply
- Quality of delivered water
- Other (please specify)

16. How aware is your organization of the projected water supply gap in the South Platte River Basin?

- Very aware
- Somewhat aware
- Neutral
- Somewhat unaware
- Very unaware

17. How supportive is your organization of adding additional storage/ reservoirs/infrastructure to help meet future water needs?

- Very supportive
- Somewhat supportive
- Neutral
- Somewhat unsupportive
- Very unsupportive

18. What are the primary ways your organization communicates about the need for water projects/infrastructure? (select all that apply)

- Bill stuffers
- Newsletters
- News media
- Website
- Public meetings
- Advertising
- Social media

19. Would your organization be willing to help communicate the results of the SPROWG study?

- Yes
- No
- Maybe

20. What communications channels would you be willing and able to make available to SPROWG for information sharing? (select all that apply)

- Bill stuffers
- Newsletters
- News media
- Website
- Public meetings
- Advertising
- Social media

21. What entity or individual would you consider a trusted spokesperson about this project for your stakeholder group? (select all that apply)

- State Agency (Colorado Water Conservation Board)
- Local partner on SPROWG Advisory Committee
- Representative from Basin Roundtable
- Representative of your specific organization only
- Other (please specify)

22. Comments related to communications.

SPROWG GUIDING PRINCIPLES QUESTIONS

The Guiding Principles describe the framework for developing the SPROWG concept. The Principles may be modified as the project progresses. They are not presented in any specific order or priority.

Guiding Principles describing what SPROWG is:

1. SPROWG will advance the goals of the South Platte/Metro Basin Implementation Plan (BIP) and Colorado's Water Plan. Specifically, SPROWG will be based on and expand the BIP and the Conceptual Future In-Basin Multipurpose Project described in Section 4.6.2. It is envisioned to include infrastructure such as reservoirs, pipelines, pump stations, canals, diversion structures, water treatment plants, and aquifer storage and recovery facilities, and it will seek to maximize the use of available exchange potential in the South Platte River to minimize long-term operational costs. It will operate within Colorado's water law and prior appropriation system.
2. The SPROWG concept intends to provide at least 50,000 acre-feet of yield to meet part of the projected municipal and industrial water supply project gap in the South Platte basin quantified in Colorado's Water Plan (note that the yield estimate may be refined during project development). A significant portion of this yield is targeted for smaller but rapidly growing communities along the I-25, Highway 85 corridor between Denver and Greeley and also larger communities in the Denver Metro area and northern Colorado. The project will also explore providing supplies to smaller communities east of Greeley.
3. The SPROWG concept intends to meet a portion of the agricultural gap identified in the BIP and in Colorado's Water Plan.
4. The SPROWG concept will identify and incorporate strategies to address environmental and recreational needs in parallel with closing a portion of the supply gaps.
5. The SPROWG concept intends to enhance the ability to conduct alternative water transfers, thus reducing the need for traditional buy-and-dry transfers in the South Platte basin. Alternative water transfer strategies and amounts will be informed by agricultural water user preferences and input from local communities.
6. The SPROWG concept will utilize different sources of water available in the South Platte basin and manage them conjunctively to achieve an overall reliable yield beyond what an individual source could produce. The sources of water include unappropriated surface water (a.k.a. free river), water derived from alternative transfers, excess recharge credits, reusable supplies, and groundwater from the Denver Basin (if needed) and other aquifers.
7. The SPROWG concept is intended to help water supply organizations and water users in the South Platte basin continue long-standing efforts to maximize the use of in-basin supplies.
8. The SPROWG concept intends to improve integration of water quality and quantity planning and management activities as identified in the Colorado Water Plan and South Platte Basin Implementation Plan.

Guiding Principles describing what SPROWG is not:

1. The SPROWG concept is not intended to be a substitute for existing or planned projects. It is a new concept for addressing water supply needs in the South Platte Basin beyond what will be met with existing or planned projects (often referred to Identified Projects and Processes or IPPs).
2. The SPROWG concept is not intended to be used to deliver water developed from the permanent dry up of irrigated lands in the South Platte basin.
3. The SPROWG concept is not intended to store supplies from an existing or new transmountain diversion project (though it will provide a means to utilize unused reusable return flows from transmountain diversions).

23. Does your organization agree with the Guiding Principles?

Yes

No

Comments related to the Guiding Principles.

SPROWG Agricultural Water User Survey

ATM QUESTIONS

Alternative Transfer Methods (ATMs) - Also referred to as Alternative Water Transfers, include various methods, activities, and frameworks to transfer water on a temporary or intermittent basis, primarily from agriculture to other uses.

24. Is your organization interested in participating in alternative water transfers also known as alternative transfer mechanisms (ATMs)?

- Yes
- No
- Maybe

25. If Yes, how would your organization use water derived from an ATM project?

- Firm yield
- Drought year supply
- Drought recovery
- Augmentation water for other water sources
- Other (please specify)

26. In your opinion, what are the most important questions that need to be resolved to make ATMs a viable option for your organization?

- Who ultimately owns the water?
- What is the price of the water?
- What is the length or term of the delivery agreement?
- Who pays for legal/engineering costs associated with legal approval for an ATM?
- How flexible are deliveries of water in terms of monthly or annual amounts?
- Other factors or general comments:

SPROWG Agricultural Water User Survey

PROJECT PARTICIPATION QUESTIONS

Indication of willingness to participate in a South Platte regional water project does not commit you or your organization to the project. There are no financial or other obligations associated with participating in the project at this time. Financial and participatory obligations will arise at some point in the future if the SPROWG concept moves forward and your organization chooses to continue participation.

27. Would your organization be willing to participate in the SPROWG project?

- Yes
- No
- Unknown at this time

* 28. Do you authorize the SPROWG Project Team to include your individual responses in a final project report?

- Yes
- No

29. Please share any other comments you have below:

Attachment N: SPROWG Environmental and Recreation Stakeholder Survey

SPROWG Survey of Environmental and Recreational Representatives

Survey Introduction

This survey has been designed to support the South Platte Regional Opportunities Water Group (SPROWG) feasibility study and the evolution of a conceptual, future, multipurpose, regional water project in the South Platte River Basin. It is being provided to environmental and recreational representatives in the region to gather information related to preferences for organizational structure to support a regional water project, the availability of existing communication resources that could be used to disseminate information, and opinions related to alternative water transfer methods (ATMs).

Preliminary planning efforts for SPROWG have focused on projects along the mainstem of the South Platte River, generally downstream of Denver, capable of providing water to regional delivery points from which demands along the front range (from Denver Metro to the North) may be satisfied. In addition, planning efforts to date have incorporated deliveries to meet a portion agricultural needs and strategies to maintain or enhance environmental and recreational attributes.

The information collected through this survey will support the evaluation of organizational structure and physical infrastructure to satisfy demands that are anticipated in the South Platte River Basin beyond those to be met by existing supplies and identified projects and processes (IPPs).

The SPROWG feasibility study is a preliminary study, additional work will be necessary for implementation of any identified concept. At this stage in the project we are looking to obtain general opinions from potential project participants; answers provided in response to this survey will not be interpreted as formal positions or opinions of your organization. Thus, for the purpose of the SPROWG study, results provided in response to this survey will be aggregated and the identity of respondents will not be made public. However, if authorization is provided (see question at end of survey), individual responses may be used in a final project report.

Your input is a critical and valued part of the SPROWG feasibility study and we thank you ahead of time for your contribution to this study.

For further information, or if you have questions about this survey, please contact Mary Presecan or Matt Lindburg.

Mary Presecan
303.455.9589
Mary.Presecan@LREWater.com

Matt Lindburg
303.239.5456
MLindburg@brwncald.com

SPROWG Survey of Environmental and Recreational Representatives

* 1. What is your name?

* 2. What is your email address?

* 3. Which entity are you completing this survey on behalf of?

SPROWG Survey of Environmental and Recreational Representatives

STRUCTURAL ORGANIZATION QUESTIONS

The **SPROWG** team is reviewing possible organizational frameworks for implementing and managing a regional collaborative water project going forward. We are soliciting input on criteria for new organizations that would eventually lead the project development, implementation, and management of a regional collaborative water project. At this stage of the **SPROWG** process the objective is to identify and compare different organizational options, not to recommend a specific option for adoption.

4. Rank the following organizational structure characteristics in order of importance to your organization. (1 = most important; 9 = least important)

- Tax Status (e.g., Government/Tax-exempt/Taxable)
- Available methods for generating revenue (taxes/member assessments/grants and loans/investors)
- Type of governing board (elected/appointed/appointed/volunteer)
- Opportunities for membership (cities/counties/districts/for-profit organizations, non-profits)
- Capability of expansion (add new members/add new project components)
- Method of staffing (own employees/contractors/shared by participants)
- Ownership of assets (by organization/by members)
- Equity ownership in entity
- Other: Please specify in comment question below

5. What organizational structure would your organization be willing to support? (select all that apply)

- New governmental entity
- Existing governmental entity
- New for-profit private entity
- Other (please specify)
- New non-profit private entity
- Intergovernmental Agreement- Cost Sharing

Consider the following definitions when responding to the next two questions.

Active/Direct Participant: Individuals or organizations that are contractually bound together by the identified organizational structure.

Passive/Indirect Participant: Individuals or organizations who are not bound contractually under the identified organizational structure but who may wish to participate or be a beneficiary. For example, a party who is not a member of the overarching organization may be allowed to participate in a project through a memorandum of understanding with the lead organization.

6. Which **active/direct participants** could your organization support including in an organizational structure? (select all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Municipalities | <input type="checkbox"/> Conservation Districts |
| <input type="checkbox"/> County Government | <input type="checkbox"/> For-Profit Organizations |
| <input type="checkbox"/> State Government | <input type="checkbox"/> Non-Profit Organizations |
| <input type="checkbox"/> Special Water Districts | <input type="checkbox"/> Industrial Water Users |
| <input type="checkbox"/> Conservancy Districts | <input type="checkbox"/> Private Investors |
| <input type="checkbox"/> Other (please specify) | |

7. Which **passive/indirect participants** could your organization support including in an organizational structure? (select all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Municipalities | <input type="checkbox"/> For-Profit Organizations |
| <input type="checkbox"/> County Government | <input type="checkbox"/> Non-Profit Organizations |
| <input type="checkbox"/> Special Water Districts | <input type="checkbox"/> Industrial Water Users |
| <input type="checkbox"/> Conservancy Districts | <input type="checkbox"/> Private Investors |
| <input type="checkbox"/> Conservation Districts | |
| <input type="checkbox"/> Other (please specify) | |

8. Which type(s) of governing boards could your organization support for an organizational structure? (select all that apply)

- Elected by voters in benefitting areas
- Appointed by elected representatives of participating entities
- Volunteer
- Weighted voting of all participants based on project ownership or investment
- Equal voting of all participants
- Other (please specify)

9. What options for raising capital could your organization support? (select all that apply)

- Mill levy or other taxing instrument
- Member assessments
- Grants
- Federal/State Loans
- Private Loans
- Equity investment by participants
- Outside investors
- Other (please specify)

10. What options for collection of operating expenses could your organization support? (select all that apply)

- Assessed based on Participants' pro-rata share of project based on investment/anticipated benefit/use
- Tiered dues structure based on constituent base
- Tiered dues structure based on percent of project benefit (e.g. amount of storage, capacity in pipeline)
- Revenue generated from operations/deliveries
- Other (please specify)

11. What options for staffing could your organization support? (select all that apply)

- Hired directly by the organization (i.e., employees)
- Hired as independent contractors
- Outside consultants
- Staff sharing between participating entities
- Other (please specify)

12. Who would your organization support holding ownership of assets acquired or built under the organization? (select all that apply)

- Organization
- Organization with each member holding a pro-rata share based on use of facilities/services
- Organization with members holding a percentage ownership according to investment in project
- Participating entities
- Other (please specify)

13. What option for distribution of potential profits could your organization support? (select all that apply)

- Distributed to participants based on equity ownership in entity
- Distributed to participants based on use of an entity's facilities or services
- No distributions, all profits held by entity or invested in entity
- Other (please specify)

14. Comments related to organizational structure.

SPROWG Survey of Environmental and Recreational Representatives

COMMUNICATIONS QUESTIONS

The purpose of these communication questions is to gauge the public's awareness of water issues in the South Platte Basin and to gather information on existing communication resources that could be used to disseminate information related to the project.

15. Which of the following water related issues most concern your organization? (select all that apply)

- Cost of water infrastructure projects
- Raising water rates
- Availability of water supplies to meet current demands
- Availability of water supplies to meet future demands
- Sustainability of water supply
- Quality of delivered water
- Other (please specify)

16. How aware is your organization of the projected water supply gap in the South Platte River Basin?

- Very aware
- Somewhat aware
- Neutral
- Somewhat unaware
- Very unaware

17. How supportive is your organization of adding additional storage/ reservoirs/infrastructure to help meet future water needs?

- Very supportive
- Somewhat supportive
- Neutral
- Somewhat unsupportive
- Very unsupportive

18. What are the primary ways your organization communicates about the need for water projects/infrastructure? (select all that apply)

- Bill stuffers
- Newsletters
- News media
- Website
- Public meetings
- Advertising
- Social media

19. Would your organization be willing to help communicate the results of the SPROWG study?

- Yes
- No
- Maybe

20. What communications channels would you be willing and able to make available to SPROWG for information sharing? (select all that apply)

- Bill stuffers
- Newsletters
- News media
- Website
- Public meetings
- Advertising
- Social media

21. What entity or individual would you consider a trusted spokesperson about this project for your stakeholder group? (select all that apply)

- State Agency (Colorado Water Conservation Board)
- Local partner on SPROWG Advisory Committee
- Representative from Basin Roundtable
- Representative of your specific organization only
- Other (please specify)

22. Comments related to communications.

SPROWG GUIDING PRINCIPLES QUESTIONS

The Guiding Principles describe the framework for developing the SPROWG concept. The Principles may be modified as the project progresses. They are not presented in any specific order or priority.

Guiding Principles describing what SPROWG is:

1. SPROWG will advance the goals of the South Platte/Metro Basin Implementation Plan (BIP) and Colorado's Water Plan. Specifically, SPROWG will be based on and expand the BIP and the Conceptual Future In-Basin Multipurpose Project described in Section 4.6.2. It is envisioned to include infrastructure such as reservoirs, pipelines, pump stations, canals, diversion structures, water treatment plants, and aquifer storage and recovery facilities, and it will seek to maximize the use of available exchange potential in the South Platte River to minimize long-term operational costs. It will operate within Colorado's water law and prior appropriation system.
2. The SPROWG concept intends to provide at least 50,000 acre-feet of yield to meet part of the projected municipal and industrial water supply project gap in the South Platte basin quantified in Colorado's Water Plan (note that the yield estimate may be refined during project development). A significant portion of this yield is targeted for smaller but rapidly growing communities along the I-25, Highway 85 corridor between Denver and Greeley and also larger communities in the Denver Metro area and northern Colorado. The project will also explore providing supplies to smaller communities east of Greeley.
3. The SPROWG concept intends to meet a portion of the agricultural gap identified in the BIP and in Colorado's Water Plan.
4. The SPROWG concept will identify and incorporate strategies to address environmental and recreational needs in parallel with closing a portion of the supply gaps.
5. The SPROWG concept intends to enhance the ability to conduct alternative water transfers, thus reducing the need for traditional buy-and-dry transfers in the South Platte basin. Alternative water transfer strategies and amounts will be informed by agricultural water user preferences and input from local communities.
6. The SPROWG concept will utilize different sources of water available in the South Platte basin and manage them conjunctively to achieve an overall reliable yield beyond what an individual source could produce. The sources of water include unappropriated surface water (a.k.a. free river), water derived from alternative transfers, excess recharge credits, reusable supplies, and groundwater from the Denver Basin (if needed) and other aquifers.
7. The SPROWG concept is intended to help water supply organizations and water users in the South Platte basin continue long-standing efforts to maximize the use of in-basin supplies.
8. The SPROWG concept intends to improve integration of water quality and quantity planning and management activities as identified in the Colorado Water Plan and South Platte Basin Implementation Plan.

Guiding Principles describing what SPROWG is not:

1. The SPROWG concept is not intended to be a substitute for existing or planned projects. It is a new concept for addressing water supply needs in the South Platte Basin beyond what will be met with existing or planned projects (often referred to Identified Projects and Processes or IPPs).
2. The SPROWG concept is not intended to be used to deliver water developed from the permanent dry up of irrigated lands in the South Platte basin.
3. The SPROWG concept is not intended to store supplies from an existing or new transmountain diversion project (though it will provide a means to utilize unused reusable return flows from transmountain diversions).

23. Does your organization agree with the Guiding Principles?

Yes

No

Comments related to the Guiding Principles.

SPROWG Survey of Environmental and Recreational Representatives

ATM QUESTIONS

Alternative Transfer Methods (ATMs) - Also referred to as Alternative Water Transfers, include various methods, activities, and frameworks to transfer water on a temporary or intermittent basis, primarily from agriculture to other uses. ATMs can also be used to maintain or improve streamflows which support environmental and recreational activities.

24. Is your organization interested in participating in alternative water transfers also known as alternative transfer mechanisms (ATMs)?

- Yes
- No
- Maybe

25. If Yes, how would your organization use water derived from an ATM project?

- Firm yield
- Drought year supply
- Drought recovery
- Augmentation water for other water sources
- Other (please specify)

26. In your opinion, what are the most important questions that need to be resolved to make ATMs a viable option for your organization?

- Who ultimately owns the water?
- What is the price of the water?
- What is the length or term of the delivery agreement?
- Who pays for legal/engineering costs associated with legal approval for an ATM?
- How flexible are deliveries of water in terms of monthly or annual amounts?
- Other factors or general comments:

SPROWG Survey of Environmental and Recreational Representatives

PROJECT PARTICIPATION QUESTIONS

Indication of willingness to participate in a South Platte regional water project does not commit you or your organization to the project. There are no financial or other obligations associated with participating in the project at this time. Financial and participatory obligations will arise at some point in the future if the SPROWG concept moves forward and your organization chooses to continue participation.

27. Would your organization be willing to participate in the SPROWG project?

- Yes
- No
- Unknown at this time

* 28. Do you authorize the SPROWG Project Team to include your individual responses in a final project report?

- Yes
- No

29. Please share any other comments you have below: