

**Yampa/White/Green River  
Basin Roundtable Meeting  
Minutes  
Wednesday July 13, 2016  
-American Legion's Shadow  
Mt. Clubhouse-1055 CR7,  
Craig, CO 81625**

- 1. Call Meeting to Order:** Called to order by Chair Mary Brown at 6:22 p.m.
- 2. Introductions of Members and Audience:** All members and guests took turns introducing themselves. See attached sign in sheet.
- 3. Approve/Modify Agenda:** Mary Brown asked if the agenda could be modified to allow John Carron to present to the Roundtable after the approval of the minutes, because he needed to leave early. This was approved.
- 4. Review and Approval of May 11, 2016 Minutes:** Motion made by Chuck Grobe to approve the May 11, 2016 minutes, seconded by Jackie Brown. Reed Kelley asked that a note be added that Geoff Blakeslee was absent, under item 8d for the Non Consumptive Needs update. Approved.
- 5. Budget Report (CWCB):** The budget report was given by Jay Gallagher. Due to the severance tax issues the CWCB has asked all of the Roundtables to reaffirm their prior funding commitments. The Roundtable will vote on reaffirming \$300,000 later in the meeting. If reaffirmed the Basins balance will be \$885,000. There currently is not an update on statewide numbers.
- 6. Public hearings/public input and comment:** Public comment was asked for. There was no public comment.
- 7. Reports of each standing or special committee (10 min. each)**
  - a. BIP Sub-committee –Dan Birch:** The committee is meeting with Erin Wilson and her team, working on modeling. They are looking at using IPPs to meet existing and future consumptive needs. The Committee met tonight, and would like regular and ongoing communication between themselves and the Roundtable. The current projects being looked at are voluntarily coming forward. Dan asked Roundtable members to inform the sub-committee about any projects that were not included in the IPPs of the Basin Implementation Plan to give them an opportunity to be included in Wilson Water's hydrologic modeling project.
  - b. IBCC update - Jeff Devere** informed the Roundtable that the State plan says it will meet a certain number; they are currently considering new means of raising revenues to fund implementation of the Colorado Water Plan. Alden Vanden Brink asked if it was known when they would arrive at a financial

solution for the Colorado Water Plan. Jay Gallagher said that an update on proposals would be given next week, during the CWCB board meeting.

c. West Slope Caucus –Jeff Devere/ Kevin McBride Included in the previous special committee updates.

d. Non-Consumptive Needs update – Geoff Blakeslee, Erin Wilson met with groups on water use. Determining natural flows, and pros and cons of storage. Geoff asked that the Non-Consumptive Needs not be included on the agenda every meeting, as there is not always an update.

e. PEPO/ Education Committee update – Kelly Romero Heaney. The new PEPO liaison has been helpful. The Education Action Plan can be amended, but needs to be modified between now and the next meeting. The CWCB bi-monthly meeting will be in Steamboat. During which a few project sites on the Upper Yampa will be toured. Mara MacKillop from the CWCB will be starting a quarterly newsletter to keep all of the Roundtables communicating. Kelly suggested that the Roundtable think of what they would like to send her.

f. Grant Committee update - Steve Hinkemeyer. The suggested changes from the May meeting, were made. The updated documents were sent to Craig Godbout on June 13<sup>th</sup>. The Committee has asked Craig to put the forms on the CWCB website.

g. Bylaws Committee – Jackie Brown sent the word compare document out to the members in June, to show the bylaw changes. Jackie also met with members that had concerns. The highlighted areas beginning on page 5 show the major changes. One being, line 198 & 199 to keep the at large members equal between counties, which would make several Roundtable members ineligible during this November's election. There was discussion on a 2/3rds majority needed for Bylaw voting. Steve Hinkemeyer will email Jackie the suggested wording. Mary asked for a vote on adopting the Bylaws with the addition from Steve by show of hands. There were 16 yes votes and zero no's. Bylaws were adopted. Mary asked that Roundtable members respond to the meeting reminders, if they will not be attending the meeting, this way the meeting can be canceled if there will not be a majority attending. There was some confusion however. Reed Kelley thought the vote was for the addition of language pertaining to the voting majority for the Bylaws, he was not in support of adopting the Bylaws as is.

## **8. Consideration/Action on Roundtable Projects: (15 minutes each)**

a. Reaffirm YWG Hydrologic Modeling & Education Outreach Program: As previously discussed during the Budget Report. The CWCB has asked the Roundtables to reaffirm their prior funding commitments, now that they know there will not be more funding. The two grants that the YWG Roundtable had previously approved are the YWG Hydrologic Modeling for \$150,000 and The Education Outreach Program for \$150,000. Doug Monger made a motion to reaffirm, John Hill seconded. Motion passed. April McIntyre will write up a letter and send it to Craig Godbout to inform him that the YWG Roundtable voted to reaffirm the \$300,000 in grants. See Attached.

b. Maybell Irrigation District 2<sup>nd</sup> Reading. Ann Franklin passed out an updated budget with itemized costs, and briefly went over project details. The Grant request is for \$108,375. Steve Hinkemeyer asked if there would be addition funding from other sources. Mike Camblin said they submitted a grant request for an additional \$62,000 from the Fish Recovery Program, but did not yet know if they would receive it.

Jay Gallagher asked Erin Light for her thoughts on the project. Erin had some concerns with the auto waste gate, but she also thought the project would have benefits. Several members voiced their support of the project, and their appreciation in funding a physical project vs. a study. Dan Birch made a motion to approve the grant request up to \$108,375 less any funds contributed by the recovery program. Motion seconded by Chuck Grobe. There was a resounding desire from the board that the Fish Recovery Program participates in the project. Jackie Brown made a motion to amend Dan's motion and fully fund the grant request. Motion passed.

#### **9. New business (15 min. each)**

a. U.S. Fish and Wildlife Presentation – Jana Mohrman presented to the Roundtable on the development of an endangered fish management plan for the White River in Colorado and Utah. The plan addresses flow targets and future water depletions. Jana said that they are happy to be preceding Wilson Water, as much of the plan is derived from the Wilson Water proposal. Jeff Devere mentioned, that this shows the Roundtable is accomplishing things and could be used for the newsletter talked about in the PEPO update. Attached is the handout from the presentation along with a handout out of estimated project completion date.

b. Update on the modeling effort – John Carron from Hydros Consulting spoke to the Roundtable about the risk of a compact call on the Colorado River. This study is looking at the required levels of water storage needed at Powell and Mead to maintain deliveries, taking into account potential hydraulic issues. Colorado is stated to be using more than it is allotted under the 1948 Upper Basin Compact, however these numbers do not account for natural evaporative loss. John discussed some potential solutions, and the work that the study still has ahead of them. Dan Birch suggested that the YWG Roundtable pass a resolution that can be passed along to John's bosses in support of the work that they are doing. The Roundtable would like to see conversations on water banking and what a compact call will look like. Jeff Devere made a motion, Geoff Blakeslee seconded, motion passed. Dan will type up a resolution and send to Mary. See attached for the presentation handout, and a copy of the typed resolution.

#### **10. Old Business**

a. Upper Yampa Conservancy District. Joe Messina presented a final report to the Roundtable on a WSRA Grant from the YWG in 2014. Funds were used for modeling to support the Upper Yampa Water Conservancy District water rights master plan. Included in the presentation was an example of evaluations made using the state mode model, and three different planning scenarios. The slides from the presentation are attached.

b. Bylaws: Jackie Brown hand wrote in the changes that Reed Kelley asked for. A second vote was made to keep the previous vote on adapting the Bylaws valid. All were in favor of keeping the updated Bylaws. Mary Brown suggested that the changes will be typed up and included in the meeting minutes. A clean copy will be provided again at the September meeting, if there are any issues at that time the Roundtable will take another look at the Bylaws. See Attached.

**11. Announcements:** Dan Birch announced a training opportunity and let members know they could pick up a flyer from him before leaving, that contained more information. Alden Vanden Brink reminded members of the Natural Resource Tour on August 18<sup>th</sup>, all Roundtable members are invited.

**12. Dates and Agenda Items for Future Meetings:**



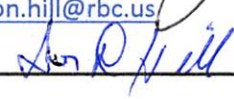
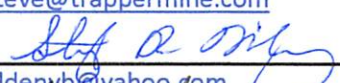
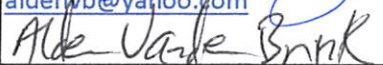
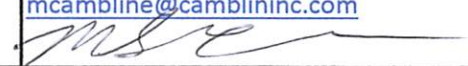

- a. Next meeting date is September 14, 2016 at 6PM


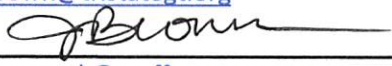
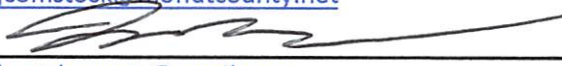

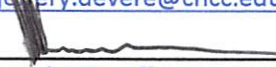
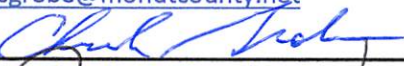

**13. Adjournment:** 9:20

Respectfully submitted,

April McIntyre  
YWG Basin Roundtable Recorder



Membership of the Yampa White Green Basin Roundtable 2016		Name	Term Exp.	Jan, 13	Mar, 9	May, 11	Jul, 13	Sep, 14	Nov, 9	Signature/email
1	Routt County Commissioners Appointment: (Alt. IBCC Rep through 2015)	Doug Monger	2018	X	X	X				<a href="mailto:dmonger@co.routt.co.us">dmonger@co.routt.co.us</a> 
2	Moffat County Commissioners Appointment: (Alt. IBCC Rep through 2015)	Tom Gray	2018	X	X	X				<a href="mailto:trgray7@gmail.com">trgray7@gmail.com</a> 
3	Rio Blanco County Commissioners Appointment: (Chair through 2015)	Jon Hill	2018	X	X	X				<a href="mailto:jon.hill@rbc.us">jon.hill@rbc.us</a> 
4	Garfield County Commissioners Appointment: (Vaccant Never filled)									
5	Routt County Municipality Appointment:	Kelly Romero-Heaney	2018	X	X	X	X			<a href="mailto:kromeroheaney@steamboatsprings.net">kromeroheaney@steamboatsprings.net</a>
6	Moffat County Municipality Appointment:	Stephen Hinkemeyer	2018	X	X	X				<a href="mailto:steve@trappermine.com">steve@trappermine.com</a> 
7	Rio Blanco County Municipality Appointment: (vice Chair #2 through 2017)	Alden Vanden Brink	2018	X	X	X				<a href="mailto:aldenvb@yahoo.com">aldenvb@yahoo.com</a> 
8	Upper Yampa Conservancy District Appointment: (IBCC Rep through 2016)	Kevin McBride	2018	X	X	X				<a href="mailto:kmcbride@upperyampawater.com">kmcbride@upperyampawater.com</a>
9	Juniper Water Conservancy District Appointment:	Mike Camblin	2018		X	X	X			<a href="mailto:mcamblin@camblininc.com">mcamblin@camblininc.com</a> 
10	Yellow Jacket Water Conservancy District Appointment	Kai Turner	2018		X					<a href="mailto:kaimturner@gmail.com">kaimturner@gmail.com</a>
11	Pothook Water Conservancy District Appointment:		2017							
12	Rio Blanco Conservancy District	Dan Eddy	2020							<a href="mailto:rbwcd@yahoo.com">rbwcd@yahoo.com</a>
13	Colorado River Water Conservation District Appointment:	Dan Birch	2018	X		X	X			<a href="mailto:dbirch@crwcd.org">dbirch@crwcd.org</a> 

14	House/Senate Appointment:		2018								
	<i>At-large Appointments from above members</i>			Jan, 13	Mar, 9	May, 11	Jul, 13	Sep, 14	Nov, 9	Signature/email	
15	Environmental Appointment:	Geoff Blakeslee	2018	X	X		X			<a href="mailto:gblakeslee@tnc.org">gblakeslee@tnc.org</a> 	
16	Agricultural Appointment: (Chair through 2017)	Mary Brown	2018	X	X	X	X			<a href="mailto:marytaylorbrown@gmail.com">marytaylorbrown@gmail.com</a>	
17	Recreation:	Kent Vertrees	2017							<a href="mailto:kent@steamboatpowdercats.com">kent@steamboatpowdercats.com</a>	
18	Domestic Water Provider:	Steve Colby	2017	X		X				<a href="mailto:scolby@mcwater.org">scolby@mcwater.org</a>	
19	Industrial Water Interest:	Rich Thompson	2017			X				<a href="mailto:rthompson@tristategt.org">rthompson@tristategt.org</a>	
20	At-Large Representative:	Chris McCourt	2017							<a href="mailto:cmccourt@tristategt.org">cmccourt@tristategt.org</a>	
21	At-Large Representative: (vice Chair #1 through 2017)	Jackie Brown	2017	X	X	X	X			<a href="mailto:jbrown@tristategt.org">jbrown@tristategt.org</a> 	
22	At-Large Representative:	Jeff Comstock	2016			X				<a href="mailto:jcomstock@moftatcounty.net">jcomstock@moftatcounty.net</a> 	
23	At-Large Representative:	Burt Clements	2016	X	X	X	X			<a href="mailto:burtclements@gmail.com">burtclements@gmail.com</a> 	
24	At-Large Representative:	Ren Martyn	2016	X		X				<a href="mailto:renmartyn@frpwetlandbank.com">renmartyn@frpwetlandbank.com</a>	
25	At-Large Representative: (IBCC Rep through 2017)	Jeff Devere	2017	X	X		X			<a href="mailto:jeffery.devere@cncc.edu">jeffery.devere@cncc.edu</a> 	
26	At-Large Representative:	Chuck G. Grobe	2017	X		X				<a href="mailto:cgrobe@moftatcounty.net">cgrobe@moftatcounty.net</a> 	
27	At-Large Representative:	Reed Kelley	2016			X	X			<a href="mailto:josephnebasin@gmail.com">josephnebasin@gmail.com</a> 	

28	At-Large Representative:	Bill Badaracca	2017	X	X						<a href="mailto:fairsquareoffice@gmail.com">fairsquareoffice@gmail.com</a>
29	At-Large Representative:	Vince Wilczek	2017	X	X						<a href="mailto:vwilczek@rangelco.gov">vwilczek@rangelco.gov</a>
	<i>At-large Appointments from above members</i>			Jan, 13	Mar, 9	May, 11	Jul, 13	Sep, 14	Nov, 9	Signature/email	
30	Green River Basin Representative	T. Wright Dickinson	2016	X							<a href="mailto:twrightdickinson@vermillionranchlp.com">twrightdickinson@vermillionranchlp.com</a>
31	Non Voting that live outside the Basin that hold water rights in the Basin	Tonia Folks	2016								<a href="mailto:tfolks@tristategt.org">tfolks@tristategt.org</a>
32	Non Voting that live outside the Basin that hold water rights in the Basin	Mike Sorenson	2016								<a href="mailto:mgsorensen@tristategt.org">mgsorensen@tristategt.org</a>
33	Non Voting that live outside the Basin that hold water rights in the Basin	Amy Willhite	2016								<a href="mailto:amy.a.whillhite@xcelenergy.com">amy.a.whillhite@xcelenergy.com</a>
34	Non-Voting Colorado Water Conservation Board Representative	Jay Gallagher	no term	X	X	X					<a href="mailto:jaygalla@comcast.net">jaygalla@comcast.net</a>



## Guest Sign-In Sheet

[illegible]

# YWG Basin Roundtable



July 14, 2016

Craig Godbout  
Program Manager  
Colorado Water Conservation Board  
Water Supply Planning Section  
1313 Sherman Street, Suite 718  
Denver, CO 80203  
[Craig.godbout@state.co.us](mailto:Craig.godbout@state.co.us)

Dear Craig:

I am writing to inform you that the YWG Basin Roundtable unanimously voted to re-affirm previous funding commitments, during their July 13<sup>th</sup> meeting. These commitments being: \$150,000 for Hydrologic Modeling, and \$150,000 for an Educational Outreach Program.

Sincerely,

April McIntyre  
YWG Basin Roundtable Recorder

**Maybell Ditch Improvement Project  
Updated Budget for Second Reading  
YWG Roundtable Meeting  
July 13, 2016**

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**Itemized Project Costs**

\$51,500.00	129 CFS flume and installation
\$45,000.00	Langmanne automatic gate
\$26,500.00	Blasting rock and excavation for rock corner and flume
\$24,000.00	Three overshot gates
\$18,000.00	Rebuild and line 400 feet of ditch with firestone liner
\$14,200.00	Concrete for automatic gate
\$10,175.00	Concrete for overshot gates
\$4,500.00	Control of Invasive Plant Species (Russian olive, white top, hounds tongue, thistle)
\$3,500.00	Excavation for Langmanne automatic gate and spill way

**Total Project Cost**

**\$197,375.00**

**Matching Funds (45% of total project cost)**

(\$49,000.00)	Colorado River District grant
(\$40,000.00)	Maybell Irrigation District cost-share

**Total YWGRT Basin Funds Requested (55% of total project cost)**

**\$108,375.00**





# Upper Colorado River Endangered Fish Recovery Program

Tom Chart, Director  
Recovery Program

Noreen Walsh, Chairman  
Implementation Committee

U.S. Fish and Wildlife Service - P.O. Box 25486 - Denver Federal Center - Denver, CO 80225 - (303) 236-9895

## Development of an Endangered Fish Management Plan for the White River in Colorado and Utah

### The White River:

- Supports populations of endangered Colorado pikeminnow and razorback sucker;
- Has a relatively intact flow regime, strong native fish community, and historically low incidence of nonnative fishes;
- Contributes flow and sediment to the Green River.

A cooperative agreement among key parties (e.g., Ute Tribe, States of Utah and Colorado, and U.S. Fish and Wildlife Service) is planned that would implement the management plan and constitute the "federal action" that would become the basis for Section 7 consultation under the Endangered Species Act (ESA). "This approach has been used by the Recovery Program

in other basins to ensure that current and future water needs are met for people and endangered fish. The Recovery Program recognizes that the Ute Tribe holds the majority of water rights in this drainage and will respect the Ute Tribe's water rights throughout this process. The White River management plan will ensure current and future water needs are met for people while recovering endangered fish. The plan will:



- Identify existing and some level of future water depletions;
- Quantify peak and base flow recommendations for the endangered fishes;
- Identify Recovery Program actions in the White and Green rivers to offset depletion impacts;
- Be implemented via a cooperative agreement, forming the basis for a programmatic biological opinion (PBO) to provide ESA compliance for existing and some level of future water depletions.

A federal-state -tribal cooperative (or similar) agreement to implement the resulting management plan will constitute a "federal action" that will become the basis for Section 7 consultation under the Endangered Species Act (ESA). This consultation is expected to culminate in a White River "Programmatic Biological Opinion" (PBO). The PBO provides additional certainty for ESA compliance by existing and future water projects in the White River basin. (A similar document developed in 2005 for the Yampa River is found at:

<http://www.coloradoriverrecovery.org/documents-publications/section-7-consultation/yampa-river-pbo.html>).

For more information contact: Jana Mohrman, U.S. Fish and Wildlife Service, Phone: 303-236-9883,  
([Jana\\_Mohrman@fws.gov](mailto:Jana_Mohrman@fws.gov)).

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*The Upper Colorado River Endangered Fish Recovery Program is a cooperative partnership of local, state and federal agencies, water organizations, power customers and environmental groups established in 1988 to recover the endangered fishes while water development proceeds in accordance with federal, state laws and interstate compacts. For more information: 303-236-9895, or [ColoradoRiverRecovery.org](http://ColoradoRiverRecovery.org) & [facebook.com/ColoradoRiverRecovery](https://www.facebook.com/ColoradoRiverRecovery).*

Colorado River Energy Distributors Association - Colorado Water Congress - National Park Service - State of Colorado

State of Utah - State of Wyoming - The Nature Conservancy - Bureau of Reclamation - U.S. Fish and Wildlife Service

Utah Water Users Association - Western Area Power Administration - Western Resource Advocates - Wyoming Water Association



SEQUENCING AND ROLES FOR UPDATE AND FINALIZATION OF ENDANGERED FISH FLOW  
RECOMMENDATIONS FOR USE IN MANAGEMENT PLAN AND PROGRAMMATIC BIOLOGICAL OPINION  
FOR THE WHITE RIVER BASIN IN COLORADO AND UTAH (July 2016)

This proposal applies the program protocol and responds to the requests for clarification of the roles of the PDO, the modeling contractor, the program committees, the White River Work Group (WRWG), and the USFWS in the update, review and approval of the flow recommendations

Estimated dates of completion <sup>1</sup>	WHO	WHAT
Dec-16 <i>Concurrent activities; greater detail provided in cells to right.</i>	PDO, USFWS, Planning Team, WRWG	Develop Future Demand Scenarios. PDO will tabulate and review future demands in CO and UT, including scenarios and storage developed by the Yampa/White BRT for future demands. High and low scenarios that represent a range of reasonable future demands will be selected by the Planning Team in consultation with the WRWG and USFWS. <b>July – Sep, 2016</b>
	Contractor	Develop Current Hydrology. Generate daily current flows by extending StateMod to the Watson gage and consult with Utah on the extension of StateMod to the Green River so as to model future demands in Utah. Re-state all flow statistics and daily hydrographs for the baseline. <b>July – Sep, 2016</b>
	PDO in concert with Flow Rec authors, Planning Team	Specify Preliminary Flow Targets (using current daily flows from StateMod). Review and resolve comments on July 2011 draft flow recommendations report, including the Topics prepared by TNC for the 12-10-2012 workshop. Incorporate current hydrology and flow statistics and hydrographs developed by contractor. <b>Sep – Oct, 2016</b>
	PDO, Planning Team, WRWG	PDO will seek feedback on Preliminary Flows Targets from the Planning Team, the BC and WAC, and will keep WRWG apprised of the specification of the preliminary flow targets. The WRWG will coordinate any concerns / comments through their Recovery Program representative. <b>Nov – Dec, 2016</b>
May-17	Contractor, PDO, Planning Team, WRWG	Model Future Demands and Identify Impacts on Preliminary Flow Targets. The contractor will model the selected future demand scenarios (including storage for future demands) and identify impacts on the preliminary flow targets. PDO and Planning Team will keep WRWG apprised of the impacts on the preliminary flow targets. The WRWG will coordinate any concerns / comments through their Recovery Program representative. <b>Nov 2016 – May 2017</b> using the outputs from Tasks 2a and 2b in the Wilson Water scope of work
Sep-17	USFWS, BC, WAC, MC, PDO, Planning Team, WRWG, Contractor	Finalize Draft Flow Recommendations Report. USFWS will update the draft flow recommendations report after considering the impact of future demands and new storage on the preliminary flow targets and responding to independent peer review. USFWS will seek approval of a final draft flow recommendations report, first, from the BC and WAC and then the MC (from an implementation perspective) before issuing a final report. PDO and Planning Team will keep WRWG apprised of any significant changes to the preliminary flow targets. The WRWG will coordinate any concerns / comments through their Recovery Program representative. This will encompass the iterative modeling Wilson Water

<sup>1</sup> Derived primarily from the Wilson Water proposal and Director Walsh's letter to Representative Tipton



		has identified as Task 2c. <b>Mar – Sep, 2017</b>
Sep-17	PDO, USFWS, Planning Team, WRWG	PDO and USFWS will develop non-flow management actions to improve endangered fish populations in the White River and identify how such actions (in addition to the final flow recommendations) will offset the flow impacts from agreed upon amount of future water development. We expect the USFWS will seek input from the BC, WAC, or MC on how these non-flow management actions will offset the depletion effects to the endangered fish populations. PDO and Planning Team will keep WRWG apprised of these non-flow management actions. The WRWG will coordinate any concerns / comments through their Recovery Program representative. These activities should be accomplished in concert with finalization of the flow recommendations. <b>Feb – Sep, 2017</b>
Nov 2017	Contractor, WRWG, Planning Team	Wilson Water finalizes report <b>Sep –Nov, 2017</b>
Feb 2018	PDO, USFWS, WRWG	Draft remainder of <u>White River Management Plan</u> , with all other roles and sequencing to be specified. Service should start drafting <u>PBO</u> through this timeframe as well. We expect limited involvement from WRWG at this point. <b>Sep 2017 – Feb 2018</b>
March 2018	WRWG and USFWS	Sign a Cooperative Agreement(CA) to implement the Management Plan. Drafting the CA should occur coincident with drafting the Management Plan. Service signature constitutes the federal action that causes the PBO (the PBO should be well underway by this point in time).
June 2018	USFWS	PBO complete

The Planning Team now consists of Tom Pitts for all water users, Tom Chart and Jana Mohrman for the PDO, Michelle Garrison for the CWCB, James Greer for Utah Division of Water Rights, and Robert Wigington and John Sanderson for TNC, and Alden Vanden Brink, District Manager Rio Blanco Water Conservancy District.

The White River Work Group now consists of the Yampa/White BRT, including the Rio Blanco Water Conservancy District, the Uintah/Ouray Ute Indian Tribe, the BLM, CRWCD, Uintah Water Conservancy District, Utah Division of Water Resources

The BC, WAC, and MC refer to, respectively, the Biology Committee, Water Acquisition Committee and Management Committee for the Upper Colorado Endangered Fish Recovery Program

The PDO refers to the Program Directors Office, which runs the Upper Colorado Endangered Fish Recovery Program and is staffed by the USFWS

The USFWS refers to the U.S. Fish and Wildlife Service, which is responsible for authoring the preliminary flow targets, the final draft flow recommendations report, and the Programmatic Biological Opinion for the White River Basin. The PDO will coordinate USFWS representation (e.g. USFWS personnel who serve as authors of the flow recommendations and / or personnel from Ecological Services (UT and CO)) and input throughout this process. In many instances the PDO will lead these USFWS tasks.

		has identified as Task 2c. Mar – Sep, 2017
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June 2018	USFWS	PBO complete

The Planning Team now consists of Tom Pitts for all water users, Tom Chart and Jana Mohrman for the PDO, Michelle Garrison for the CWCB, James Greer for Utah Division of Water Rights, and Robert Wigington and John Sanderson for TNC, and Alden Vanden Brink, District Manager Rio Blanco Water Conservancy District.

The White River Work Group now consists of the Yampa/White BRT, including the Rio Blanco Water Conservancy District, the Uintah/Ouray Ute Indian Tribe, the BLM, CRWCD, Uintah Water Conservancy District, Utah Division of Water Resources

The BC, WAC, and MC refer to, respectively, the Biology Committee, Water Acquisition Committee and Management Committee for the Upper Colorado Endangered Fish Recovery Program

The PDO refers to the Program Directors Office, which runs the Upper Colorado Endangered Fish Recovery Program and is staffed by the USFWS

The USFWS refers to the U.S. Fish and Wildlife Service, which is responsible for authoring the preliminary flow targets, the final draft flow recommendations report, and the Programmatic Biological Opinion for the White River Basin. The PDO will coordinate USFWS representation (e.g. USFWS personnel who serve as authors of the flow recommendations and / or personnel from Ecological Services (UT and CO)) and input throughout this process. In many instances the PDO will lead these USFWS tasks.



# JOINT WEST SLOPE BASIN ROUNDTABLE RISK STUDY

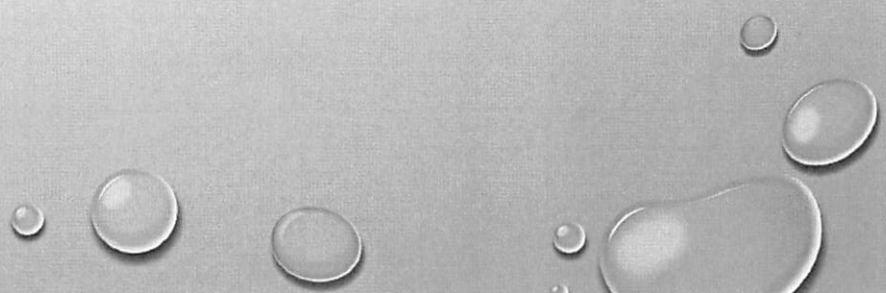
INTRODUCTION AND WORK TO DATE

JULY 13, 2016





# OUTLINE

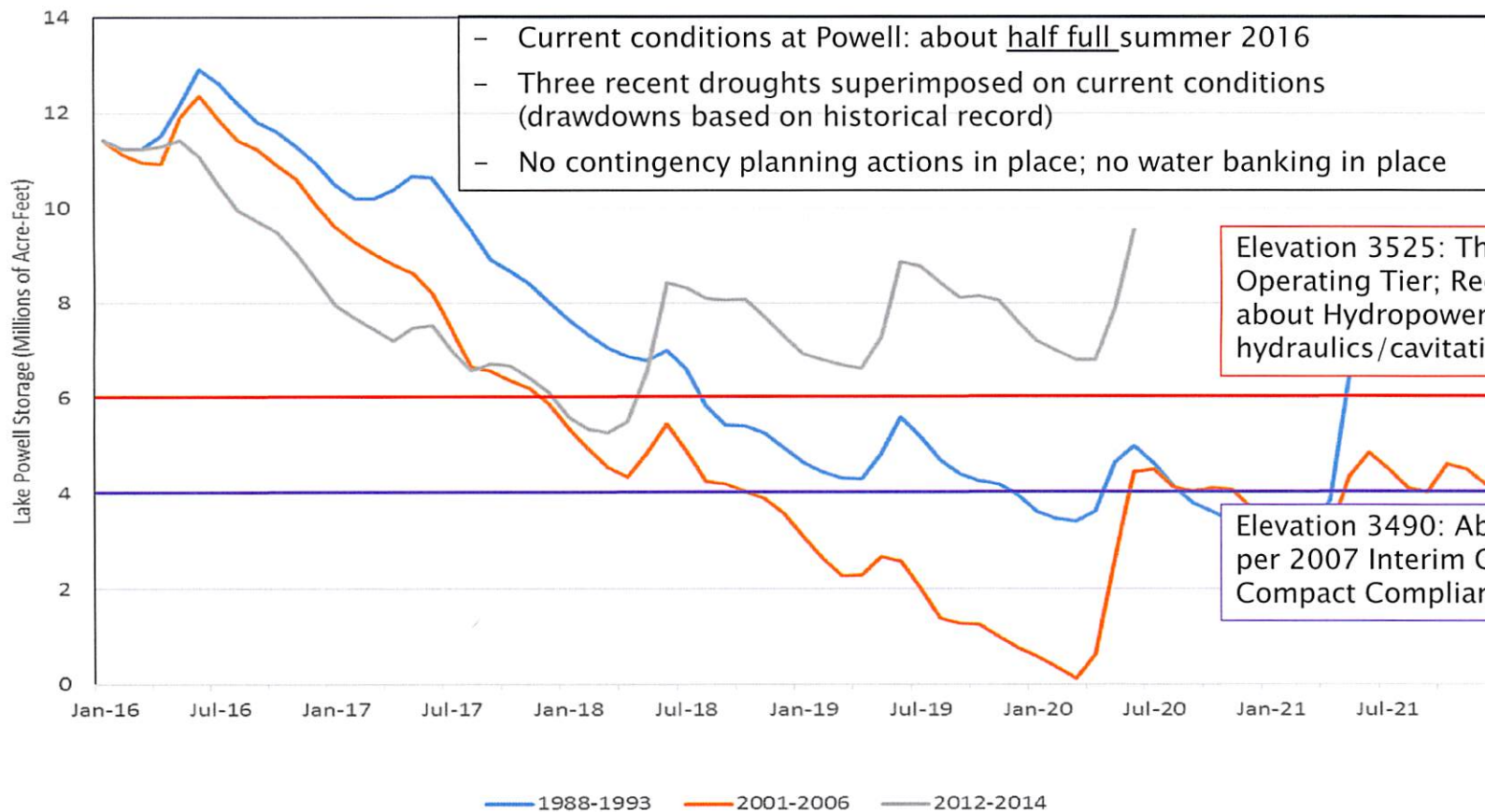
1. What is the risk of a Compact Call?
  2. Background and Project Catalyst
  3. Contingency Planning Process 2013–Present
  4. Risk Study Phase I Objectives
  5. Model Assumptions and Preliminary Results: How can we Quantify Risk?
  6. Conclusions (thus far)
  7. What's Next?
- 



TO UNDERSTAND THE RISK OF A COMPACT  
CALL, WE MUST LOOK AT LAKE POWELL

# What if drought periods of past 25 years repeated?

Recent Droughts - Powell Drawdowns



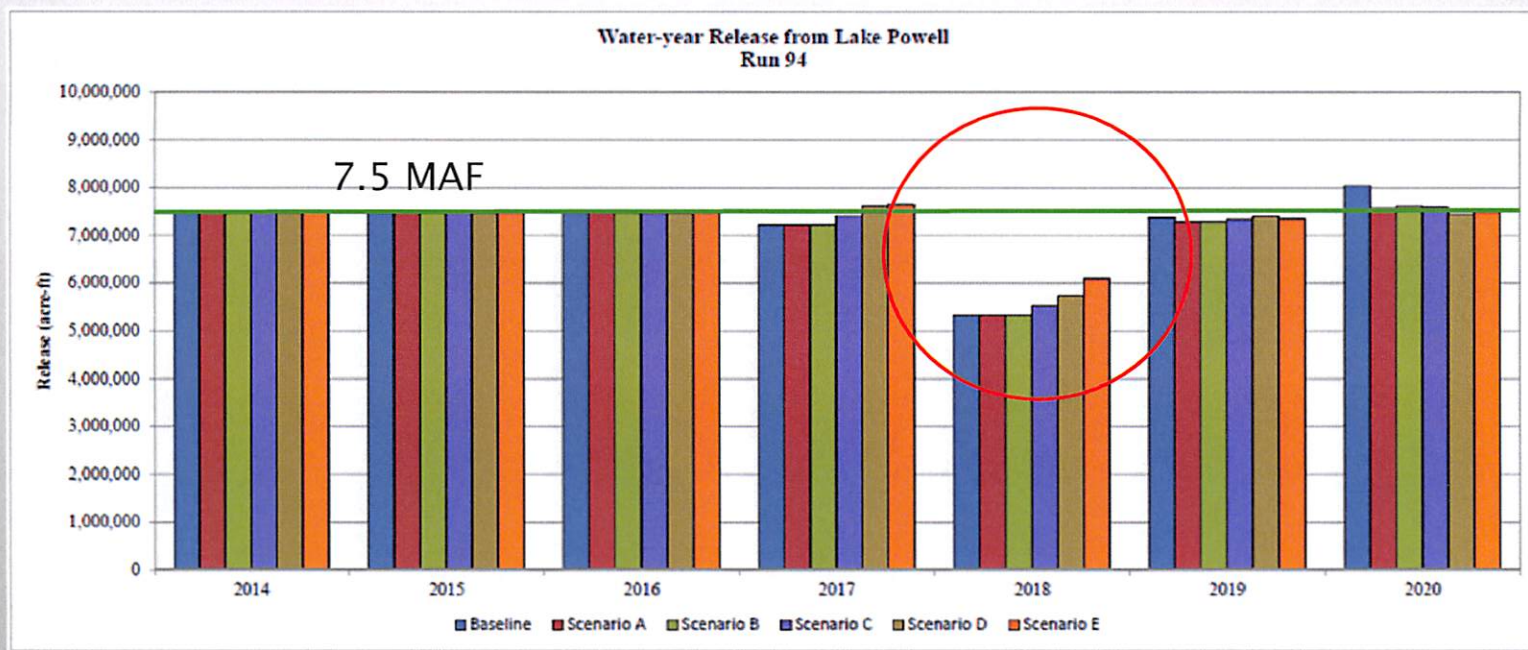


# BACKGROUND AND CATALYST FOR THIS STUDY

- July 2013: Secretary Jewell asks basin states “if 2000 – 2013” drought conditions continue, are you prepared: ANSWER – NO!
- Fall 2013: SNWA and Reclamation analysis for Lower Basin States illustrate possibility of critical storage levels in both Mead and Powell and importantly for us in the Upper Basin, the potential for a compact “hole”.
- Upper Basin and Lower Basin begin coordinated, but independent, development of contingency plans.
- Dec 2014 Joint West Slope BRT Meeting, Request was made for additional studies.
- Colorado’s Water Plan: Take actions that will minimize risk of compact curtailment actions (pt. 4 of Seven Point Framework)

# WHAT ARE “CRITICAL ELEVATIONS” AT POWELL?

- To minimize risk of a Compact Call, keep Powell above 3525’
- At 3490 it is impossible to meet deliveries under the Interim Guidelines.





# DROUGHT CONTINGENCY PLANNING

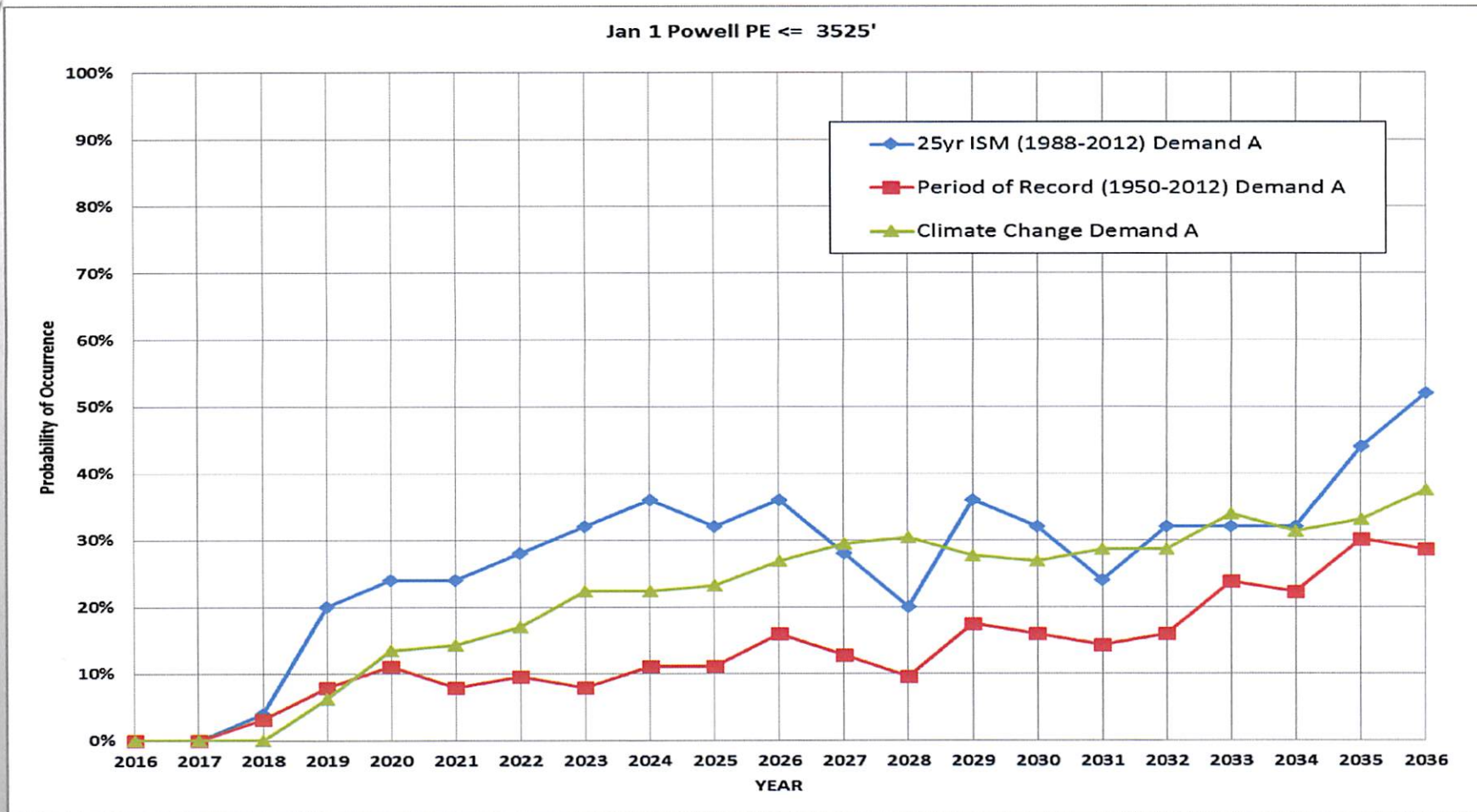
- Objectives:
  - (Upper Basin) Identify actions that can reduce the risk of either losing power production at Powell or lose ability to meet our compact obligations
  - **Why 3525'? Maintains power production, and by always keeping some water in Powell, we avoid a compact "hole" where we can't deliver minimum required amount downstream (hydraulics).**
- Possible Solutions:
  - Drought Operation of CRSP reservoirs (Upper Basin)
  - **Demand Management** (Lower Basin and Upper Basin)
  - Continue Augmentation (Cloud Seeding) Activities (Upper Basin only)
- Best solutions involve a coordinated effort between basins, because Powell and Mead operations are closely linked through the 2007 Interim Guidelines
- Lower Basin has proposed a plan whereby they begin additional conservation measures at Mead El. 1090', with as much as 1.2MAF conservation as Mead approaches El. 1020'

# WEST SLOPE BRT STUDY – PHASE I

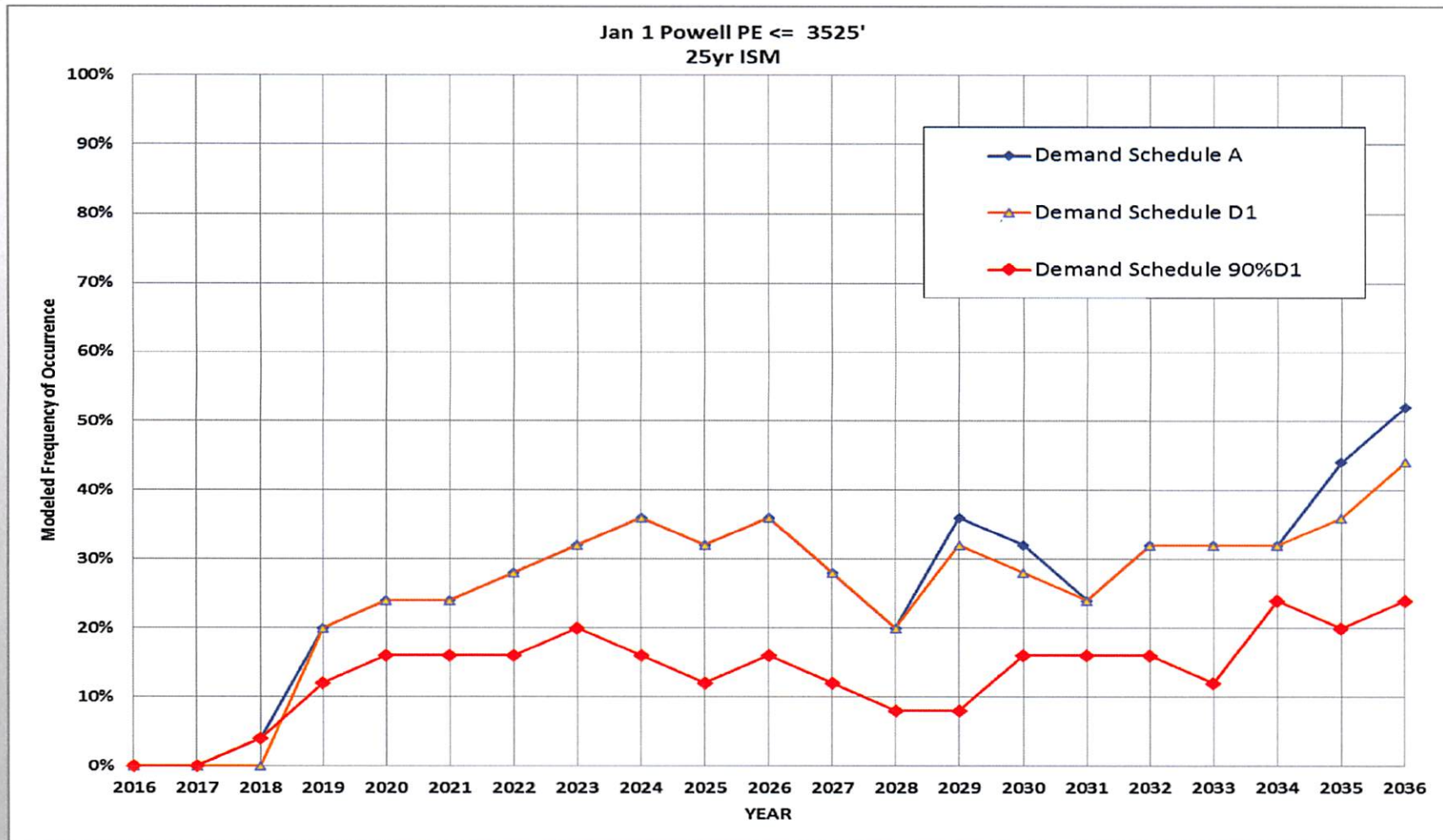
- Questions to answer in Phase I:
  1. What are magnitude and duration of Powell shortages below elevation 3525'?
  2. How much of the above shortages can be met by contributions from Drought Operations of CRSP reservoirs? (A: up to about 2 MAF)
  3. How much consumptive use reduction (“demand management”) would be needed by Upper Basin states – AFTER use of stored CRSP water – in order to maintain Powell pool elevations?
  4. What are possible implications to Compact deliveries? What is range of volumes that Colorado might need to conserve? At a minimum 51.75% of total (Colorado’s apportionment under the 1948 Upper Basin Compact is 51.75%, but we’re currently using about 56–58% of UB total)
- Use CRSS Model to address these “What If” questions. We must understand the “Big River” issues in order to address issues within Colorado.



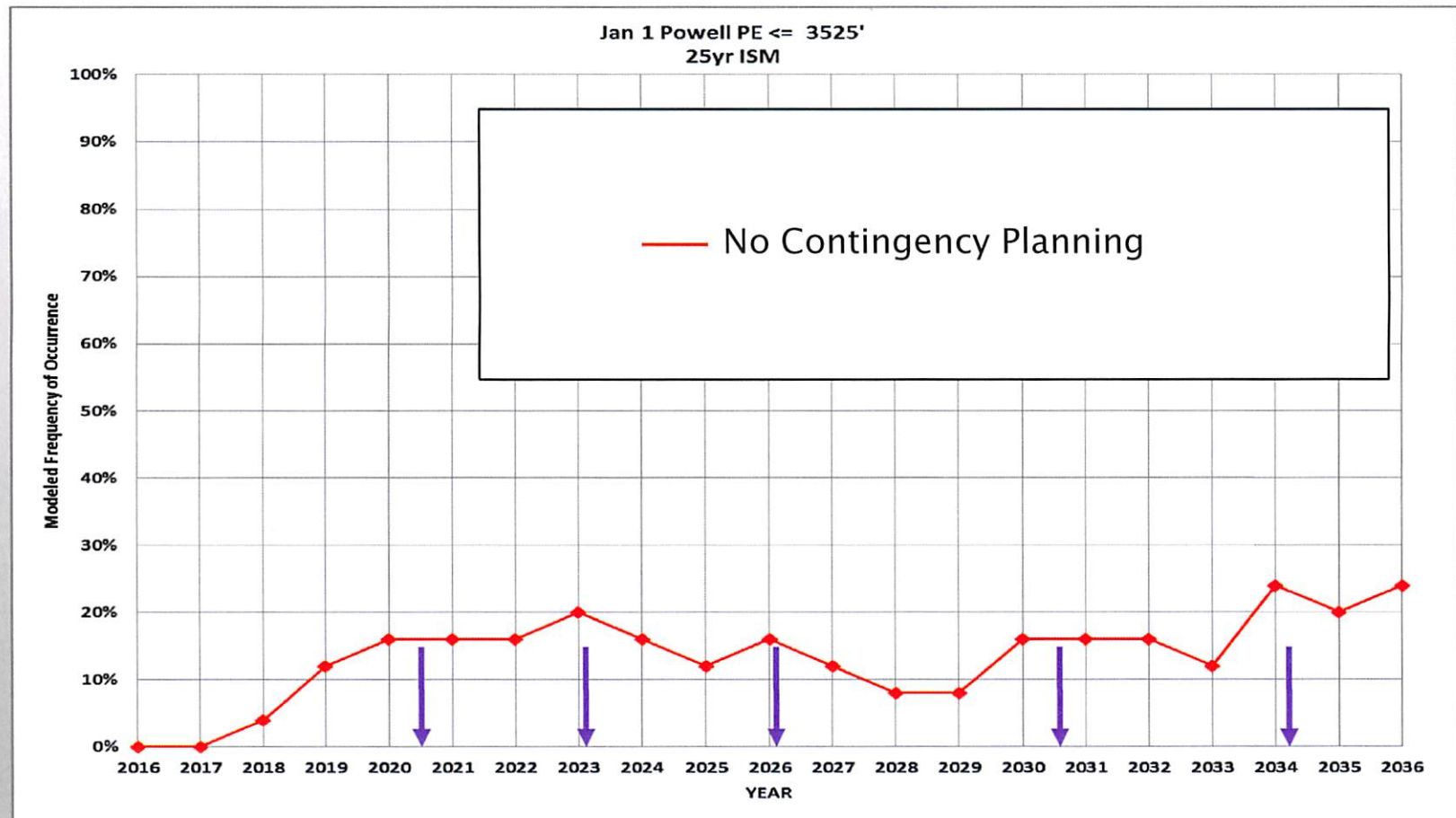
# RISK IS A FUNCTION OF HYDROLOGY



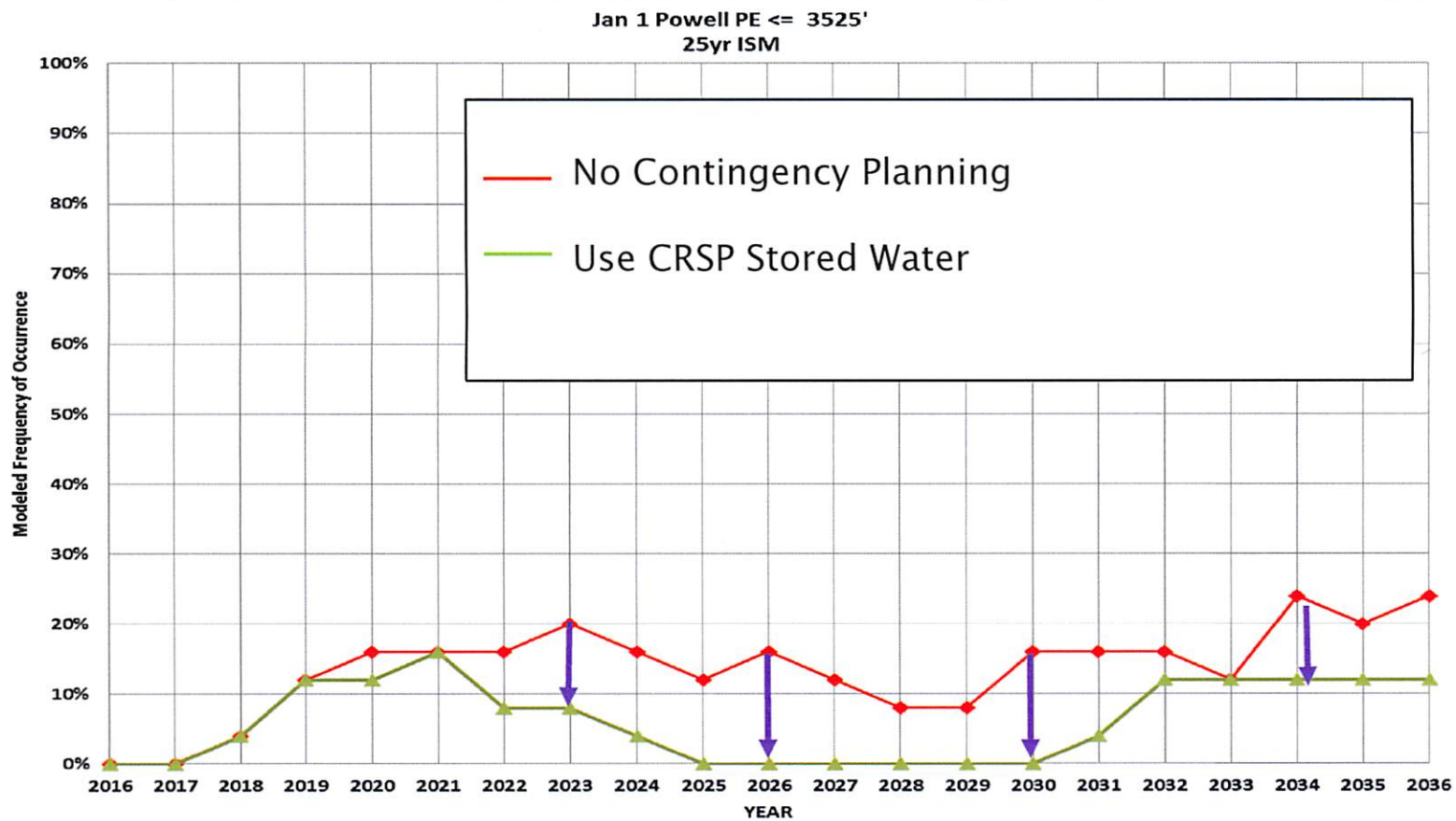
# RISK IS ALSO A FUNCTION OF DEMAND



# IDEALLY, WE WOULD REDUCE RISK TO ZERO

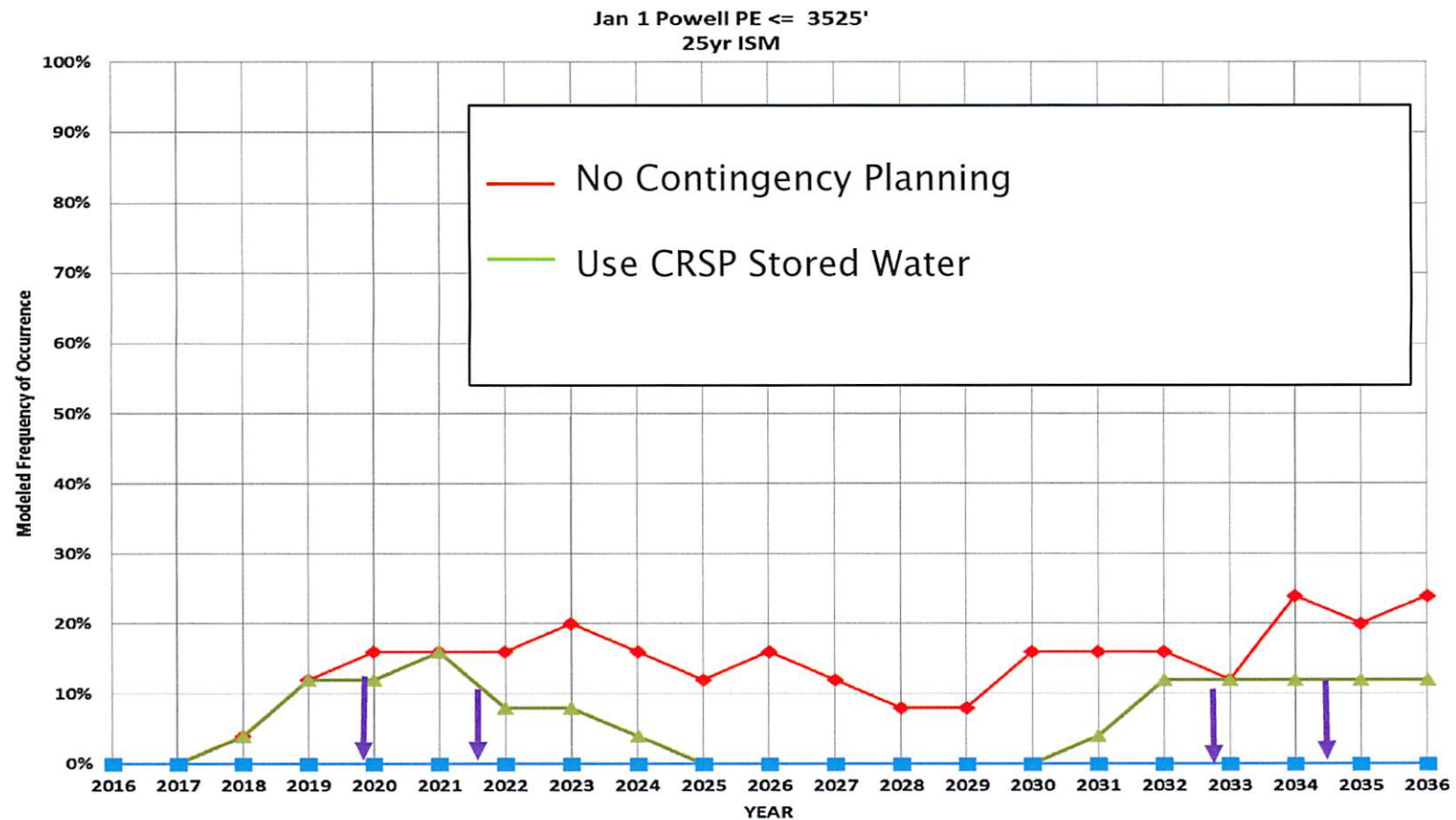


# CRSP DROUGHT OPERATIONS AND LOWER BASIN CONSERVATION REDUCES THE RISK, BUT DOES NOT ELIMINATE IT

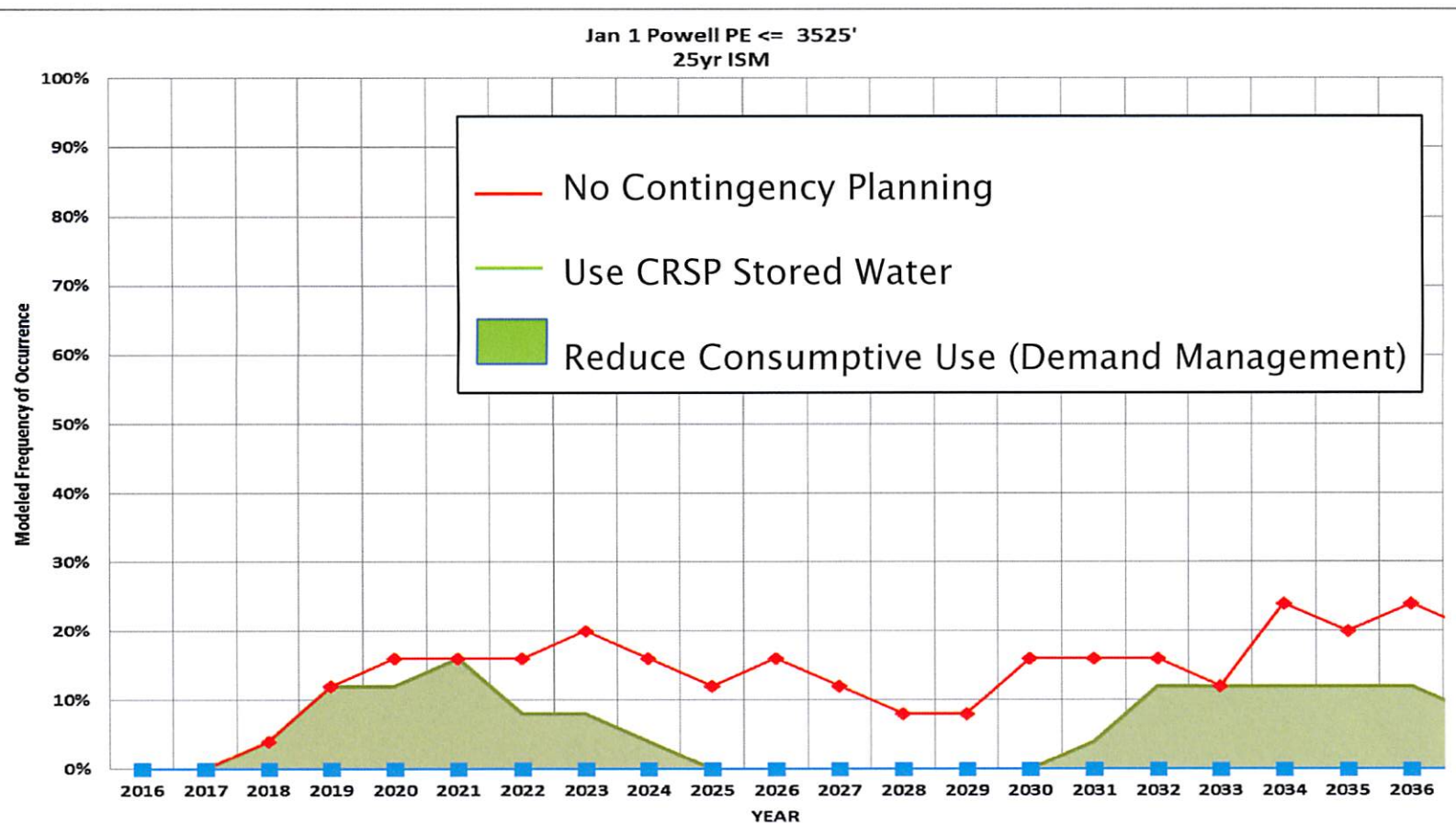




# HOW MUCH ADDITIONAL WATER WOULD BE NEEDED TO ELIMINATE RISK?

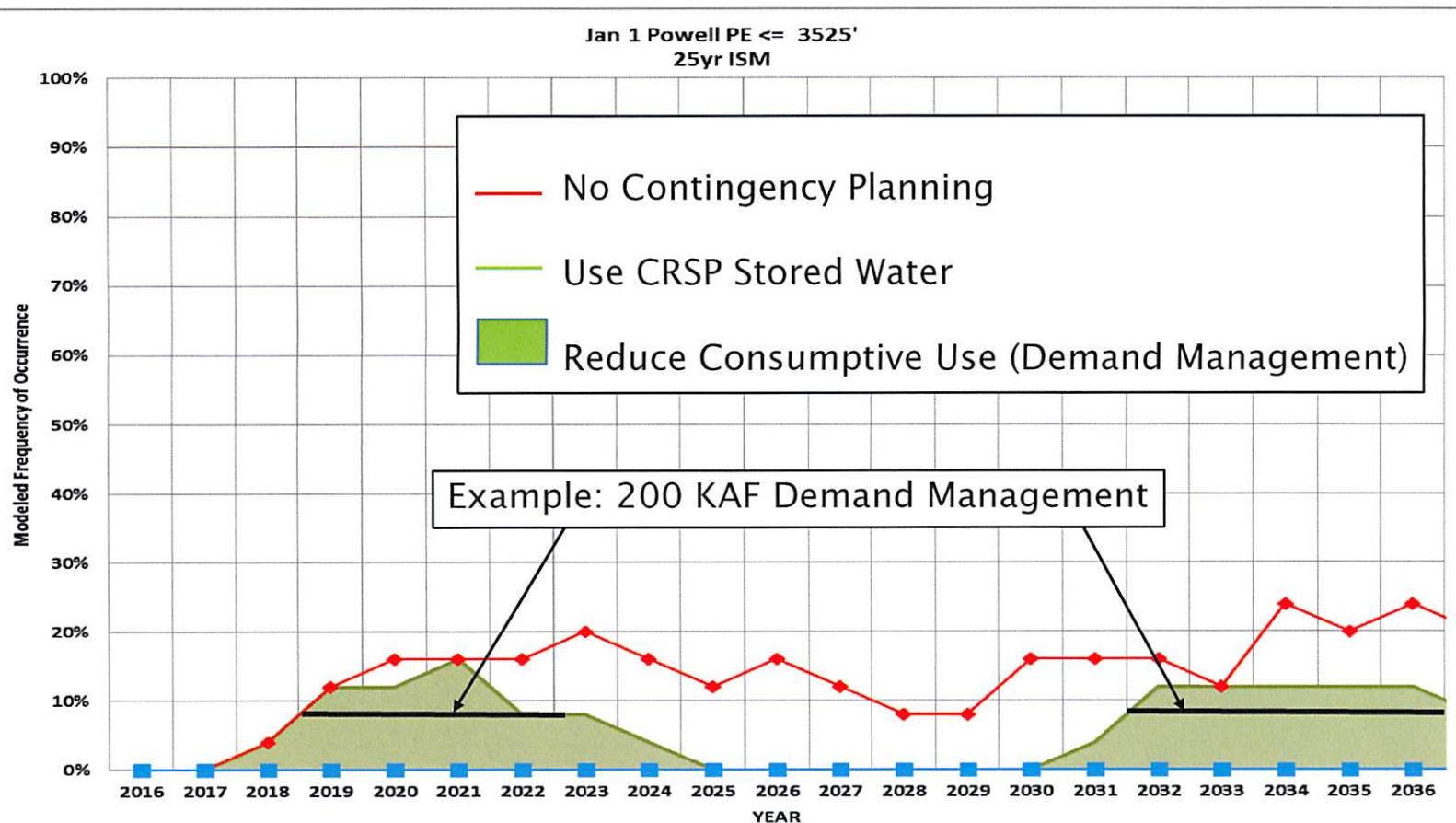


# WE CAN REDUCE RISK FURTHER THROUGH DEMAND MANAGEMENT

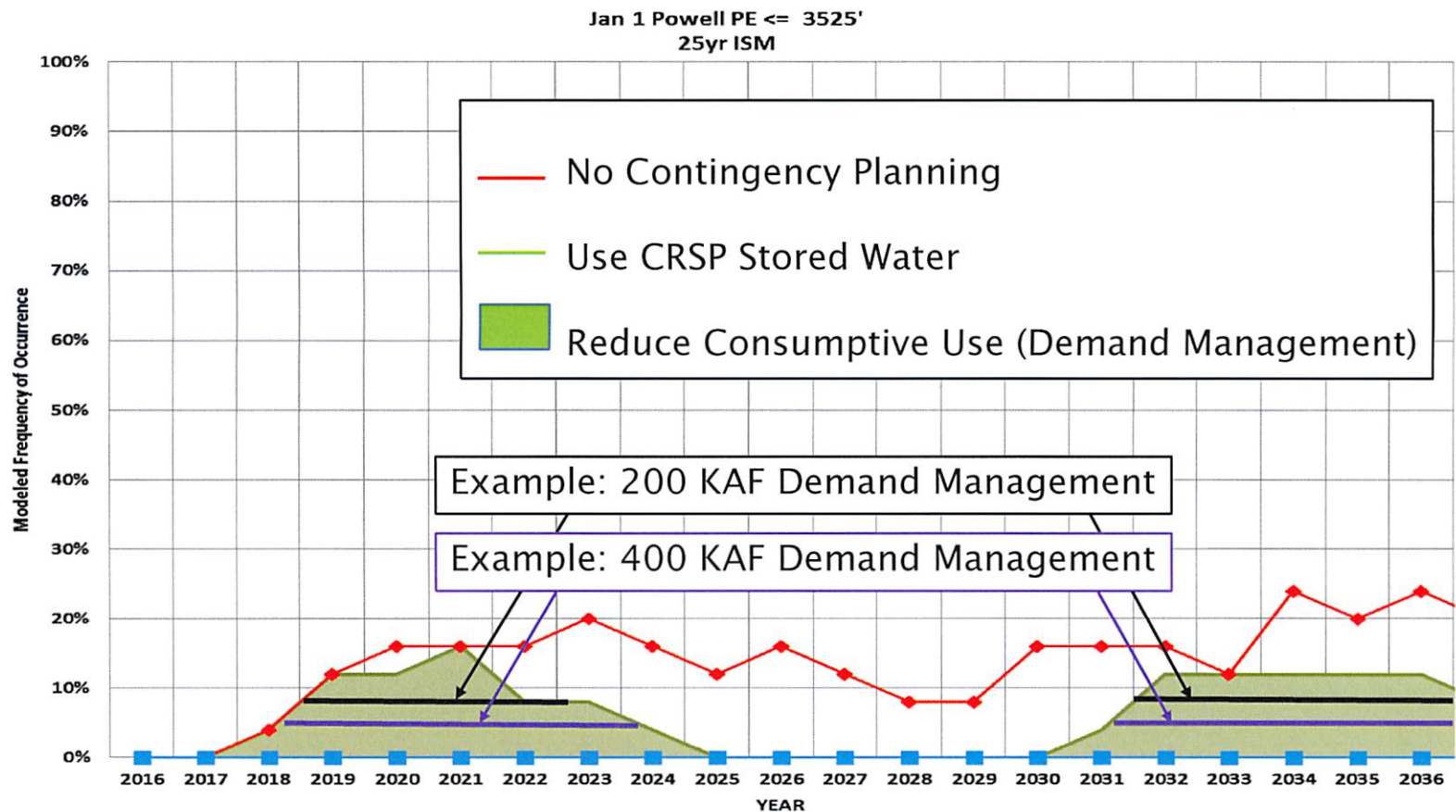




# WE CAN REDUCE RISK FURTHER THROUGH DEMAND MANAGEMENT



# COLORADO AND BRTS NEED TO UNDERSTAND THE RISK, AND BE ABLE TO EVALUATE TRADE-OFFS BETWEEN DEMAND MANAGEMENT COST AND ELIMINATING ALL RISK



# CONCLUSIONS

- Hydrology, Demands and Future Development levels matter, the higher the consumptive use in the UB the higher the risk to all users.
- Contingency Planning is Essential, CRSP reservoir drought operations reduces the risk, but in more severe droughts (e.g., 1988–1993 & 2001–2005), demand management is also required
- Some of the demand management volumes we are seeing in the model are very large and may not be feasible, so we need to consider the “trade-offs” and alternative strategies
- Example: Demand Management Combined with a Water Bank:
  - Could limit the Annual impact to CU by spreading Conservation over many years
  - Would provide greater control over conserved water



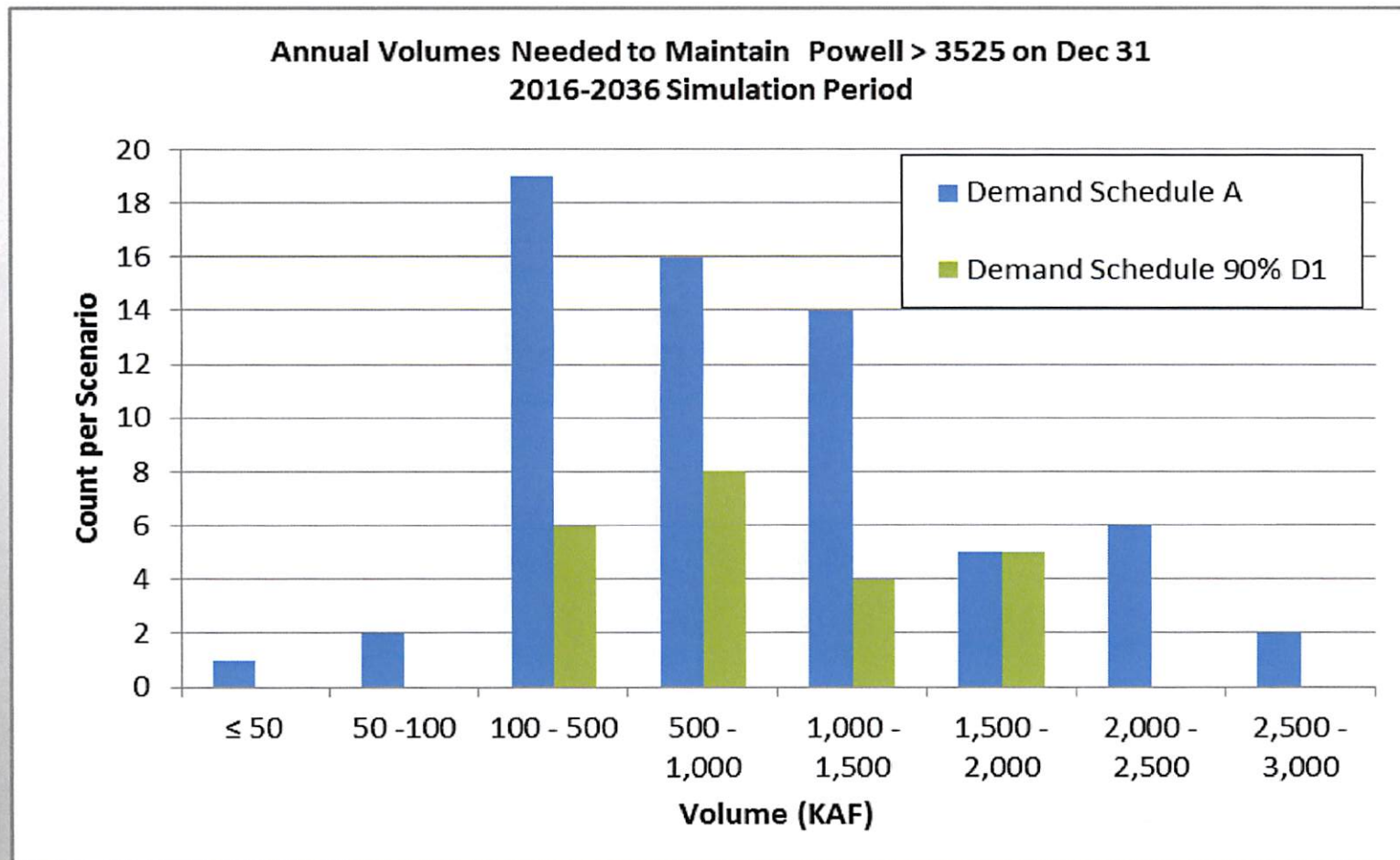
# ONGOING / UPCOMING WORK

- This Project:
  - Evaluate different demand and hydrology data sets
  - Draft report of results for discussion/distribution to BRTs
  - Set the Stage for Colorado-specific and basin-specific analyses.
- Recommendations for future work: Look at sub-basin specifics
  - Statemod coupled with CRSS
  - What would voluntary demand management look like? With or w/o a Bank?
  - What would a compact call (mandatory reductions) look like?
  - How do these impacts vary across sub-basins?
- What are reasonable actions to prepare for?
  - Need to examine cost of acting vs not acting
  - Identify thresholds and “signposts”
  - How much can a water bank help?
  - Economic cost-benefit: Hydropower vs Ag/M&I use?

The image features a light gray background with a subtle, fine-grained texture. In the four corners, there are several realistic water droplets of varying sizes. The droplets in the top-left and bottom-right corners are larger and more prominent, while those in the top-right and bottom-left corners are smaller. Each droplet has a clear highlight and a soft shadow, giving them a three-dimensional appearance.

END

# WHAT WOULD IT TAKE TO COMPLETELY ELIMINATE RISK?



# YWG Basin Roundtable



Date: July 14, 2016

James Eklund  
Director  
Colorado Water Conservation Board  
1313 Sherman St, Room 721  
Denver, CO 80203

Dear James:

I am writing to you on behalf of the Yampa/White/Green Basin Roundtable.

The YWG Basin Roundtable unanimously approved a resolution in support of continuing the Joint West Slope Basin Roundtable Risk Study examining risks of Lake Powell dropping below critical levels, risks of compact shortages, how risks can be reasonably mitigated using measures such as water banking, and including how a compact shortage might be administered within the four west slope basins in Colorado, and recognizing such further study is necessary to support essential policy discussions within and among Basin Roundtables

Sincerely,

April McIntyre  
YWG Basin Roundtable Recorder

# YWG Basin Roundtable



Date: July 14, 2016

Eric Kuhn  
General Manager  
Colorado River Water Conservation District  
201 Centennial, Suite 200  
Glenwood Springs, CO 81601

Dear Eric:

I am writing to you on behalf of the Yampa/White/Green Basin Roundtable.

The YWG Basin Roundtable unanimously approved a resolution in support of continuing the Joint West Slope Basin Roundtable Risk Study examining risks of Lake Powell dropping below critical levels, risks of compact shortages, how risks can be reasonably mitigated using measures such as water banking, and including how a compact shortage might be administered within the four west slope basins in Colorado, and recognizing such further study is necessary to support essential policy discussions within and among Basin Roundtables

Sincerely,

April McIntyre  
YWG Basin Roundtable Recorder

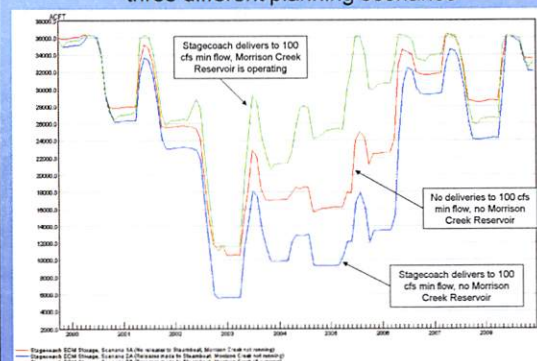


## UYWCD Final Report on WSRA Grant from Yampa/White/Green BRT

- Grant for 25,000 approved by BRT July 2014 (2<sup>nd</sup> reading)
- Funds to be used for Modeling to support UYWCD Water Rights Master Plan
- Diligence Report Filed May 2016
- This presentation shows an example of evaluations made using StateMod Model

www.free-power-point-templates.com

### Example 1: Stagecoach EOM Contents under three different planning scenarios



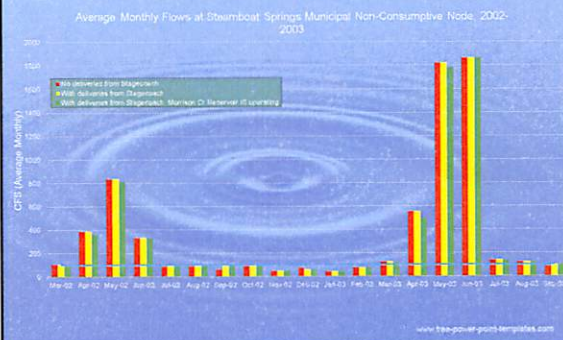
## Upper Yampa Water Conservancy District

StateMod water allocation modelling to support 2016 Water Rights Master Plan

- Resource Engineering, Inc.
- Wilson Water Group
- Upper Yampa Water Conservancy District

www.free-power-point-templates.com

### Example 2: Flows in Yampa River at Steamboat Springs under 3 different planning scenarios



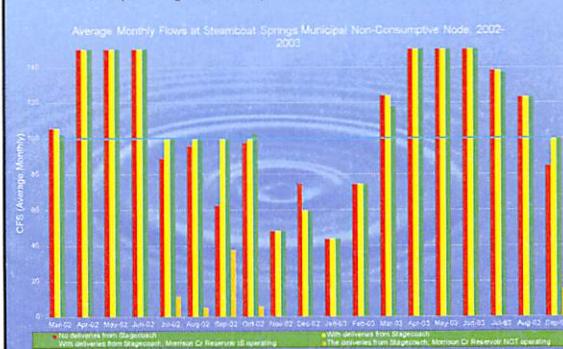
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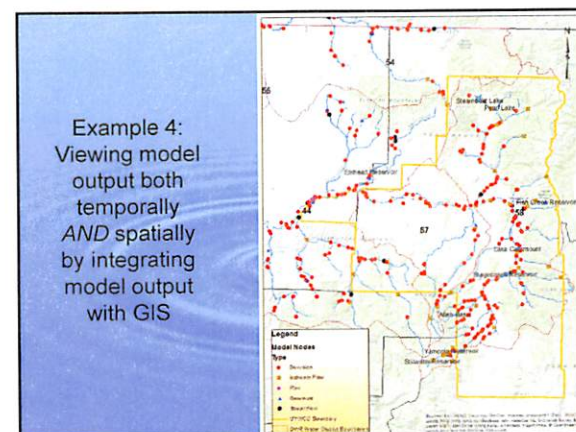
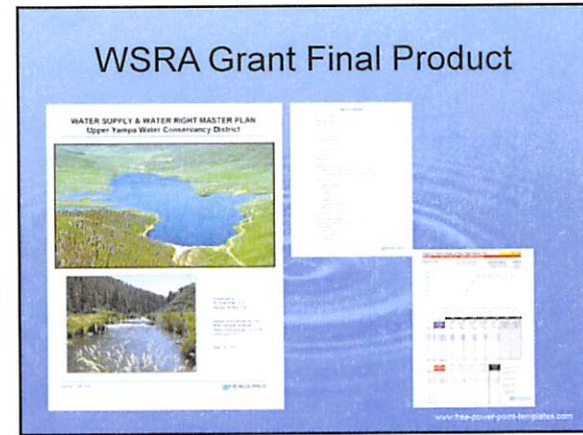
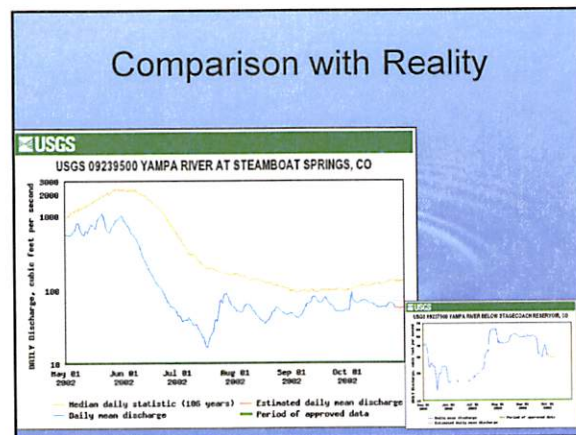
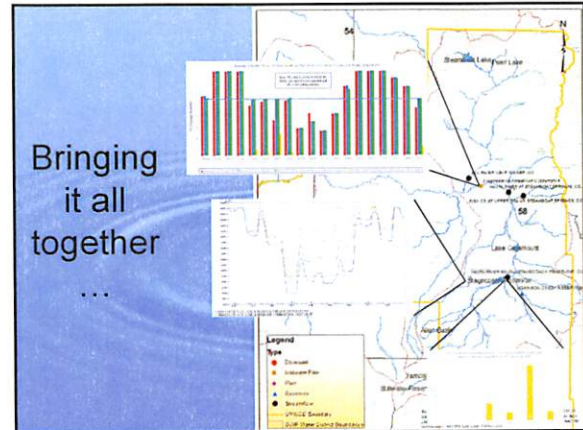
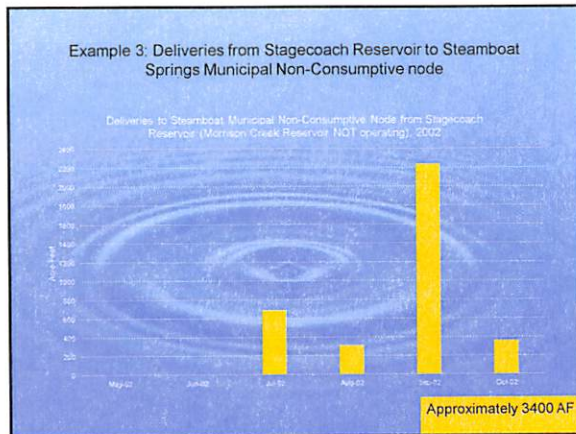
## Model Assumptions for Three Model Runs (simulations)

- Paleo Hydrology: 1,013 years derived from tree ring data at Maybell
- SWSI (2010) High Demand
- Current UYWCD Contractees modeled from Yamcolo and Stagecoach Reservoirs per District's "Fill and Release" Policies
- 2,000 AF Augmentation Pool is being used for unmet needs within the UYWCD
- Comparative model runs include no IPP's, a run with a non-consumptive IPP (maintain 100 CFS Yampa at SS), and a run with non-consumptive IPP and MC Reservoir IPP.

www.free-power-point-templates.com

### Example 2: Flows in Yampa River at Steamboat Springs under 3 different planning scenarios (Chart is limited to 150 cfs for clarity)





**\*Handwritten changes made to Bylaws during July 13<sup>th</sup> meeting\***

Page 3 line 99 – IPP's changed to Implementation Projects & Processes

Page 4 line 139 – 33 changed to 34

Page 4 line 140 – 29 changed to 30

Page 5 line 181 - word Rio indented

Page 8 line 282 – 29 changed to 30

Page 8 line 283 – 30 changed to 31 and 33 changed to 34

Page 15 line 596 – 1 changed to II

Page 16 line 603 – 1

This does not include the 2/3rds majority needed for amending Bylaws. That will be included in the clean copy provided at the September meeting.