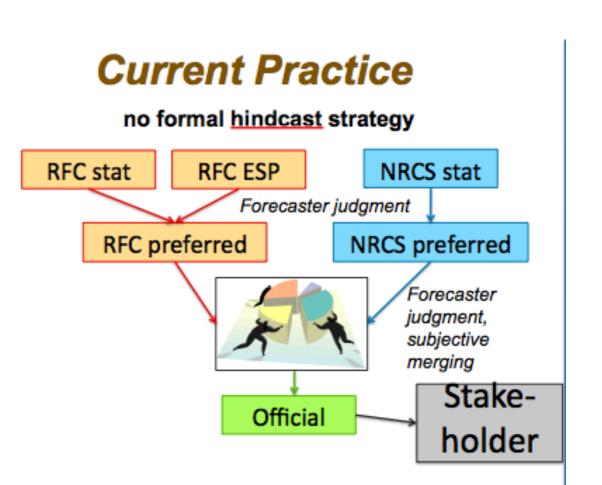
Future of Water Supply Coordination



## Past CBRFC Methods



- Skill primarily from accumulating snow pack
- Updated monthly or semi-monthly
- Probabilistic but not ensemble based
- Not repeatable
- Subjective
- Forecaster Role:
  - Monitor forecast process and system
  - Add judgement to forecast process



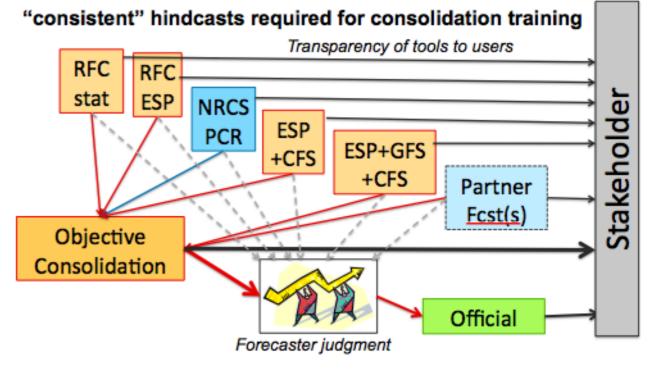


## Future CBRFC Methods



- Objective, repeatable ensemble forecasts
- Integrate skill from weather and climate predications
- Tailor to stakeholder thresholds and concerns
- Forecaster role:
  - Monitor forecast process and system
  - Apply judgement (less frequently?)
  - Decision support
  - Work to improve forecast system and processes based on objective standards
  - Follow best practices identified by CPC











Coordination becoming obsolete

- Slows down the process
- Not feasible with frequent updates
- Verification does not clearly show benefit

Use Objective Combination Method

- Ability to bring in new models
- Reproducible
- More scientifically sound
- Still need hydrologists input





- -Users will have access to all model output ESP, SWS, NRCS, etc.. new ones?
- –NWS (CBRFC) will also provide an official forecast:
  - Objective Combination Methodology with forecaster oversight, approval, and explanation.



## Early Prototype



1 other viewer

## CBRFC Water Supply Forecast Analysis 🕸

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fx | January Most Probable

10	bandary most ribbable																				2
	A	В	С	D	E	F	G	н	L	J	к	L	M	Ν	0	Р	Q	R	S	Т	U
1	January Most Probable																				
2	Forecast Point			ESP		SWS		Multi		CBRFC			NRCS			Coordinated		Average	Comments		
3	Name	ID	SB	5 da	ys	no C	2PF			esp/s	sws	Preferred	1	Daily	Statics	Preferre	d	Suggested		30 Yr	
4	Settlement Ck - Tooele; Nr	SCTU1			0%		0%		0%	0	0%	C	%				0%		0%	2.1	
5	Smith And Morehouse Ck - Oakley; Nr	SMOU1			0%		0%		0%	0	0%	C	%				0%		0%	34	
6	Chalk Ck - Coalville	CIVU1	BR	74	163%	66	147%		0%	37	82%	C	%				0%		0%	45	
7	Weber - Coalville; Nr	CLLU1	BR	203	147%	195	141%		0%	101	73%	C	%				0%		0%	138	
8	Lost Ck - Lost Ck Res; Croydon; Nr	CRAU1	BR	21	117%	18	100%		0%	10	58%	C	%				0%		0%	17.6	
9	Weber - Echo Res; Echo; At	ECBU1	BR	279	155%	263	146%		0%	140	78%	C	%				0%		0%	180	
10	Weber - Oakley; Nr	OAWU1	BR	170	138%	159	129%		0%	85	69%	C	%				0%		0%	123	
11	Little Bear - Paradise	PRZU1	BR	90	196%	67	146%		0%	45	98%	0	%				0%		0%	46	
12	Weber - Rockport Res; Wanship; Nr	RKUU1	BR	198	143%	189	137%		0%	99	72%	0	%				0%		0%	138	
13	Sevier - Hatch	HATU1	SC	101	184%	106	193%		0%		92%		%				0%		0%	55	
14	Sevier - Piute Dam; Blo; Marysvale; Nr	MYSU1	SC		0%		0%		0%	0	0%	0	%				0%		0%	91	
15	Ef Sevier - Kingston; Nr	SEFU1	SC		0%		0%		0%	0	0%		%				0%		0%	35	
16	Sevier - Kingston; Nr	SEKU1	SC		0%		0%		0%	0	0%	0	%				0%		0%	33	
17	Vernon Ck - Vernon; Nr	VCVU1	SC		0%		0%		0%	0	0%	0	%				0%		0%	1.48	
18	S Willow Ck - Grantsville; Nr	WCGU1	SC	4	124%	3	92%		0%	2	62%		%				0%		0%	3.2	
19	Big Cottonwood Ck - Salt Lake City; Nr	BCTU1	UL	44	116%	41	109%		0%		58%		%				0%		0%	38	
20	City Ck - Salt Lake City; Nr	CCSU1	_		143%		133%		0%		72%		%				0%		0%	8.7	
21	Dell Fk - Little Dell Res		UL		135%		111%		0%		68%		%				0%		0%	6.8	
22	Emigration Ck - Salt Lake City; Nr	EMIU1	UL	7	149%	5	107%		0%		74%		%				0%		0%	4.5	
23	Little Cottonwood Ck - Salt Lake City; N	LCTU1	UL		125%		114%		0%		62%		%				0%		0%	40	
24	Mill Ck - Salt Lake City; Nr	MILU1	UL	8	111%	7	102%		0%	4	56%		%				0%		0%	7	
25	Parleys Ck - Salt Lake City; Nr	PRLU1	UL		132%		113%		0%		66%		%				0%		0%	16.7	
26	Jordan - Utah Lake; Provo; Nr	UTLU1	UL		178%		172%		0%	293			%				0%		0%	330	
27	American Fork - American Fork; Nr; Up		WB		156%		131%		0%		78%		%				0%		0%	32	
28	Spanish Fork - Castilla; Nr		WB		164%	136			0%		82%		%				0%		0%	77	
29	Provo - Deer Ck Res	DCRU1	_				151%		0%	106			%				0%		0%	126	
30	East Canyon Ck - East Canyon Res; Mo				173%		134%		0%	27	87%		%				0%		0%	31	
31	Weber - Gateway		WB	577			142%		0%	288			%				0%		0%	355	
32	Sf Oaden - Huntsville: Nr	OGHU1	WR	95	149%	83	130%		0%	48	74%	0	%				0%		0%	64	







- –2012 old forecast method (coordination with NRCS), and skeleton of new methods in parallel, accessible by stakeholders
  - Explanation when Objective Combination not acceptable
  - Ongoing development during water supply forecast season
  - Goal: Combination method and component forecasts accessible to forecasters and stakeholders
- -2013 New method only