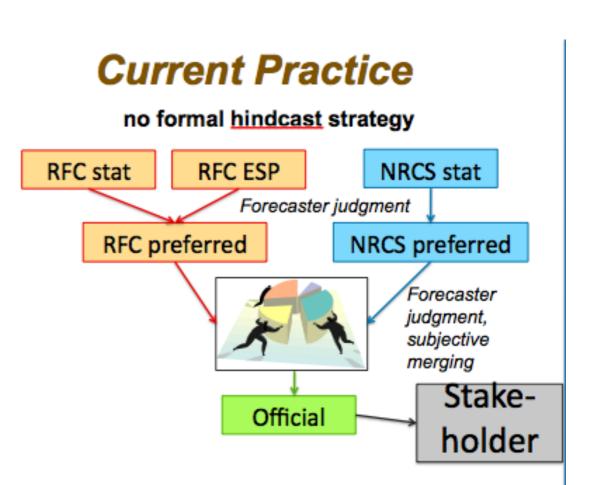
Future of Water Supply Coordination



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



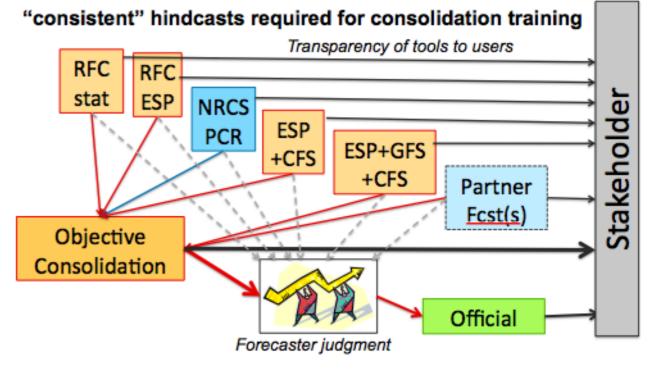


Future CBRFC Methods



- 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