NOAA
National
Weather
Service

CBRFC Operations Update
Water Year 2020

CRFS November 21, 2019

CBRFC Operations Update

- Model Calibration Updates
  - Current
  - Planned
- Data Network Updates
  - USGS Precipitation
  - WYSEO Streamflow
- ESP Trace Files on the Web
- Interactive Graphic Snapshot
- Interactive Hydrographs
- Basin Focal Points

Current Model Calibration Updates

- Lower Colorado Basin:
  - Salt River - installed September 2019
    - 1981-2017 (recalibration/extension)
  - Colorado River below Havasu - completed; will be installed by end of year
    - 1981-2017 (new)
    - new segments; just route water downstream to Imperial Dam
  - Virgin River - completed; will be installed by end of year
    - 1981-2017 (new/extension)
    - new segments to account for increased water storage/use
    - will run reforecasts for intervening flow after installation (1981-2010)
  - Upper Gila River - in progress; will be installed by end of year
    - 1981-2017 (recalibration/extension)
- Upper Colorado Basin:
  - Roaring Fork - will be installed by end of year
    - 1981-2015 (recalibration)
    - addresses dry model bias above Ruedi Reservoir

Planned Model Calibration Updates

- Recalibrate upper basin (UC, GB) through 2020 (more than just extending years)
  - Preliminary work will begin next summer
    - Basin delineation / GIS analysis
    - Data collection & quality control (streamflow, temperature, precipitation, etc..)
    - Basin research (diversions/irrigation/etc..)
    - Station (temperature/precipitation) selection & weighting
    - Water balance analysis
  - New data and methodologies
    - Include additional SNOTEL stations with adequate periods of record
    - Include additional known/measured diversions that are now gaged (fewer assumptions)
    - Incorporate JPL re-processed snow covered area (SCA) data
    - Incorporate lessons learned from ASO and NWM
  - Plan to have new calibrations in place for WY22
    - Any new segment requests should be made as soon as possible so we can investigate the possibility for inclusion
    - 30-year normals will shift to 1991-2020
    - ESP will use 1981-2020 forcings (40 traces)

Data Network Updates

- USGS Precipitation Gages funded by USBR (29)
  - Remainder were installed by end of May 2019
  - We are receiving data
    - Incorporated into our observed daily precipitation maps
    - Can be used in model during summer months
- Wyoming State Engineers Office Streamflow Gages (23)
  - Conversion to GOES funded by USBR
  - Most were transmitting by end of summer
    - ~5 not running yet
  - Hope to get rating curves by next spring

ESP Trace Files on the Web

Old Method

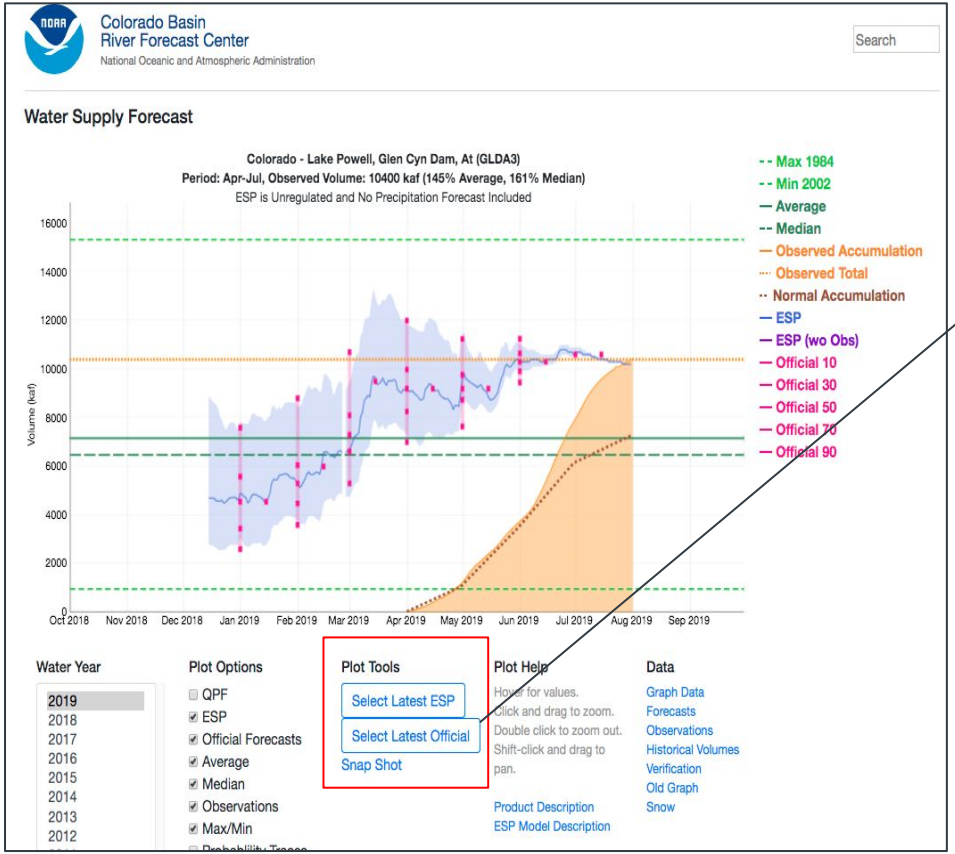
- Multiple locations
  - based on basin
  - different locations for daily and monthly files
- Multiple file formats
  - tab delimited
  - csv
- No standard naming convention
- ESP type availability not standard
- Daily ESP 1 year posted 1-2x/week

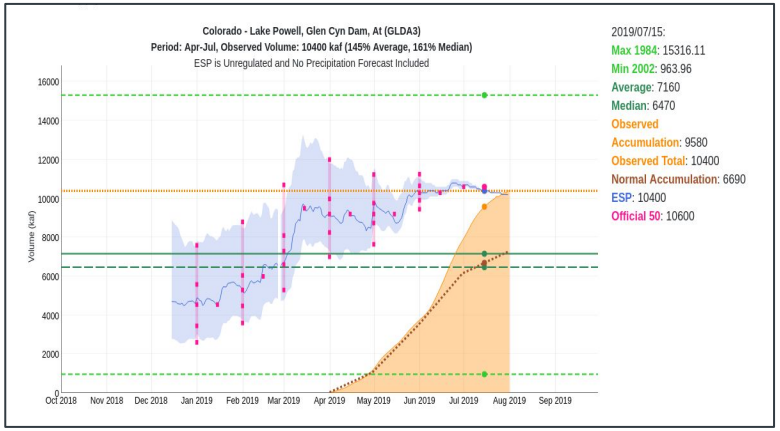
Note:
'old method' files will continue to be created for now

New Method

- One location
  - https://www.cbrfc.noaa.gov/outgoing/ucbor/
- One file format (csv)
- Standard naming convention
  - *hb5id.type.length.(raw/adj).csv*
    - Daily, 1 year, raw (every day)
      - *hb5id.*espdly.1yr.csv
    - Daily, 5 year, raw (first of month)
      - *hb5id.*espdly.5yr.csv
    - Monthly, 5 year, raw/adjusted (first of month)
      - *hb5id.*espmvol.5yr.adj.csv
  - See file idmaplist.csv for *hb5id* mapping
- All file types created for all sites, except:
  - 'adj' files only available for monthly MTOM inputs
  - Powell inflow only available as monthly volume
- Daily ESP 1 year posted every day

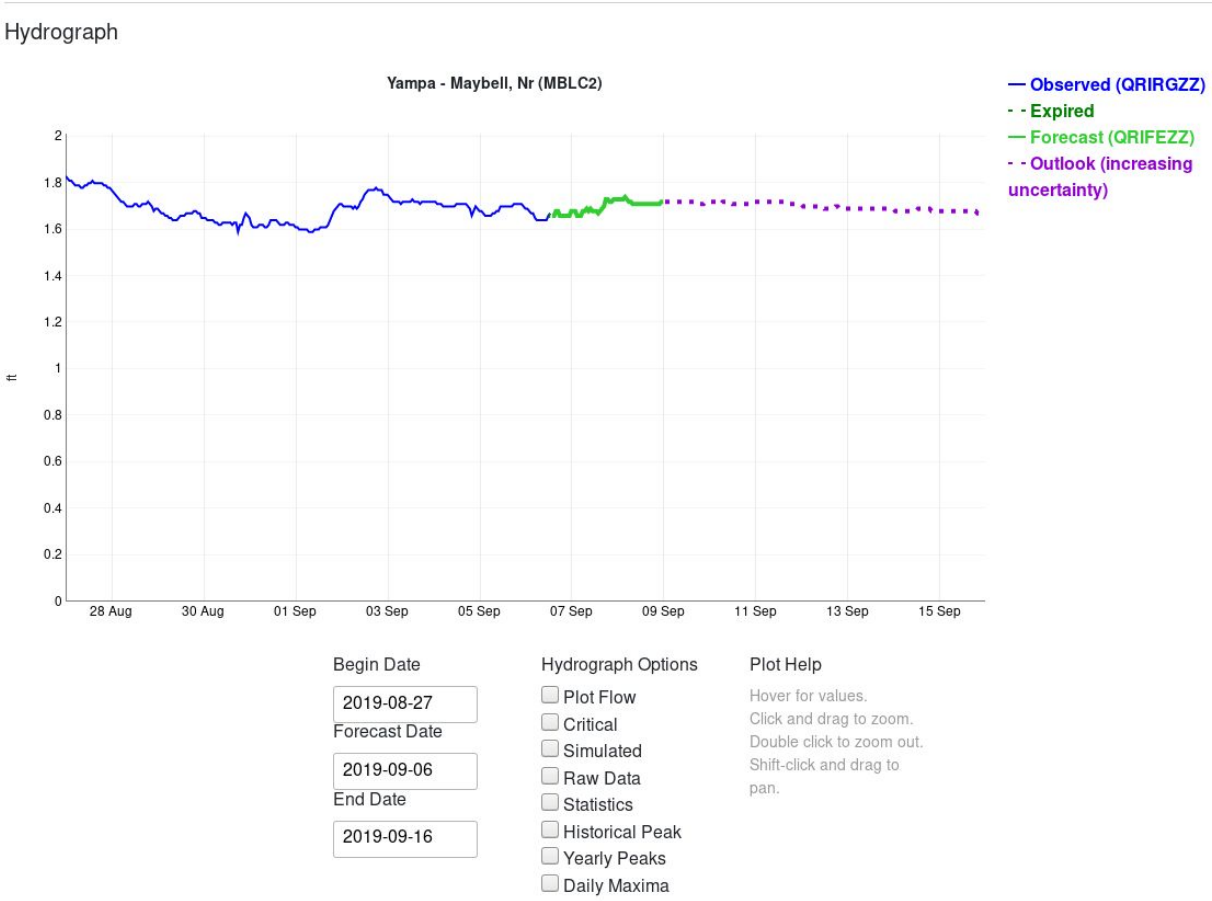
Interactive Graphic Snapshot





- Option now available to easily save the Water Supply Forecast graphic
  - Latest ESP
  - Latest Official
- Will be available for other interactive graphics on the webpage
  - Model snow
  - Hydrographs

Interactive Hydrographs



- Has the same hover and zoom capabilities as our other interactive graphs (Water Supply, Model Snow).
- Working to ensure it has the same information and links that are available on current hydrographs.
- New: ability to show previous forecasts and to more easily select a specific date range.
- Goal is to have these operational by the spring runoff season.

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