

## WC Duties

- Day to Day Administration
  - Setting the Call Based on Supply and Demand
  - Assuring Diversions In Priority For Decreed Uses
  - Delivery of Augmentation and Other Water
  - Operating Exchanges
  - Assuring Diversions Are Measured
  - Dealing with Complaints/Questions/Other Public Relations
  - Assuring Compliance with Other Decree Conditions
  - Compiling Diversion Records



**COLORADO**  
Division of Water Resources  
Department of Natural Resources

## Administration of Tributary Water Rights

- Legislature – laws
- Court of Appropriate Jurisdiction – all tributary water rights in Colorado established through a court decree
- Division of Water Resources = State Engineer's Office
  - Rules, policies, procedures
  - Administration of the court decrees
- A Water Commissioner is the in-field representative of the SEO
  
- Tributary water = water (both surface & ground) that naturally would flow to a stream
  - All water in the Big Thompson Basin is considered tributary, unless shown otherwise



**COLORADO**  
Division of Water Resources  
Department of Natural Resources

## Division of Water Resources Responsibilities

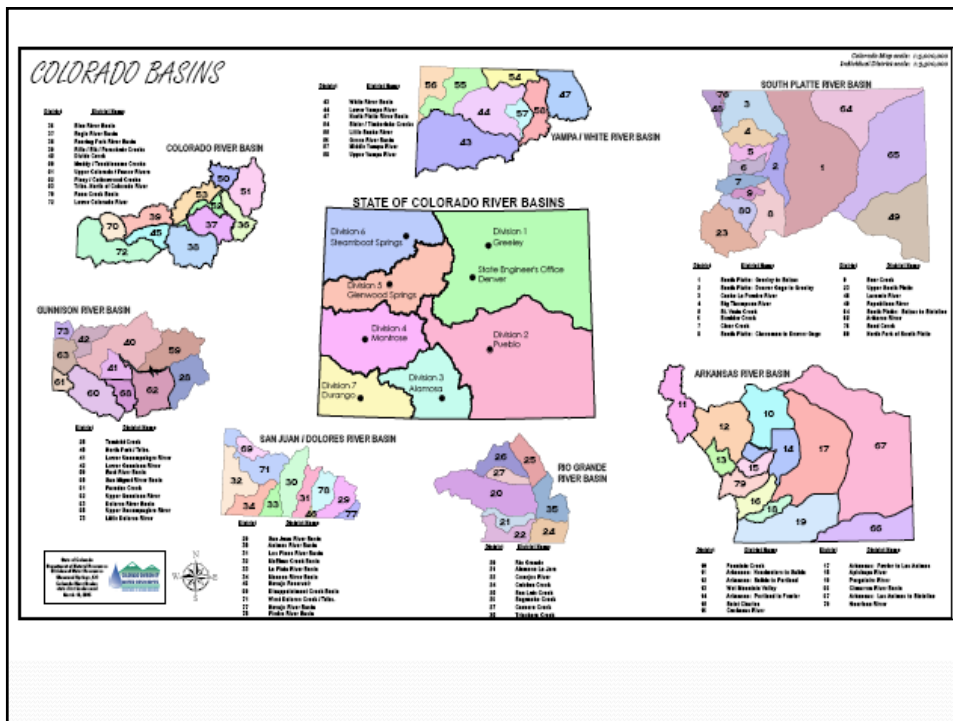
- DWR = State Engineer's Office (SEO)
- Water Administration (surface and ground water)
- Public Safety (dams & wells)
- Ground Water Well Permitting
- Interstate Compacts
- Hydrographic Program
- Public Information Services
- Special Studies



**COLORADO**  
Division of Water Resources  
Department of Natural Resources

# State Engineer's Office

- Each WC administers one or more of the smaller river basins
- 1879: The legislature established the position of Water Commissioner to distribute water rights
- 1881: SEO, created by legislature, is responsible for water rights administration and distribution
- 1889:
  - A water commissioner in discharging his duties is vested with the power of a constable, and is authorized to arrest any person violating his orders
  - It is hereby made the duty of the water commissioner, after being called upon to distribute water, to devote his entire time to the discharge of his duties



## Doctrine of Prior Appropriation

- ***First in time, first in line***
- those that put the water to use first are entitled to get their water first
- Water must be put to a beneficial use
- In Colorado, the priority of a water right is determined by **BOTH** the date when the water was first put to a beneficial use **and** the date when the right was decreed by the Water Court
- This is opposed to the Riparian Doctrine that recognizes water rights as being attached to lands adjacent to the river.



## How is the Line created?

- Only a court can create a tributary water right.
  - The Court identifies all the attributes of that water right
- The SEO takes each decree and determines its place in line
  - Each place in line is given a Priority Administration No.
  - The smaller the Admin #, the more senior is the water right
- The WC figures out who gets water based on this line
  - = that is **The Call**
- First water right on the Big Thompson River:
  - Big Thompson Ditch, Nov 10, 1861 , Admin # 4332





## Must have a decree to have a tributary water right

- At minimum, a decree must have the following:
- Dates
  - Appropriation date = when water 1<sup>st</sup> put to beneficial use
  - Adjudication date = when went to court to establish the use
- Use(s)
- Flowrate(s)
- Locations of use, points of diversion
- Need the dates to slot the WR into the correct location in the line, which is the admin #
- 'Junior' water right = larger admin #
- 'Senior' water right = smaller admin #



**COLORADO**  
Division of Water Resources  
Department of Natural Resources

## The Call

- The determination of the most junior water right that can divert water, given the supply & demand
  - This is the daily mechanism by which the prior appropriation doctrine is administered
- Typically 'set' once a day on the Big Thompson
- The WC posts the Call



**COLORADO**  
Division of Water Resources  
Department of Natural Resources

# How A WC Sets The Call-Supply

<http://www.dwr.state.co.us/Surfacewater/default.aspx>

- Day's supply of water in the river
- Use stream gauges BTABESCO  
BTNFDRCO  
BIGLOVCO
- This is not the official record

District	Big Thompson River	Parameter	Gage Ht.	Value	Date/Time
ADATKDCO	ALVA B. ADAMS TUNNEL AT EAST PORTAL NEAR ESTE...	DISCHRG	2.41 ft	240 cfs	9/12/2017 14:00
ADATKDCO	INCHD: Bureau of Reclamation (Station Cooperation)				
SARESTCO	BARNES DITCH DIVERSION	DISCHRG	0.07 ft	1.08 cfs	9/12/2017 03:00
SARESTCO	Cooperative Program of CDWR, INCHD & LSPWCD				
NEEDTDCO	BEELINE DITCH	DISCHRG	0.03 ft	17.83 cfs	9/12/2017 03:00
NEEDTDCO	Cooperative USB Program of CDWR & INCHD				
INGRITCO	BIG THOMPSON AND MANUFACTURING DITCH	DISCHRG	0.03 ft	11.92 cfs	9/12/2017 02:45
INGRITCO	Cooperative USB Program of CDWR & INCHD				
INGRILCO	BIG THOMPSON RIVER AT HILLSBOROUGH DIVERSION	DISCHRG	0.22 ft	31.2 cfs	9/12/2017 03:30
INGRILCO	BIG THOMPSON RIVER AT SOUTH NEAR LA SALLE	DISCHRG	1.36 ft	36.8 cfs	9/12/2017 03:30
INGRILCO	BIG THOMPSON RIVER AT CLEVELAND	DISCHRG		73.9 cfs	9/12/2017 03:30
INGRILCO	U.S. Geological Survey (Data Provider)				
BLVHFTCO	BLUHER DITCH	DISCHRG	0 cfs	0 cfs	9/12/2017 03:00
BLVHFTCO	Cooperative USB Program of CDWR & INCHD				
BOULDFCO	BOULDER LARNER BYPASS NEAR BERTHOOD	DISCHRG	0.17 ft	3.62 cfs	9/12/2017 14:15
BOULDFCO	BOULDER LARNER DITCH NEAR BERTHOOD	DISCHRG	0.11 ft	0 cfs	9/12/2017 03:30
BTABESCO	BIG THOMPSON RIVER ABOVE CANYON MOUTH AT CEDAR...	DISCHRG	4.98 ft	287 cfs	9/12/2017 02:15
BTABESCO	BIG THOMPSON RIVER ABOVE LAKE ESTES	DISCHRG	1.30 ft	84 cfs	9/12/2017 03:30
BTABESCO	INCHD: Bureau of Reclamation (Station Cooperation)				
BTNFDRCO	BIG THOMPSON RIVER BELOW LAKE ESTES	DISCHRG	2.71 ft	385 cfs	9/12/2017 14:00
BTNFDRCO	INCHD: Bureau of Reclamation (Station Cooperation)				
BTNFDRCO	BIG THOMPSON BL MCKINBE FARM NEAR ESTES PARK CO.	DISCHRG		24.2 cfs	9/12/2017 03:45
BTNFDRCO	U.S. Geological Survey (Data Provider)				
BTNFDRCO	NORTH FORK BIG THOMPSON RIVER AT DRAKE	DISCHRG	2.31 ft	42.3 cfs	9/12/2017 03:30
BTNFDRCO	INCHD: Bureau of Reclamation (Station Cooperation)				
BTPLADCO	BIG THOMPSON AND PLATTE DIVERSION	DISCHRG	0.88 ft	26.08 cfs	9/12/2017 02:45
BTPLADCO	Cooperative Program of CDWR, INCHD & LSPWCD				
BTPLADCO	BIG THOMPSON AND PLATTE BYPASS STATION	DISCHRG	0.99 ft	16.95 cfs	9/12/2017 02:45
BTPLADCO	Cooperative Program of CDWR, INCHD & LSPWCD				
BTPLADCO	USBR POWER PLANT AT BIG THOMPSON CANYON MOUTH	DISCHRG		159 cfs	9/12/2017 03:30
BTPLADCO	INCHD: Bureau of Reclamation (Station Cooperation)				
BUCRNDCO	BURCHEN CREEK NEAR WOODVILLE	DISCHRG	6.33 ft	124.8 cfs	9/12/2017 03:30
BUCRNDCO	INCHD: Bureau of Reclamation (Station Cooperation)				
CARTERCO	CARTER RESERVOIR	STORAGC	5728.64 ft	7897.4F	9/12/2017 03:15
CARTERCO	INCHD: Bureau of Reclamation (Station Cooperation)				
COLENTCO	COLEB DITCH	DISCHRG	0 cfs	0 cfs	9/12/2017 03:00
COLENTCO	Cooperative USB Program of CDWR & INCHD				
DULTKDCO	DALLE TUNNEL NEAR DRAKE	DISCHRG	3.17 ft	209 cfs	9/12/2017 03:30
DULTKDCO	INCHD: Bureau of Reclamation (Station Cooperation)				

# How A WC Sets The Call-Demand

- Anyone who wishes to divert water MUST first request to do so from the water commissioner (limited by decree)
- Returns to the river should also be known
- Every user needs to know where they are both physically and legally in relation to the call, this tells them whether they are 'in priority' and can take water or 'out of priority' and cannot

# How A WC Sets The Call-Publish

8am July 18, 2017, the Calls on the Big Thompson River are:  
 Big T & Platte Ditch: **Admin #7598** (GLIC, 10/20/1870, Priority 17),  
 affects Big Thompson u/s of Big T & Platte ditch  
 Downstream of Big T & P Ditch: **Admin # 20969**, (5/31/1907,  
 Harmony Ditch)

- Call Location - the dry-up point / sweeping the river
- Calling Right - gives the water right being curtailed
- A bypass exists when a user may only divert a portion of their appropriation under that priority and must bypass the remainder of the water.



# CDSS Administrative Calls Page

<https://www.dwr.state.co.us/CDSS/>

**COLORADO**  
 Decision Support Systems  
 Colorado Water Conservation Board / Division of Water Resources

---

Administrative Calls

Administrative Calls ▼

**Filters**

Active  Historic

Within Geographical Area  
 Water Division ▼ 1 - South Platte ▼

Additional  
 None ▼

**Additional Resources**

[Advanced Filtering Options](#)

[Priority Listing Report](#)

Admin Scenario	Date/Time Set	Water Source Name	Location WRID	Location Structure Name	Priority WRID	Priority Structure Name	Priority Admin No	Priority Date
CALL	9/12/2017 8:00 AM	SOUTH-PLATTE RIVER	0220825	HEWES COOK DITCH	0220808	RULTON DITCH	9686.00000	07/08/1876 1
CALL	9/11/2017 12:00 PM	SOUTH-PLATTE RIVER	6400511	HARMONY DITCH 1	0100519	TREMONT DITCH	18009.00000	01/17/1902 C
CALL	9/7/2017 8:00 AM	SAINT VRAIN CREEK	0300553	HAGERS MEADOW DITCH	0500547	OLGAROHY DITCH	5996.00000	06/01/1866 8
CALL	9/6/2017 8:00 AM	CACHE LA POUVRE RIVER	0300931	B HEATON DITCH	0300919	LARIMER WELD IRR CANAL	6300.00000	04/01/1867 C
UPSTREAM JUNIOR CALL	9/5/2017 4:00 PM	SOUTH-PLATTE RIVER	0801998	LITTLETON BOAT CHUTE NO 9	0801998	LITTLETON BOAT CHUTE NO 9	53295.51713	12/31/1993 9
CALL	9/4/2017 8:15 AM	BOULDER CREEK	0600528	GREEN DITCH	0600528	GREEN DITCH	4841.00000	09/15/1862 1
CALL	9/4/2017 8:00 AM	BIG THOMPSON RIVER	0400502	BIG T PLATTE R DITCH	0400519	FARMERS IRRIGATION CANAL	5335.00000	05/01/1864 0
CALL	9/4/2017 8:00 AM	CLEAR CREEK	0700549	COLO AGRICULTURAL D	0700652	ROCKY MOUNTAIN DITCH	5265.00000	05/31/1864 V
CALL	9/4/2017 8:00 AM	BEAR CREEK	0900731	HARRIMAN DITCH	0900731	HARRIMAN DITCH	7015.00000	03/16/1869 0
CALL	8/30/2017 8:00 AM	TURKEY CREEK	0900767	INDEPENDENT HIGH-LINE DITCH	0900767	INDEPENDENT HIGH-LINE DITCH	4688.00000	11/01/1862 C
CALL	8/29/2017 12:00 PM	SOUTH-BOULDER CREEK	0600582	JONES DONNELLY DITCH	0600575	EAST BOULDER DITCH	4474.00000	04/01/1862 8
CALL	8/22/2017 8:00 AM	CACHE LA POUVRE RIVER	0300937	OGUY DITCH	0300929	NEW CACHE LA POUVRE CO DITCH	7604.00000	10/26/1870
CALL	8/21/2017 8:00 AM	BOULDER CREEK	0600551	RURAL DITCH	0600532	HIGHLAND SOUTH SIDE DITCH	5631.00000	06/01/1865 1
CALL	8/20/2017 12:00 PM	SOUTH-PLATTE RIVER	6499999	SOUTH-PLATTE RIVER COMPACT	6499999	SOUTH-PLATTE RIVER COMPACT	17392.00000	06/14/1897 0
CALL	8/19/2017 8:00 AM	LITTLE THOMPSON RIVER	0400600	OSBORNE CANYWOOD DITCH	0400600	OSBORNE CANYWOOD DITCH	4170.00000	06/01/1861 0

Viewing: 1 - 15 of 15 Results    Page Size: 20 ▼

## Conditions a WC Reviews Prior to Setting the Call

- User must be in priority
- Water diverted by user must be used in accordance with the decree terms and conditions
- Water cannot be wasted
- User must have an acceptable headgate and an accurate measuring device
- Must determine whether user can get the water they are asking for without setting a call
- Must determine whether user will get the water they are calling for by curtailing upstream junior rights



**COLORADO**  
Division of Water Resources  
Department of Natural Resources

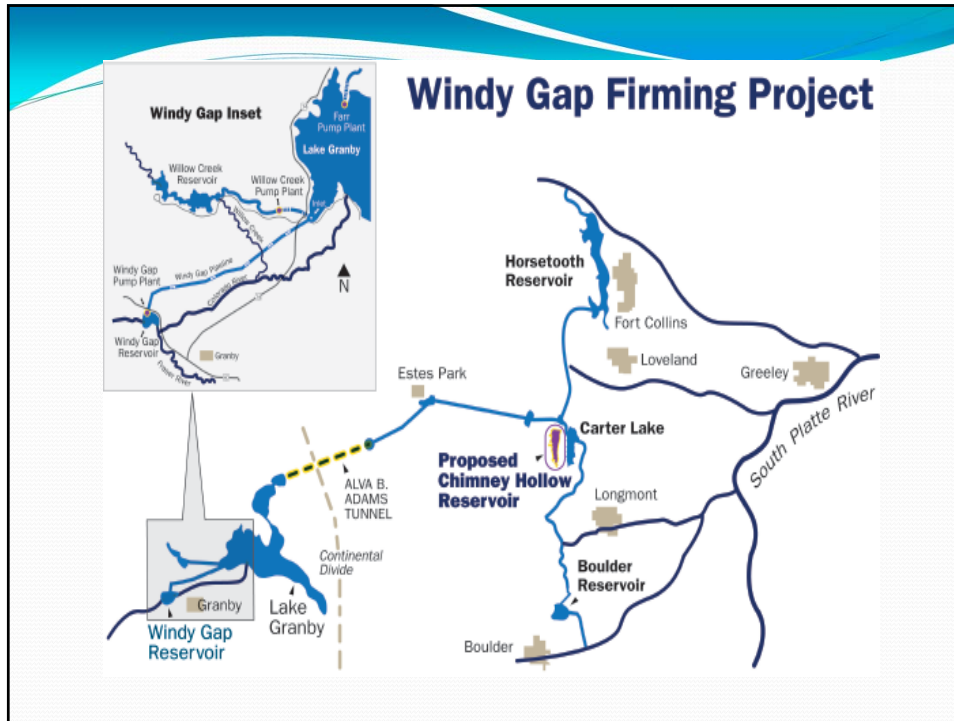
## Colorado Big Thompson Project

- Delivery of Colorado River water to the East slope. Storage capacity of 370,000 AF
- USBR uses water for hydroelectric generation
- CBT is 'foreign water' i.e. not native to the Big Thompson Basin
  - not subject to the priority system
- CBT sits 'on top of' the native flow
- WC must ensure the CBT goes to whoever has leased it
- Approx 20% of water usage in Big Thompson River is CBT water



**COLORADO**  
Division of Water Resources  
Department of Natural Resources





## Augmentation Plans

- Reflect the following:
  - how to allow junior users to divert, but to not injure senior users (**wells**)
  - over time, uses and places of use change – how do we adjust to ensure that the senior users are not injured
- Need to retain the historic return flow regimes so that those who have senior rights that rely on those historic return flow patterns are not injured
- *Must replace water in quantity, location & time*
- Plans must go through water court –they are decreed



**COLORADO**  
 Division of Water Resources  
 Department of Natural Resources

## Groundwater & Wells

- 1969 – Law formally put tributary groundwater into the prior appropriation doctrine
  - Made wells subject to the call same as surface water
- Generally are more junior to the senior surface flow rights
- Junior, non-exempt wells required to be in aug plans  
37-92-308(1)(c)(III) C.R.S.
- Exempt Wells– Exempt from priority system administration (single family domestic or small commercial with no other water supply, livestock on range or pasture) – 37-92-602 C.R.S



**COLORADO**  
Division of Water Resources  
Department of Natural Resources

## Other Daily Operations

- Questions /Complaints – both from public and other
- Meetings/communications with Water Users
  - Assessment of what is/needs to be done for appropriate administration
  - Questions as to whether operations match the decree requirements
  - Require at least 1 field inspection
- Weekly fieldwork
  - Visiting headgates & other structures
    - Assessing that the measurement device at that gate is reading correctly
    - Making changes as needed
    - Collecting the data
  - Visiting reservoirs
- Review of Accounting and Maintenance of Diversion Records



**COLORADO**  
Division of Water Resources  
Department of Natural Resources

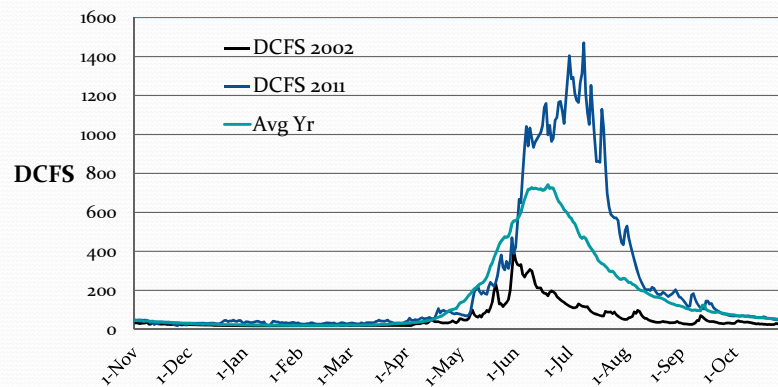
## What A WC does not do

- Water Quality
- Construction
- River maintenance or restoration (some exceptions)
- Most down-ditch administration
- Ditch maintenance etc
- Property rights issues concerning the use of water (unless water use was not per decree/out of priority)
- Don't control the sale, resale, ownership of WRs
- We are not the illegal grow police



**COLORADO**  
Division of Water Resources  
Department of Natural Resources

## Hydrograph of Big Thompson Supply BTABESCO + BTNFDRCO

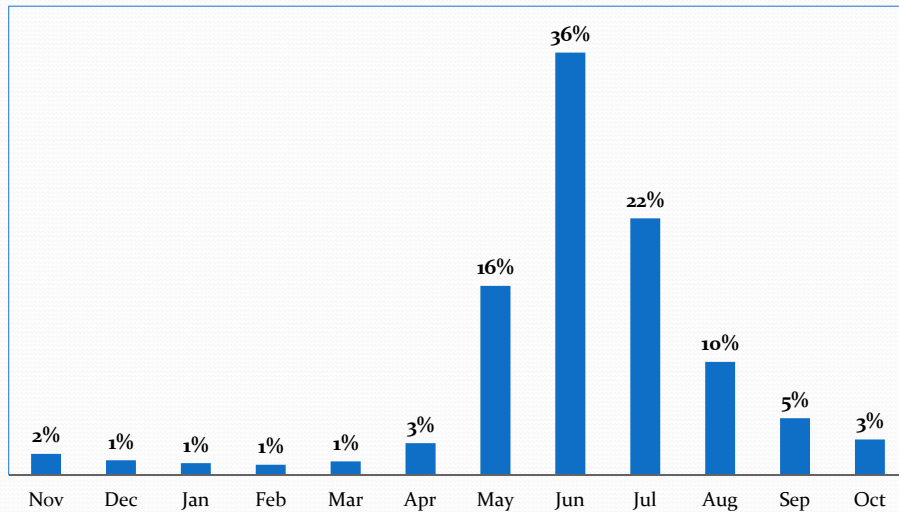


2002 Dry Year: Peak May 31<sup>st</sup> at 401 cfs (369 + 32)

2011 Wet Year: Peak July 9<sup>th</sup> at 1471 cfs (1280+ 191)

Average Year: Peak June 19<sup>th</sup> at 742 cfs (610+ 132)

## Distribution of Native Flow of the Big Thompson



## Terminology

- Cfs – a cubic foot of water past a fixed point in one second (second-foot)
- Acre-foot – one acre covered one foot in depth (1 cfs for 1 day equals approximately 2 acre-feet) – Average suburban family uses about  $\frac{1}{2}$  acre-foot of water per year
- Staff Gage – Measures the depth of the water, location important
- Stilling Well – Used to dampen wave action, also may have water level recorder
- Flume or Weir – specially shaped devices installed in a ditch to measure flow





# Terminology

- Free River – when the supply of water in the river exceeds the demand for water by all decreed water users
- The Call– the determination by the Water Commissioner of the most junior right that may divert when the supply of water in the river is less than the demand on the river by all decreed water users. SETTING THE CALL
  - Call location – physical location on the river where there is no more water
  - Calling right – that is the junior right that is being curtailed
  - Being called out – water right is more junior than the calling right
- Sweeping the river – this is what happens at the call location i.e. the ditch sweeps all the water into the ditch and leaves the river at a dry-up point
- In priority / out of priority
- Note: These definitions are not found in statute, but are working definitions in Division 1. The primary statute that water administration occurs under is 37-92-502 C.R.S.



**COLORADO**  
Division of Water Resources  
Department of Natural Resources