




PUBLIC WORKS DEPARTMENT
MEMORANDUM #2013 – 17

DATE: April 15, 2013
TO: Honorable Mayor Joyce Downing and City Council Members
FROM: David Willett, Acting City Manager 
Raymond Reling, Public Works Superintendent for Utilities 
Tamara Moon, Water Resources Administrator 
SUBJECT: Water Supply Outlook and Restrictions

CURRENT WATER OUTLOOK

Statewide drought conditions have persisted since late 2011. The summer of 2012 proved to be drier than expected, and the winter has not provided any relief with low snow fall and below average snow pack throughout the state. National Weather Service precipitation outlooks show a continued pattern of dry weather through the summer of 2013.

The United States Geological Service (USGS) provides snow pack maps for the state and for each river basin in the state. The two basins that are of interest to Northglenn are the South Platte River basin and the Colorado River basin. Statewide, snow pack is at approximately 73% of the average, and there is 17% less snow this year than the same time last year. For the two basins mentioned above, the South Platte River basin is at 63% of the average snow pack and is 38% less than this time last year. The Colorado River basin is not as low, but it currently is at 70% of the average snow pack, with 14% less than last year.

Currently, Northglenn's "bucket" in Standley is at 100%, and Standley Lake has held steady at approximately 60% full throughout the winter. River appropriations on Clear Creek as well as the South Platte River have been very senior through the winter. Senior appropriations on Clear Creek limit the amount of water that comes in to the Church Ditch, Northglenn's only source of summer water. Even in normal water years, water demand from the City exceeds what comes in for storage during the summer. This causes our lake storage to drop rapidly in the summer, and will do so even quicker in a drought year with little to no water coming into Standley Lake.

Because of the extended drought many metro area communities are implementing mandatory water restrictions to ensure adequate supplies of water through the summer and into next year. Communities and water suppliers that have already approved or started mandatory restrictions include: Thornton, Aurora, Denver Water, East Cherry Creek and Fort Collins.

Northglenn is still asking residents to voluntarily conserve water and have been working with area water providers to create a joint message on good practices. On March 4th a press release was sent to local media with the joint message. This information was published in the Northglenn-Thornton Sentinel and the current recommendations are listed on the conservation section of the City's website. Additionally, the City's water wasting ordinance is still being enforced. Additional measures that have been taken to start the conservation process include: filing a substitute water supply plan for Northglenn's unchanged Church Ditch inches, working with parks to evaluate watering practices, and a monthly article in the Northglenn Connection newsletter.

WATER RESTRICTIONS PROCESS

The City's municipal code Section 16-23-1 gives direction for instituting mandatory watering restrictions. There is no guidance for instituting voluntary restrictions; however in 2012 Council gave authorization for the enforcement of the City's Water Wasting Ordinance (Section 16-24-3).

In times of drought, the City Council can direct, by council resolution, the City Manger to promulgate rules for water use in the Northglenn service area. Following the passage of the Resolution, publication of the rules must be made (16-23-3) in the manner determined best to reach the majority of users. The municipal code also gives a list of potential rules that can be used to limit water with in the service area (16-23-2). There is no noted time frame that this process should occur, just as long as the process does occur prior to instituting mandatory restrictions.

Additionally, municipal code section 16-10-4 provides drought surcharges that can be applied to the existing water use rates. The use of drought rates is another option for encouraging residents to reduce water use. These rates will also help keep water related revenues stable while residents are using less water.

RECOMMENDATION

Beginning in early March after the publication of the joint conservation message, staff has received phone calls and inquires from residents about the City's water restrictions as well as questions about limited watering times and days.

Based on the provided information, staff recommends that council consider a resolution enacting mandatory water restrictions and/or water use drought rates for all Northglenn water users beginning May 1, 2013.

An example of restrictions and rates, based on the City of Thornton's restrictions that could be enacted by resolution would be:

1. Lawn watering limited to two days per week.
2. No watering between 10:00 am and 6:00 pm
3. No new lawns during July and August. Permits for sod or seed required May 1 – June 10, and September 1 – October 10. There will be an administrative cost for the permit.
4. No watering allowed between November 1 and April 15.
5. School and park properties will be allowed to water outside the turf schedule but only to preserve turf from heavy traffic or to appropriately water large areas.
6. Permits and limited water budgets for large area irrigators.
7. Fines for restriction violations.
8. Institution of Stage 2 drought surcharges for water rates.

STAFF REFERENCE

Tamara Moon, Water Resources Administrator

tmoon@northglenn.org or 303.450.4070

ATTACHMENTS

Attachment A: Supply Projections Graph

Attachment B: Municipal Code Section 16-23

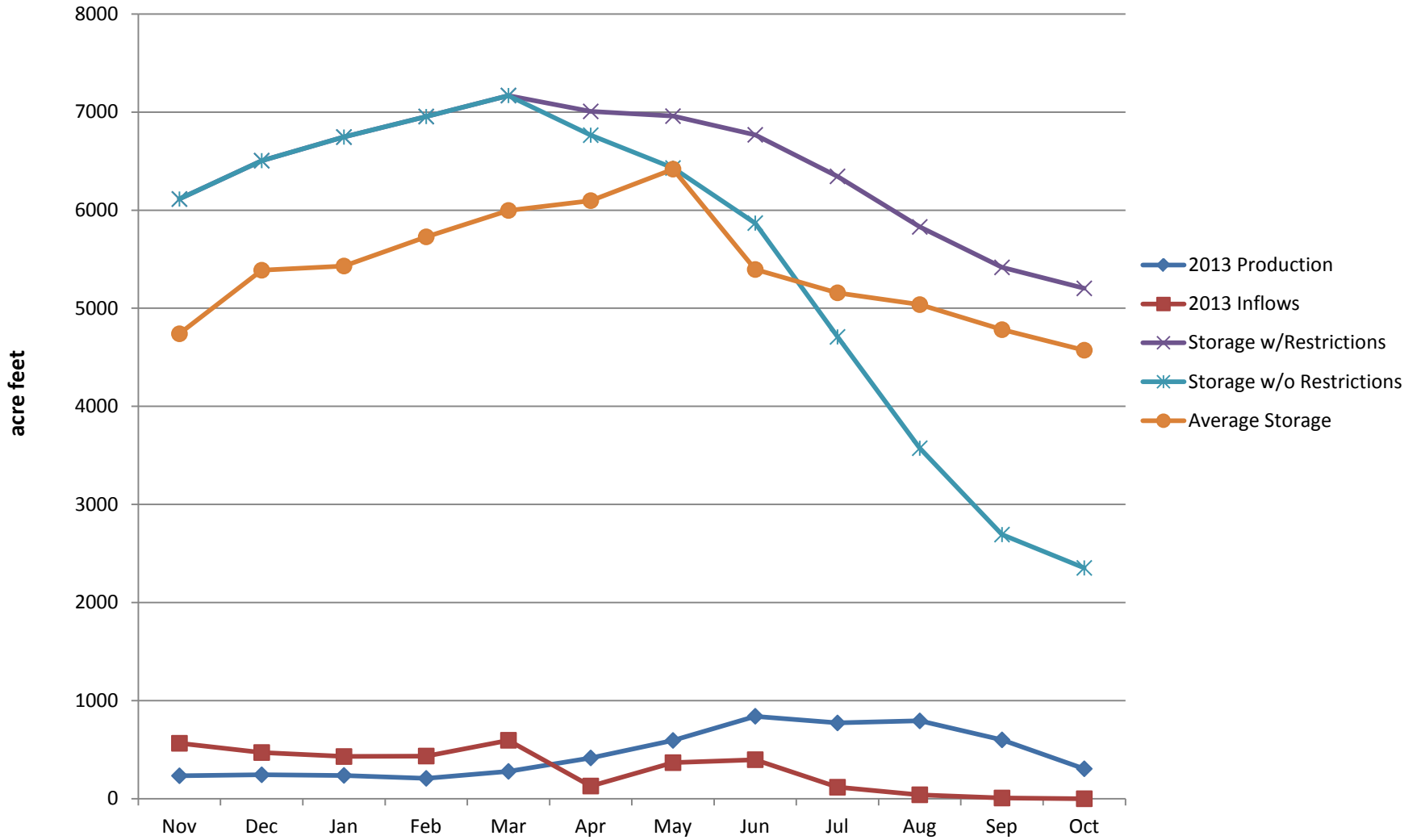
Attachment C: Municipal Code Section 16-10-4

Attachment D: Average Year/Dry Year Comparison Chart

Attachment E: Colorado Drought Map

Attachment F: Colorado Snow Pack Map

Northglenn Water Supply Projections No Water Restrictions vs. Water Restrictions (30% Reduction)



ATTACHMENT B



City of Northglenn
 11701 Community Center Drive
 Northglenn, CO 80233
 303-451-8326

[Home](#)

[Contents](#)

CHAPTER 16
 PUBLIC PROPERTY, UTILITIES AND SERVICES

ARTICLE 23
 MANDATORY WATER RESTRICTIONS

Section 16-23-1. Drought and Other Water Shortages. In the event of a drought or other water shortage or emergency, as declared by the City Council by resolution, the City Manager shall have the authority to promulgate rules and regulations governing water usage by all customers of the Northglenn water system.

[Source: Ord. 1333, 2003]

Section 16-23-2. Rules and Regulations. Rules and regulations promulgated by the City Manager, pursuant to the authority of Section 16-23-1 above, shall include but not be limited to:

- (a) Limiting lawn watering to certain times of the day, days of the week or times of the month;
- (b) Prohibiting the waste of water;
- (c) Prohibiting or limiting the times of day or days per week for washing of cars and other vehicles at residential properties;
- (d) Prohibiting the use of water for the washing of sidewalks, driveways, patios or similar impervious surfaces;
- (e) Prohibiting power-washing of housing, fences, windows, decks or other similar impervious surfaces;
- (f) Prohibiting or regulating new lawns being planted or installed;
- (g) Regulating the amount of water that can be used by each customer, household and/or business;
- (h) Prohibiting or limiting any outside irrigation use of water;
- (i) Prohibiting serving water at restaurants prior to a request for the service of water;
- (j) Implementing a major public education program on the need to conserve water; and
- (k) Prohibiting or regulating water for construction uses
- (l) Other similar restrictions designed to conserve water and reduce excess water usage within the boundaries of the City.

[Source: Ord. 1333, 2003]

Section 16-23-3. Publication of Rules and Regulations. Upon the promulgation of such Rules and Regulations pursuant to this Article, the City Manager shall publish, post or otherwise make available copies of the Rules and Regulations in the manner determined by the City Manager as best calculated to reach the largest number of water consumers.

[Source: Ord. 1333, 2003]

Section 16-23-4. Violations and Penalty. Any person violating any provision of this Article, or of the Rules and Regulations promulgated by the City Manager pursuant to this Article, shall, upon conviction, be punished by a fine not to exceed \$999.00 for each violation. The assessment of fines for violations of this Article or the Rules and Regulations promulgated hereunder will be through the City utility bill for the responsible party's billing account. The responsible party shall be defined as the owner, manager, supervisor or person who receives the water utility bill, or person in charge of the property, facility or operation during the period of time the violation is observed. All fines must be paid within the normal payment period allowed by the City utility billing system. The City Manager may, as part of the Rules and Regulations promulgated pursuant to this Article, establish a progressive schedule of warnings and/or fines subject to approval of such schedule by the City Council by resolution or motion.

[Source: Ord. 1333, 2003]

City Clerk's Office 303.450.8755 | 303.450.8709 | 303.450.8757

ATTACHMENT C

[Source: Ord. 1101, 1994; 1438, 2006]

Section 16-10-4. Utility Usage Charges--Fresh Water. Monthly charges for use of fresh water supplied by the City to all utility accounts shall be made in a manner that is directly dependent upon the actual or estimated quantity of water used by that account during that billing period, and at incremental rates that are dependent upon the City's cost of obtaining and providing that quantity of water. The determination of applicable rates shall be no less frequently than annually, in accordance with the following subsections:

- (a) The costs of both Water and Wastewater operations are accounted for in a single fund. Based upon the annual budget and a multiple year forecast of required expenses, necessary reserves, and contingency, both water and sewer usage rates shall be set at levels approximating those necessary to recover "operating, maintenance, direct, general, and accounting costs" attributable to the separate systems. To smooth rates and avoid large year-to-year fluctuations, the need to recover projected **combined** water/wastewater operational expenses may also impact the rate setting equation.
- (b) The City Council shall only increase fresh water usage rates by ordinance. Prior to the public hearing pursuant to Section 4.10(b) of the City of Northglenn Home Rule Charter, details regarding the proposed rate increase(s) shall be posted in full, including the day, hour, and place at which Council shall hold the Public Hearing regarding the proposed rate increase.
- (c) **FRESH-WATER INCREMENTAL USAGE/RATE TABLE.**

<p>Residential Individually Metered Tier Rate</p> <p>Tier 1 \$1.90 per 1,000 gallons</p> <p>Tier 2 \$3.72 per 1,000 gallons</p> <p>Tier 3 \$4.52 per 1,000 gallons</p> <p>Tier 4 \$6.70 per 1,000 gallons</p> <p>Commercial Water Volume Charges</p> <p>Mixed Use</p> <p>\$3.25 per 1,000 gallons</p> <p>\$5.26 per 1,000 gallons</p> <p>Domestic Use</p> <p>\$3.25 per 1,000 gallons</p> <p>Irrigation Use</p> <p>\$5.26 per 1,000 gallons</p>	<p>Consumption Range</p> <p>First 3,000 gallons</p> <p>Over 3,000 gallons to 10,000 gallons</p> <p>Over 10,000 gallons to 20,000 gallons</p> <p>Over 20,000 gallons</p> <p>Consumption Range</p> <p>Up to 100% of the EQR as defined in Section 16-10-2(f)</p> <p>Over 100% of the EQR as defined in Section 16-10-2(f)</p>
---	---

Residential Drought Surcharge

	Stage 1	Stage 2	Stage 3	Stage 4
Over 18,000 gallons	None	\$2.00 per thousand gals.	\$4.00 per thousand gals.	\$4.00 per thousand gals.

Commercial Drought Surcharge

	Stage 1	Stage 2	Stage 3	Stage 4
Over 100% EQR	None	\$2.00 per thousand gals.	\$4.00 per thousand gals.	\$4.00 per thousand gals.

Monthly Service Charges

Meter Size	Per Bill
5/8	\$9.75
3/4	\$11.20
1	\$13.80
1 1/2	\$21.00
2	\$29.40
3	\$53.00
4	\$78.80
6	\$152.00

- (d) Due to the Requirement that water used under the FRICO exchange be supplemented by 10% upon return to the FRICO system, cost differences exist between water provided for uses having a "return flow" and for uses that preclude "return-flow" (usually "irrigation" water). Fresh water usage rates shall consider this cost differential and be set such that the rate for estimated usage of "irrigation" water is greater than the rate for "non-irrigation" water.

[Source: Ord. 1101, 1994; 1268, 2000; 1544, 2009; 1553, 2009; 1570, 2010; 1602, 2011]

Section 16-10-5. Utility Usage Charges--Wastewater. Monthly charges for wastewater collection, treatment and storage services provided by the City to all utility accounts within the City's boundaries shall be in a manner that is generally dependent upon the quantity of water that is returned directly to the wastewater system (i.e., the accounts "return flow"). New accounts and/or accounts with insufficient historical data to establish a "winter average," as may be required for determination of an "EQR" assessment, shall be assessed an estimated volume determined by the director of water and environmental services. For this purpose, the director may use comparable data from similar accounts, if such similar accounts exist, or may use data supplied by the customer. Once a 12 month billing history is available, that account's "EQR" assessment shall be determined by using the first year's actual volume as the basis for calculation. Should the "EQR" 12 month history be less than the estimated "EQR" assessment, the city shall refund to the customer the difference between the rates actually paid for wastewater service during said 12 month period and the amount that would have been paid based on the final "EQR" assessment. Should the "EQR" 12 month history be more than the estimated "EQR" assessment volume, the customer shall be subsequently assessed for any such additional charges.

- (a) For "mixed usage" accounts, in lieu of separate and specific "return flow" measurement by meters, "return flow" is normally assumed to be the "winter average" fresh-water volume supplied to an account during the winter months when "irrigation usage" is generally not required. If another method (metering or other adequate documentation of water used for "return-flow" vs. "non-return flow" purposes) is available, the most accurate method shall

ATTACHEMENT D

Average Year/Dry Year Comparisons of Water Supply Parameters

On this day -
April 5

	Dry Year (2006)	Average Year (2009)
Snow Pack (inches)	71	80
Clear Creek Flows (CFS) *value from 2012	61*	45
Total Standley Storage (%)	83	90

On this day-
May 1

	Dry Year (2006)	Average Year (2009)
Snow Pack (inches)	59	66
Clear Creek Flows (CFS) *value from 2012	76*	200
Total Standley Storage (%)	78	91

Current Values (April 4, 2013)

Snow Pack: 54"

Clear Creek Flow: 37 cfs

Standley Storage: 69%

U.S. Drought Monitor

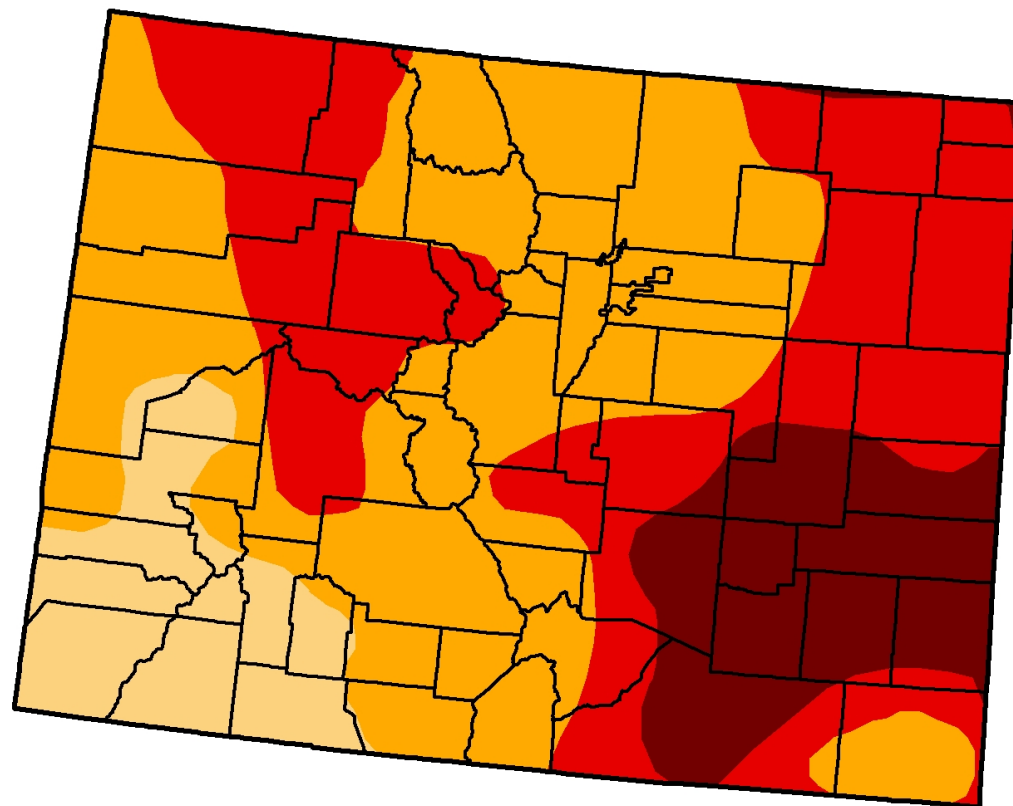
Colorado

April 2, 2013

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	88.97	45.98	13.83
Last Week (03/26/2013 map)	0.00	100.00	100.00	88.97	45.98	13.83
3 Months Ago (01/01/2013 map)	0.00	100.00	100.00	95.06	53.47	13.48
Start of Calendar Year (01/01/2013 map)	0.00	100.00	100.00	95.06	53.47	13.48
Start of Water Year (09/25/2012 map)	0.00	100.00	100.00	100.00	61.75	16.89
One Year Ago (03/27/2012 map)	2.25	97.75	50.97	9.26	0.15	0.00



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://droughtmonitor.unl.edu>



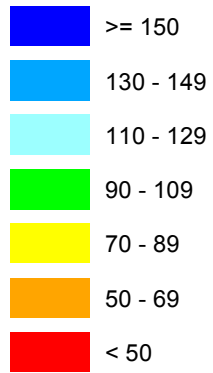
Released Thursday, April 4, 2013

National Drought Mitigation Center,

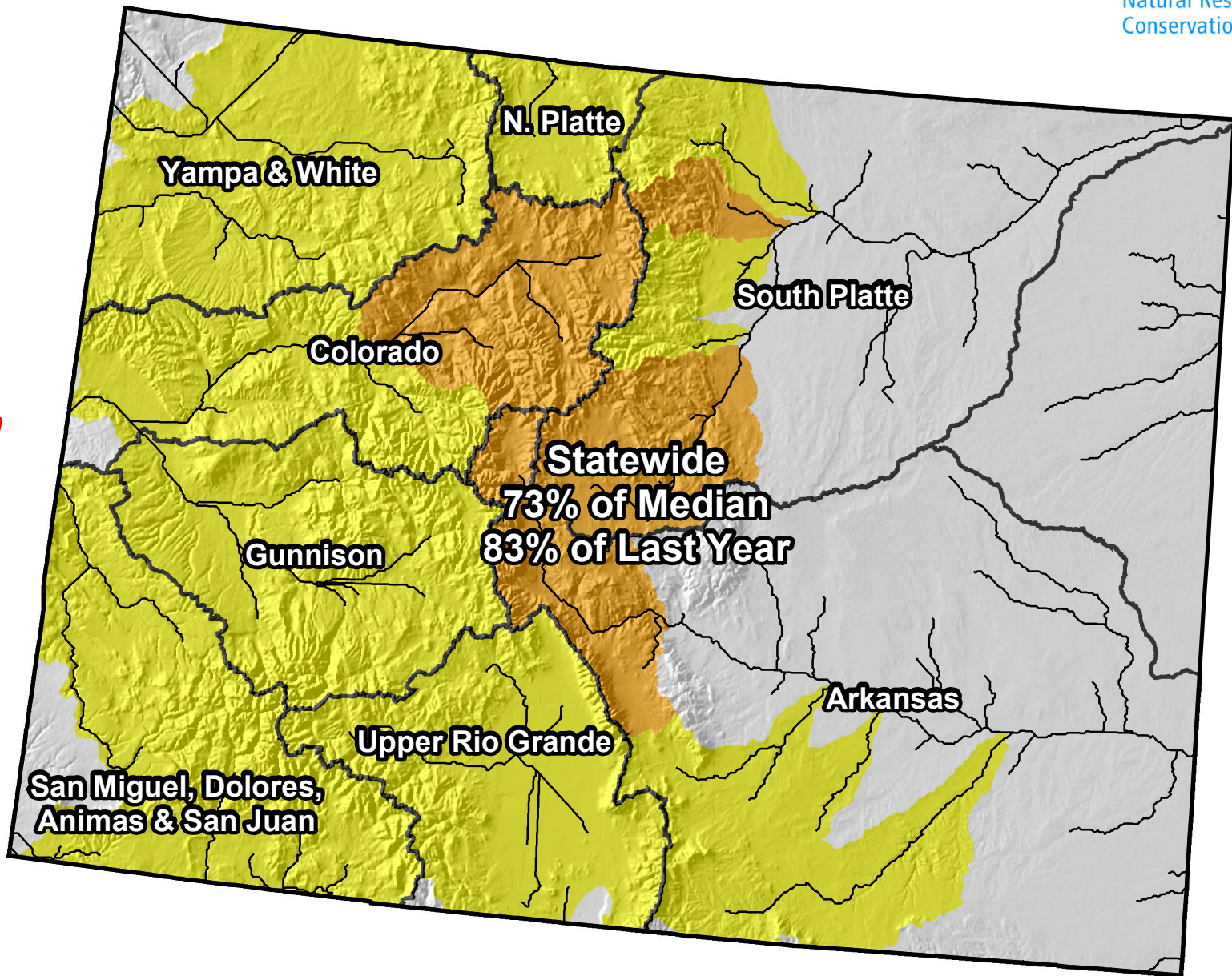
Colorado Snowpack Map



Percent of Median



*Provisional Data
Subject to Revision*



Current as of March 1, 2013