

Department of Natural  
Resources and Conservation,  
Water Resources Division

State Water Projects Bureau

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444-2932

# MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

WATER RESOURCES DIVISION - STATE WATER PROJECTS BUREAU

June 15, 2011

All Contents in Acre-Feet

| RESERVOIR          | TOTAL CAPACITY<br>(includes dead storage)* | CONTENTS    |           |            |           | % CAPACITY<br>6/15/2011 | %AVERAGE<br>6/15/2011 | READING<br>DATE | COMMENTS   |
|--------------------|--|-------------|-----------|------------|-----------|-------------------------|-----------------------|-----------------|--|
|                    | Full Pool                                  | AVERAGE     | Last Year | Last Month | PRESENT   |                         |                       |                 |  |
|                    | Contents                                   | 1960 - 2010 | 6/15/2010 | 5/31/2011  | 6/15/2011 |                         |                       |                 |  |
| ACKLEY             | 6,140                                      | 5,204       | 5,985     | 5,728      | 5,509     | 90                      | 106                   | 6/13/2011       | from R. Epkes inflows=18 cfs outflows=25 cfs                   |
| BAIR               | 7,300                                      | 5,376       | 7,400     | 7,455      | 7,500     | 103                     | 140                   | 6/11/2011       | from L. Hammond inflow=outflow~100 cfs (spilling)              |
| CATARACT           | 1,478                                      | 687         | 650       | 500        | 779       | 53                      | 113                   | 6/9/2011        | from D. Larson el.=6335.18                                     |
| COONEY             | 28,230                                     | 24,469      | 27,878    | 28,230     | 29,230    | 104                     | 119                   | 6/15/2011       | Full Pool (spilling) (volume estimated) inflow=500 cfs         |
| COTTONWOOD         | 1,900                                      | 1,564       | 2,040     | 2,024      | 2,024     | 107                     | 129                   | 6/15/2011       | volume estimated (spilling)                                    |
| DEADMAN'S BASIN    | 75,968                                     | 53,485      | 63,210    | 76,170     | 74,950    | 99                      | 140                   | 6/12/2011       | from T. Hice el.=3920.5  |
| E.F. ROCK CREEK    | 16,040                                     | 12,210      | 15,820    | 13,304     | 13,986    | 87                      | 115                   | 6/14/2011       | from data logger el.=6050.2 inflow=220 cfs outflow=150 cfs     |
| FRENCHMAN          | 2,777                                      | 2,535       | 2,657     | 2,777      | 3,749     | 135                     | 148                   | 6/14/2011       | elev.=2266.13 inflow=452 cfs outflow=871 cfs                   |
| MARTINSDALE        | 23,348                                     | 16,562      | 22,885    | 19,912     | 20,120    | 86                      | 121                   | 6/10/2011       | from L. Hammond  |
| MIDDLE CREEK       | 10,184                                     | 10,050      | 9,027     | 7,867      | 7,100     | 70                      | 71                    | 6/14/2011       | from data logger el.=6706.8 inflow=150 cfs outflow=136 cfs     |
| NEVADA CREEK       | 11,207                                     | 10,184      | 11,207    | 11,522     | 11,766    | 105                     | 116                   | 6/14/2011       | from R. Hawkins el.=4617.5 (spilling) inflow=426 cfs           |
| NILAN              | 10,992                                     | 8,671       | 9,996     | 10,809     | 10,850    | 99                      | 125                   | 6/14/2011       | from J. Wolfe el.=4442.25 (9,950 AF)                           |
| N.F.K. SMITH RIVER | 11,406                                     | 9,616       | 11,434    | 11,553     | 11,553    | 101                     | 120                   | 6/15/2011       | volume estimated (spilling) estimated elev=5488.8              |
| RUBY RIVER         | 36,633                                     | 35,192      | 38,137    | 38,570     | 38,652    | 106                     | 110                   | 6/15/2011       | volume estimated (spilling) inflow=1,260 cfs outflow=1,230 cfs |
| TONGUE RIVER       | 79,071                                     | 69,265      | 82,565    | 81,617     | 82,953    | 105                     | 120                   | 6/14/2011       | from Data Logger el.=3429.4 (spilling)                         |
| W.F. BITTERROOT    | 32,362                                     | 30,649      | 32,362    | 33,108     | 36,242    | 112                     | 118                   | 6/14/2011       | extrapolated from USGS outflow (1,940 cfs)                     |
| WILLOW CREEK       | 18,000                                     | 16,125      | 18,000    | 16,613     | 18,263    | 101                     | 113                   | 6/9/2011        | from D. Larson el.=4736.26 (spilling)                          |
| YELLOWATER         | 3,842                                      | 1,322       | 1,530     | 3,842      | 4,418     | 115                     | 334                   | 6/13/2011       | from T. Olson el.=3120.05 (spilling)                           |

\* Note: Reservoir contents include dead storage at the following:

|           |         |    |   |
|-----------|---------|----|---|
| Ackley    | 325 AF  | ** | O&M slope storage table does not include dead storage (so dead storage has to be added into the storage from the table) |
| Cooney    | 90 AF   | ** | Tongue River 711 AF (O&M storage table includes dead storage)   |
| Deadman's | 3750 AF | ** | W. F. Bitterroot 656 AF (O&M storage table includes dead storage)   |
| Nilan     | 900 AF  | ** | Willow Creek 269 AF (O&M storage table includes dead storage)   |

\* Note: Cooney capacity reflects capacity after 1982 dam rehabilitation; prior capacity was 24,195 A.F.. Average storage shown is for post rehabilitation data.

\* Note: Middle Creek capacity reflects capacity after 1993 dam rehabilitation; prior capacity was 8,027 A.F.. Average storage shown is for post rehabilitation data.

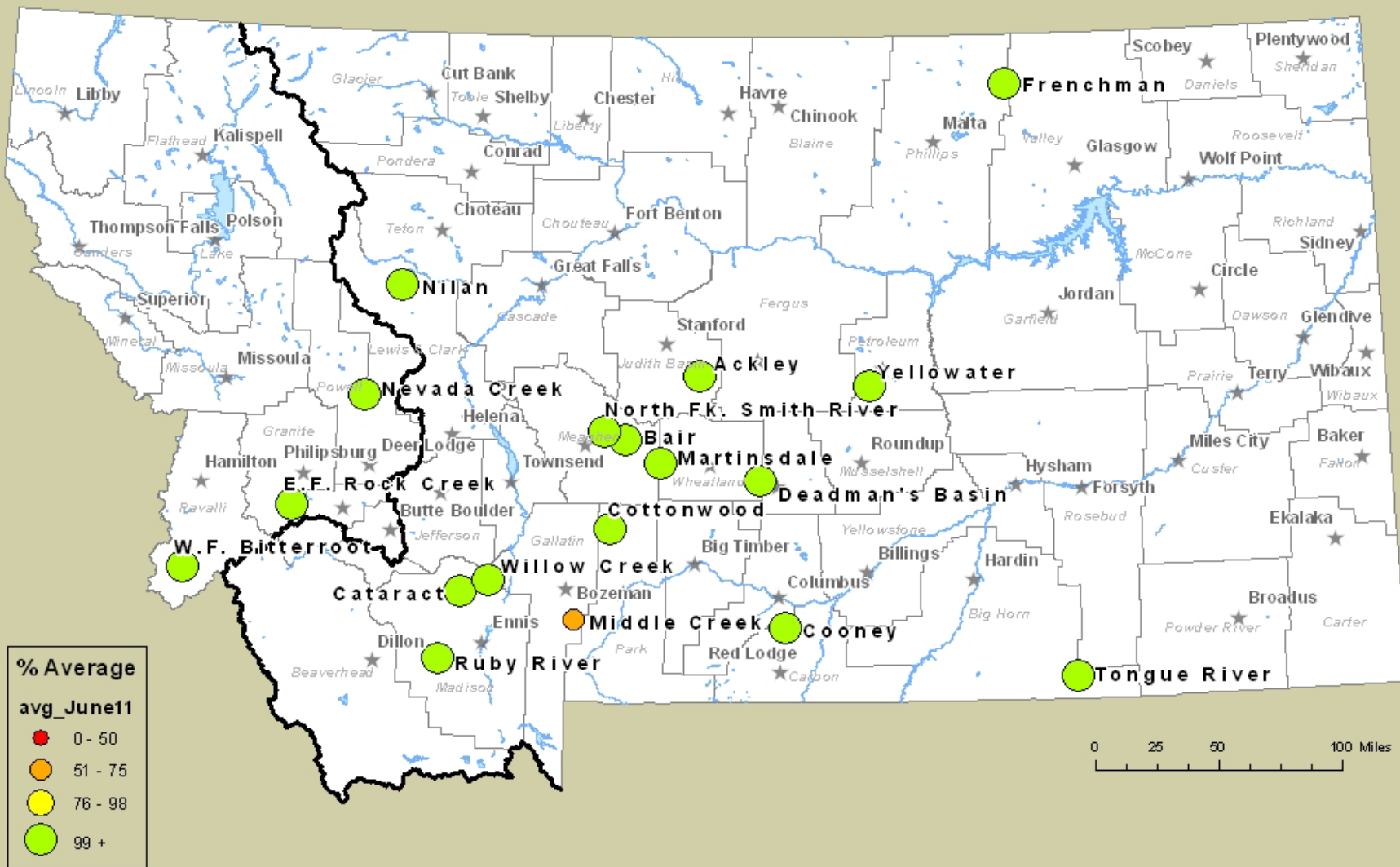
\* Note: Nevada Creek Reservoir Capacity reflects live storage capacity survey conducted in year 2000. Prior live storage capacity documented as 12,723 AF.

\* Note: Ruby River capacity reflects capacity at concrete crest elevation; capacity at top of flashboards is 37,612 A.F.

\* Note: Tongue River capacity reflects capacity after 1999 dam rehabilitation; prior capacity was 68,040 A.F.. Average storage is post rehabilitation data.

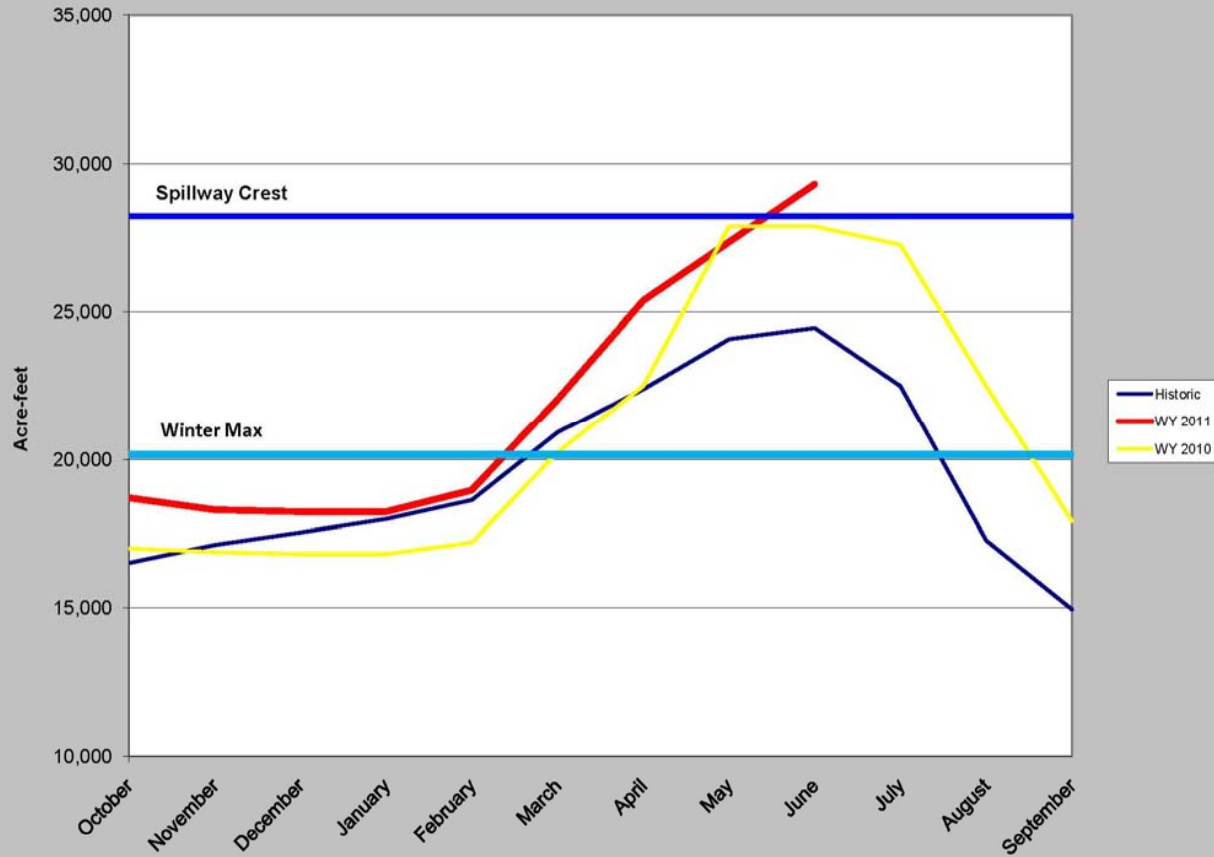
\* Note: Frenchman Reservoir capacity tables updated based on aerial survey; prior capacity was 3752 A.F. Average shown is pre aerial survey

# Reservoir Contents Report June 15, 2011



# Cooney Reservoir

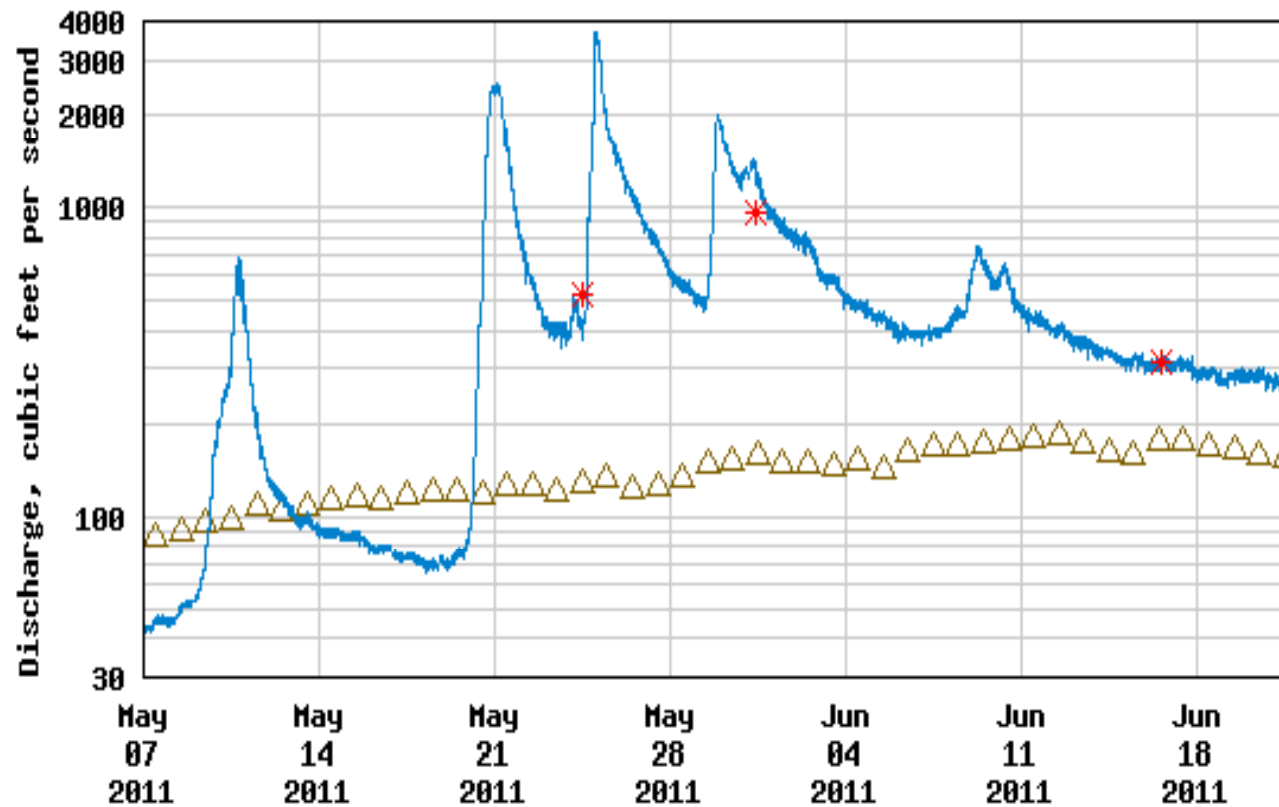
(Historic, WY 2010, and WY 2011)



- 104% Capacity
- 119% average
- ~29,300 Acre-Feet
- Inflows=500 cfs+/-
- Elev.=4252.3
- Reservoir conditions are normal



### USGS 06211000 Red Lodge Cr ab Cooney Re nr Boyd MT



----- Provisional Data Subject to Revision -----

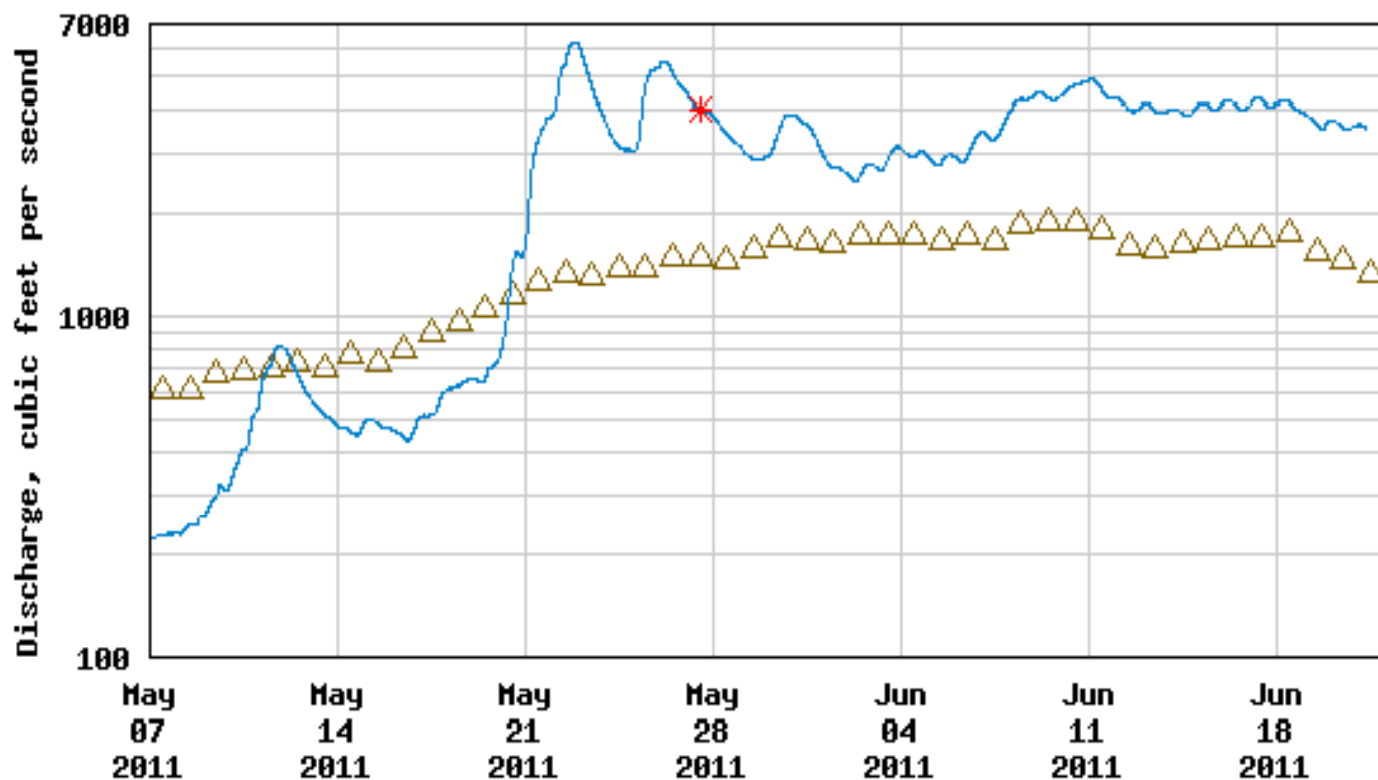
△ Median daily statistic (73 years) \* Measured discharge  
— Discharge







### USGS 06306300 Tongue River at State Line nr Decker MT



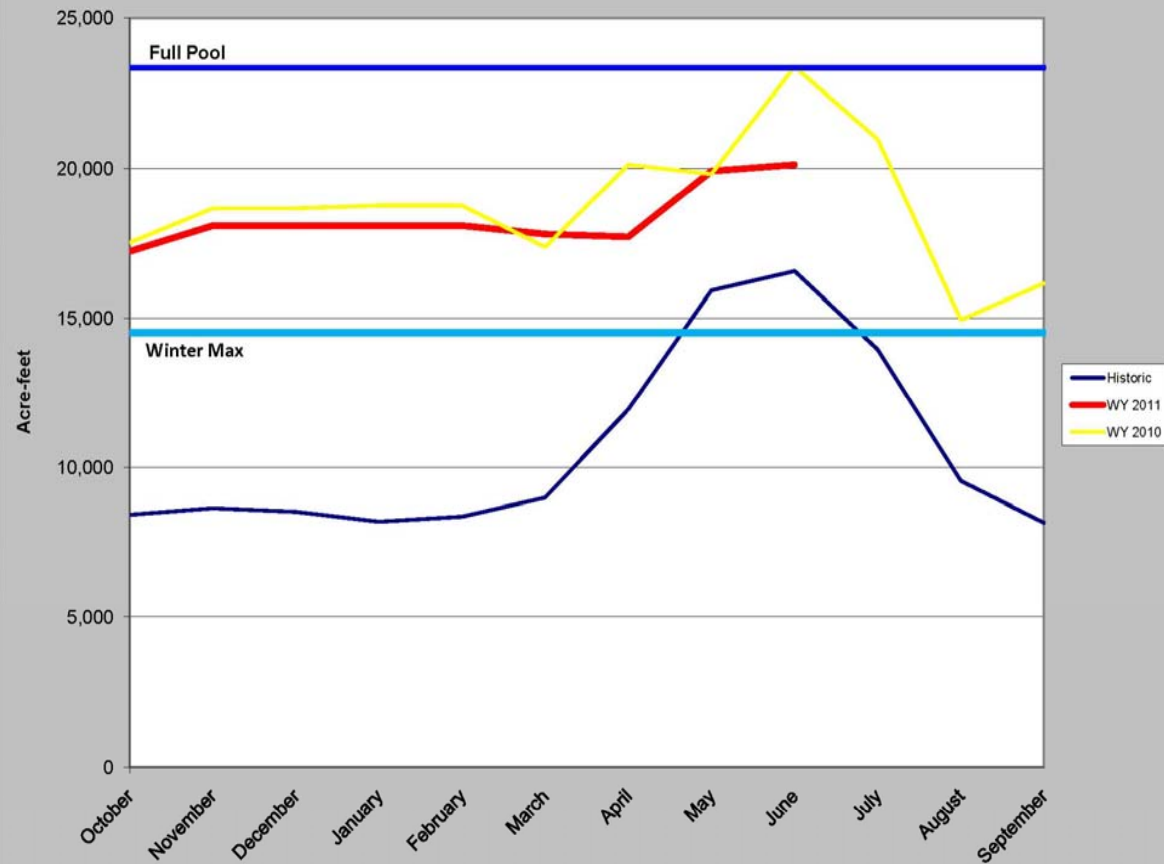
----- Provisional Data Subject to Revision -----

- △ Median daily statistic (50 years) \* Measured discharge
- Discharge



# Martinsdale Reservoir

(Historic, WY 2010, and WY 2011)



- 86% Capacity
- 121% average
- 20,120 Acre-Feet
- Inflows=2 cfs+/-
- Outflows=0 cfs
- Elev.=4775.83
- Supply Canal was breached and has sustained damaged at HG
- Reservoir conditions are normal







# Summary

- Majority of reservoirs are full and spilling (drafted reservoirs are exceptions)
- Winter carryover+May precipitation=fast storage
- 17 of 18 reservoirs are above historic averages for this time of year (Middle Ck @ 71% was drafted and runoff starting to refill res.)
- Delivery canals for off-stream storage projects incurring damage-assessment to be completed once water recedes
- All DNRC SWP Reservoirs are stable and site conditions are normal
- *If needed*-Water User's will have full water supply from reservoirs