Teton River Hydrologic Overview

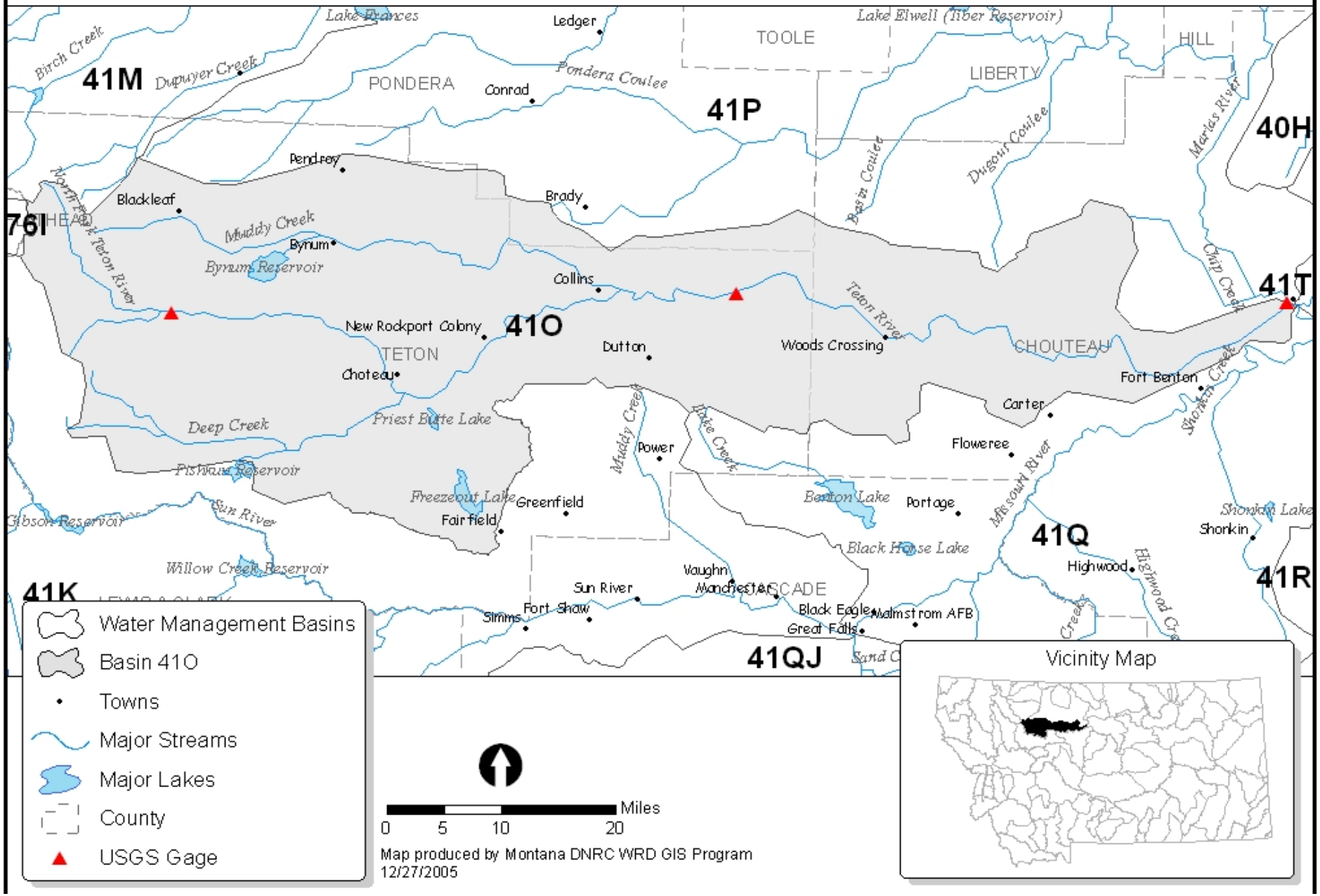
Montana DNRC

October 24, 2007

Historical Overview

- Blood and Piegan tribes of the Blackfeet Nation historically possessed the lands of the Teton River;
- August 1806, Captain Lewis crossed the Teton River;
- Permanent post established at Fort Benton in 1842;
- First water right filed on February 19th, 1874;
- 1880s and 1890s large irrigation systems were developed to provide cut hay.

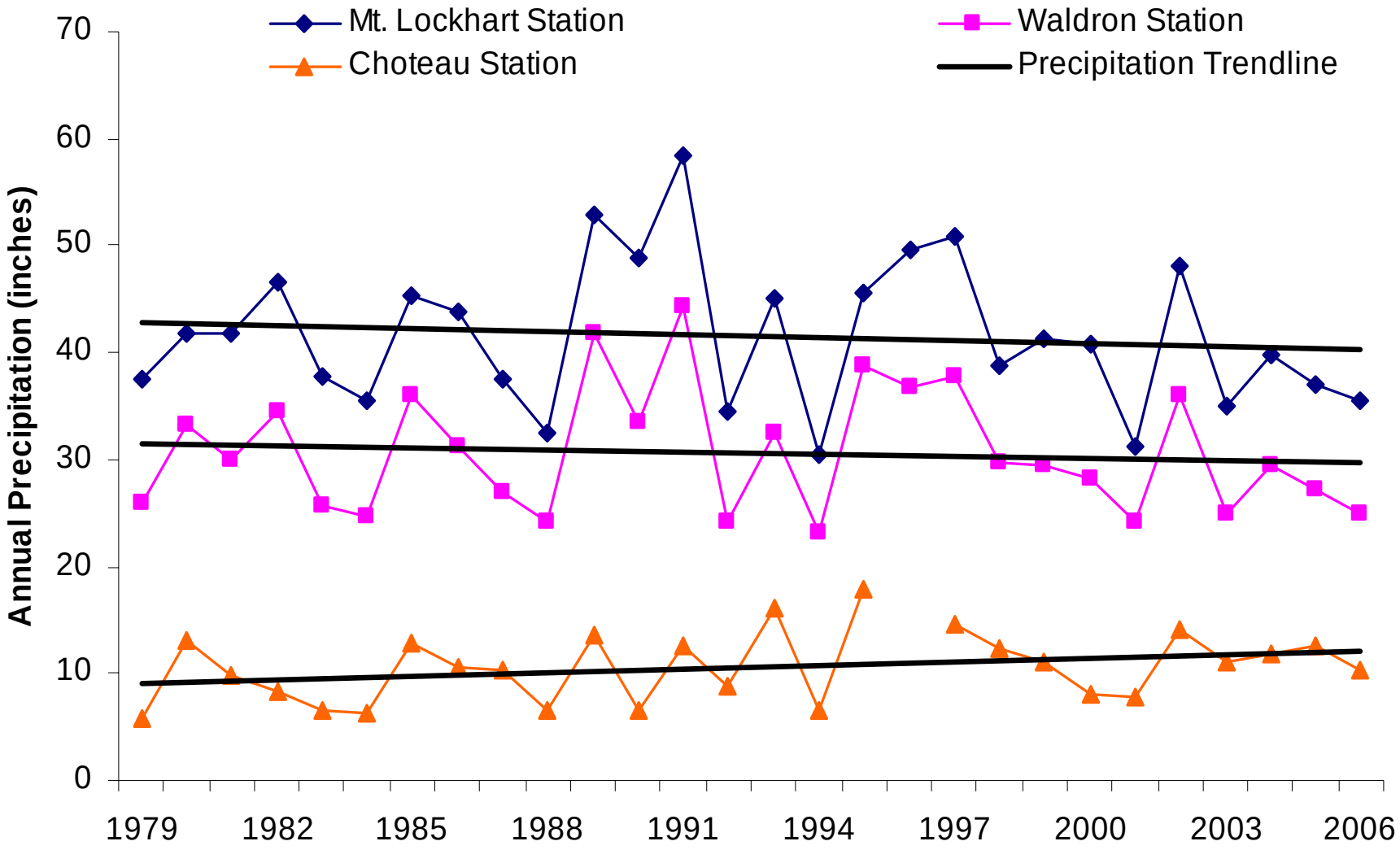
Teton River Basin - 41O



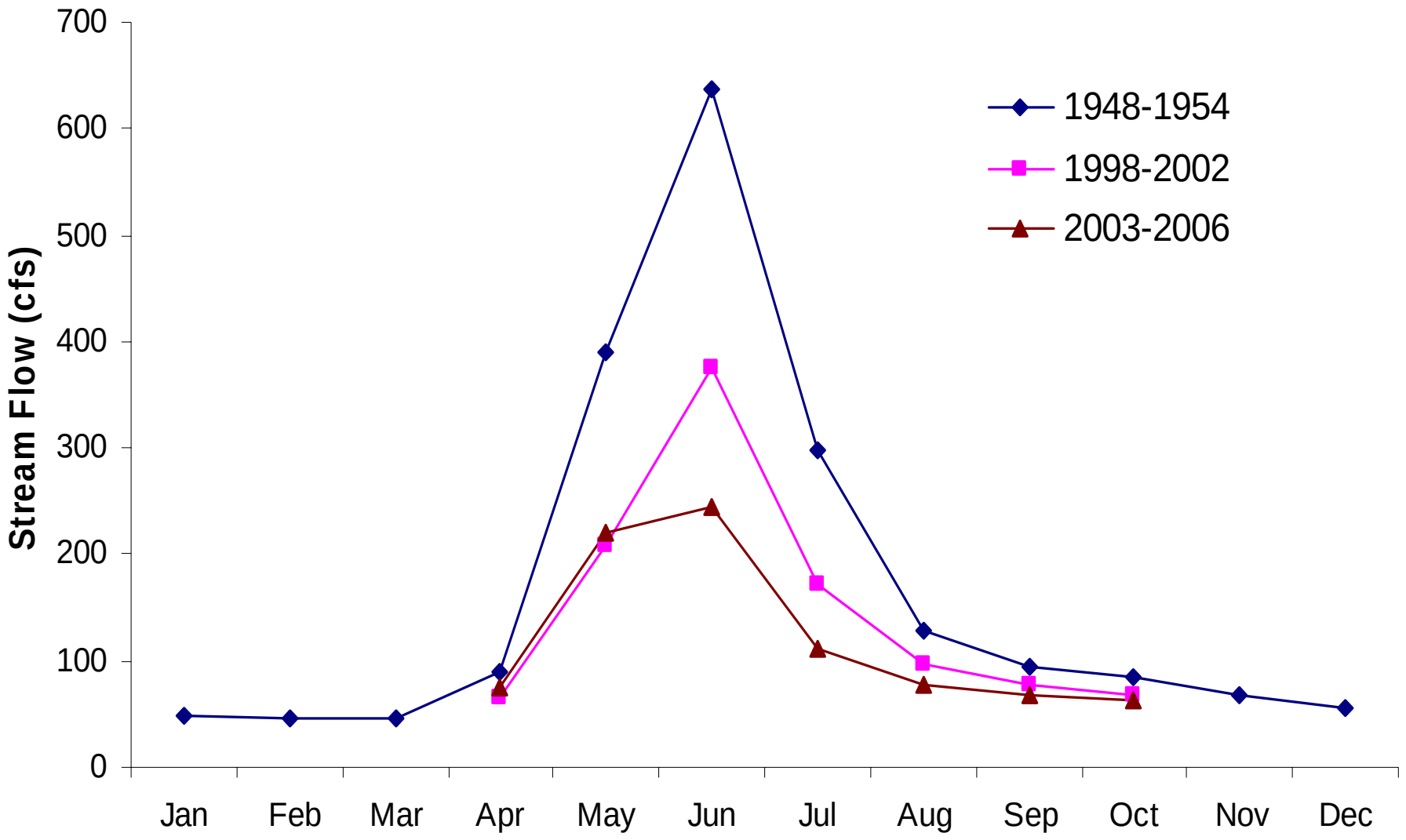
River Overview

- Snowmelt dominated runoff with peak flows typically occurring in late May or early June;
- Low flows occur during the winter season;
- Major tributaries include Deep and Muddy Creeks;
- Large storage projects within the basin include Bynum and Eureka reservoirs.

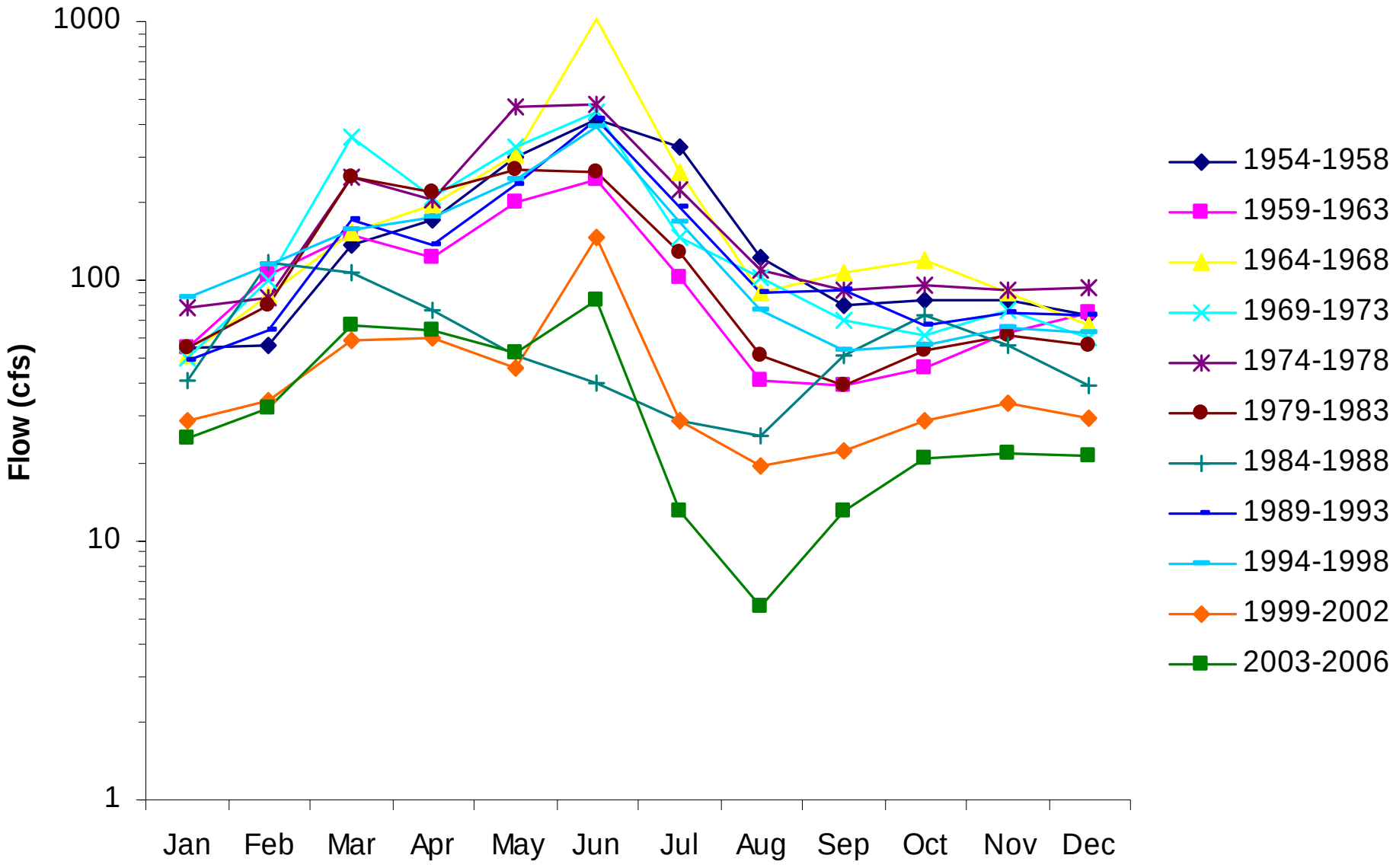
Annual Precipitation In The Teton River Basin



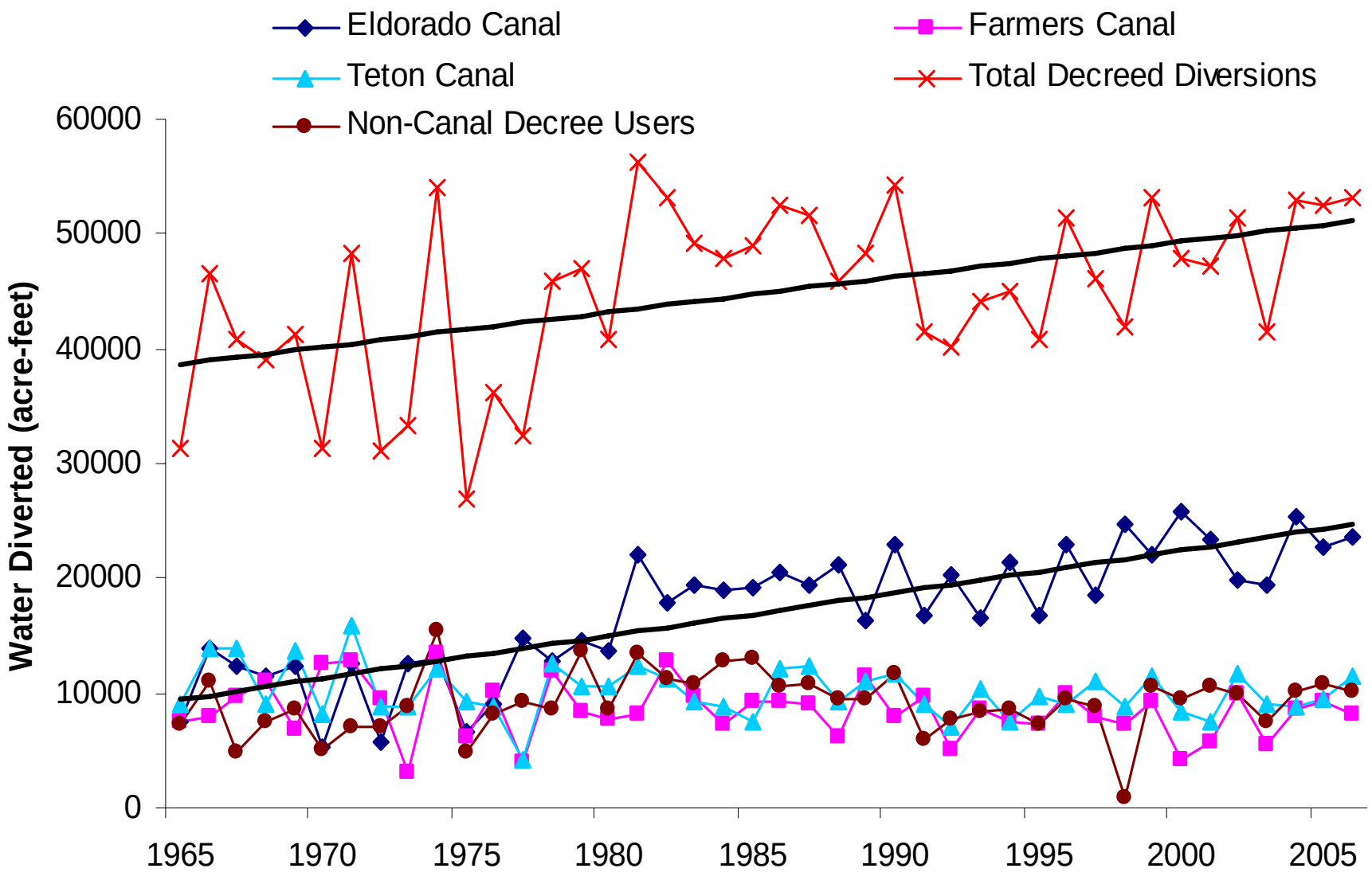
Mean Monthly Flows At The Choteau USGS Gauging Station



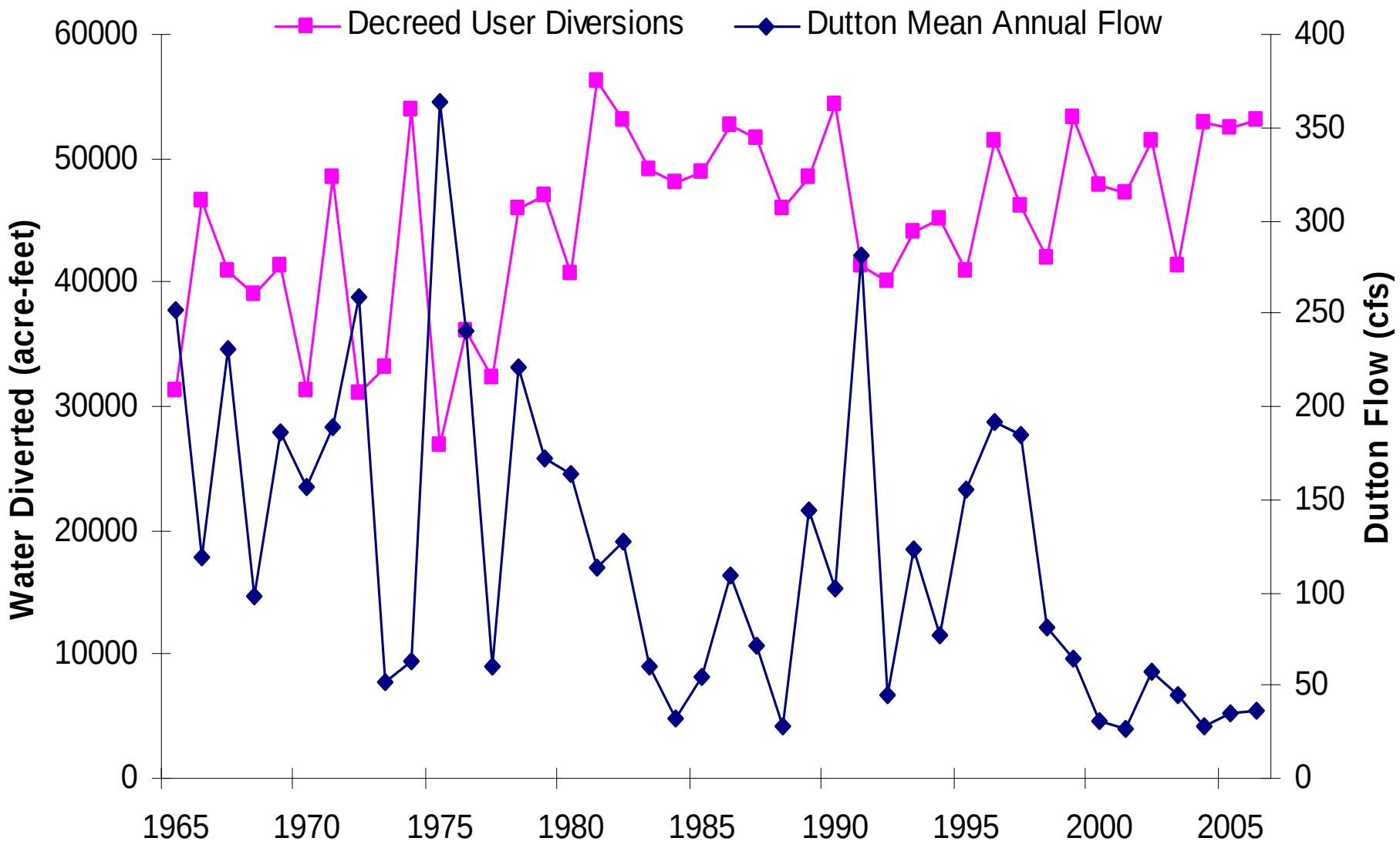
Mean Monthly Flows At The Dutton USGS Gauging Station



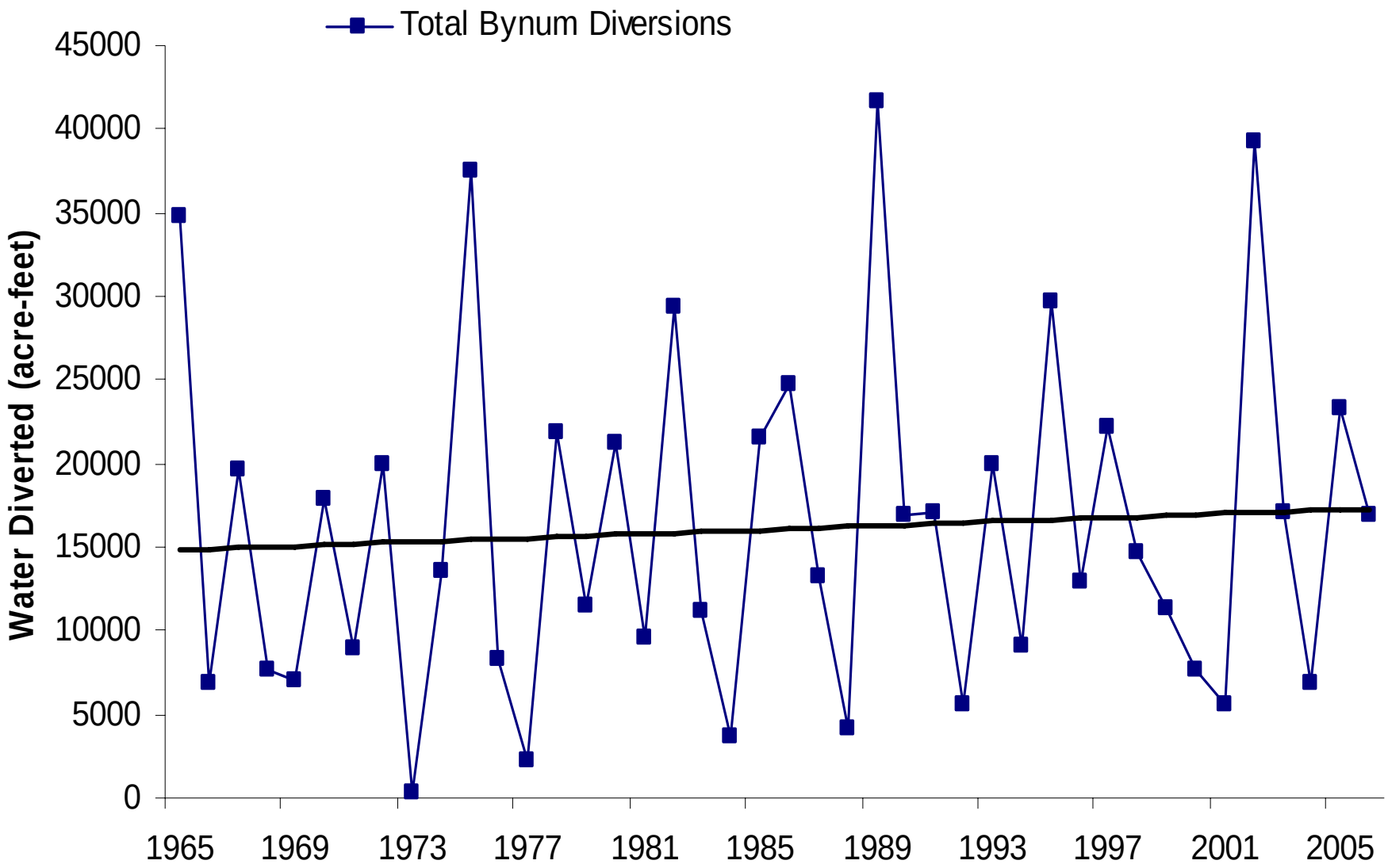
Annual Diversions: Teton River Decreed Users



Teton River Decreed User Diversions Compared To Dutton Gauge Annual Flow



Bynum Reservoir Annual Diversions



Impacts of Drought and Irrigation (1)

- Declining inflows during the recent drought period, coupled with sustained and even increased diversions from the Teton River, have led to chronic dewatering;
- Since 2000, the problem has gotten worse and the lower River is going dry on an almost annual basis;

Impacts of Drought and Irrigation (2)

- The Teton River at the Choteau gauging station has never gone dry during the irrigation season, and rarely falls below 60 cfs;
- In contrast, the Teton River at the Dutton gauge went dry in 2000, 2001, 2003, 2006, and 2007;
- In 2004 and 2005 it fell below 2 cfs;
- From 2000-2007 the Teton River at Loma went dry every year except for 2002, when the river fell below 1 cfs.

Teton River Water Rights

Montana DNRC

October 24, 2007

Adjudication Status

- Temporary preliminary decree Issued on 2500 Claims December 2005
- 547 claims received objections with an average of three objections to a specific claim.
- There are another 1076 claims with DNRC issue remarks that did not receive individual objections.
- Water Court appointment of Water Master to the Teton River Basin
  - Basin Review of Objections
  - Resolution of issues and objections
  - Consolidation of Cases

Teton River New Appropriations Subsequent To 7/1/1973

- 895 New water rights issued by DNRC since July 1, 1973 including GW Certificates of Water Rights
  - -63 Provisional permits issued
  - -55 Change Authorizations granted
- Legislative Teton River Basin Closure April 21, 1993
- HB 831 Provisions for Basin Closures Effective May 3, 2007

Teton River Appropriations

- Total of All Appropriations
  - Total Flow CFS 12,545.57
  - Total Maximum Volume 187,555.20
  - Total Maximum Acres 591,668.90

- Total of Irrigation Appropriations
  - Flow CFS 8,378.32
  - Maximum Volume 58,067.22
  - Maximum Acres 589,852.30

Teton River Water Availability Letter to Provisional Permittees

- DNRC started proactive enforcement of New Appropriations in 1985
  - Teton River Annual Water Availability letter sent to Surface Water Provisional Permit Owners
  - Advised and informed of consequences of continued appropriation of unavailable water for junior water users
- Improved relations between DNRC and existing water users but has not improved water availability on the lower Teton.

Bridge Over Teton River Near Loma 9/26/06

Buck Bridge (North of Carter) 9/26/06

Bridge Over Interstate #15 (North Of Dutton) - Teton River 9/26/06

Eldorado Irrigation Diversion

Eldorado Diversion Dam Across the Teton River

Eldorado Canal (Crosses Highway #89) North Of Choteau 9/26/06

DNRC Teton River Water Management Goals

- Work with the Water Court to mitigate issues to claims to expedite an enforceable decree.
- Continue enforcement of post 1973 water use permits and new water uses without an underlying pre-1973 water right.
- Provide an educational overview to basin water users of Teton River flows and Adjudication status.