

Market Approaches to Water Management

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The Issue

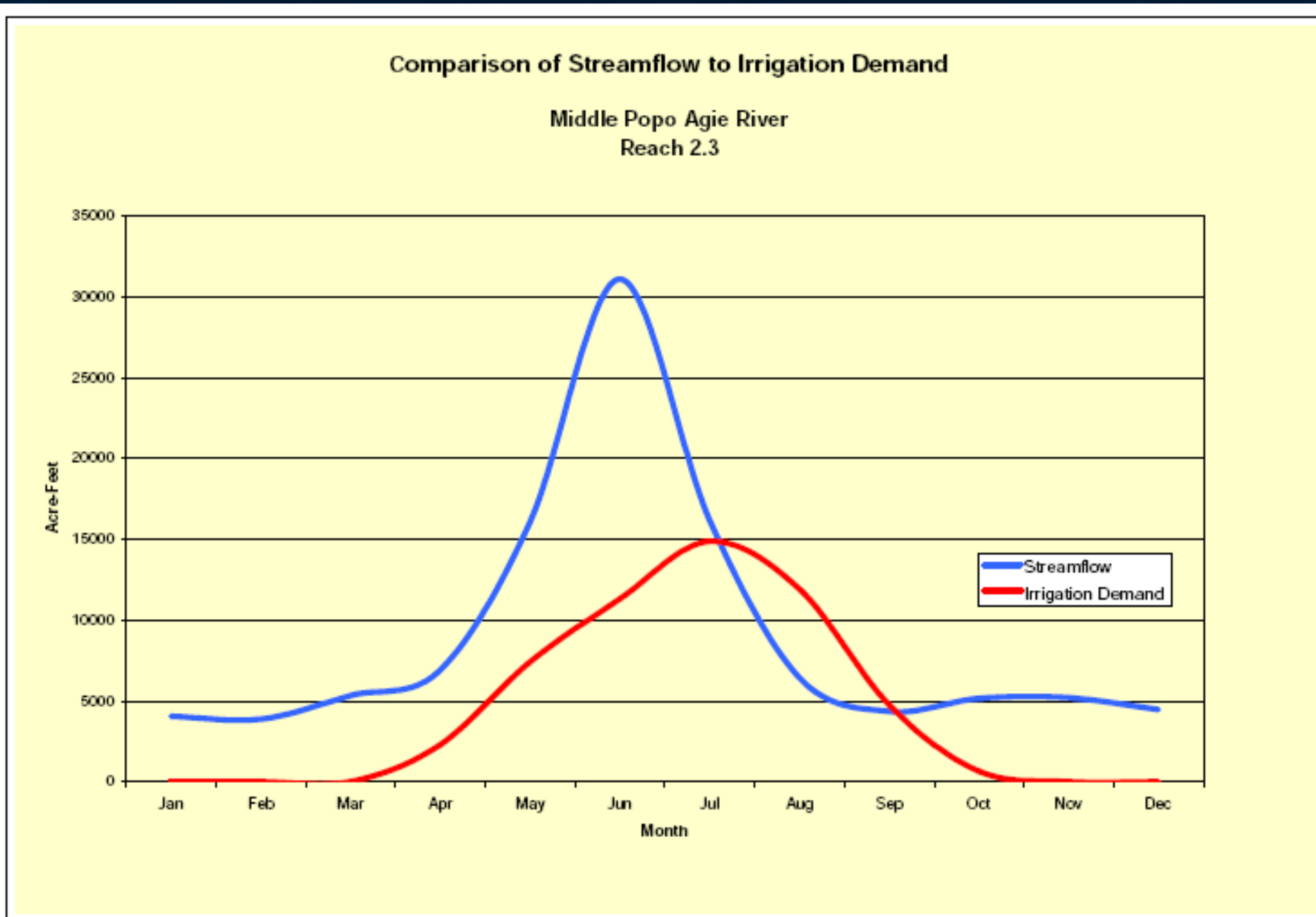


Figure 7.7 Typical Relationship between Streamflow and Irrigation Demand.



The Issue



The Issue

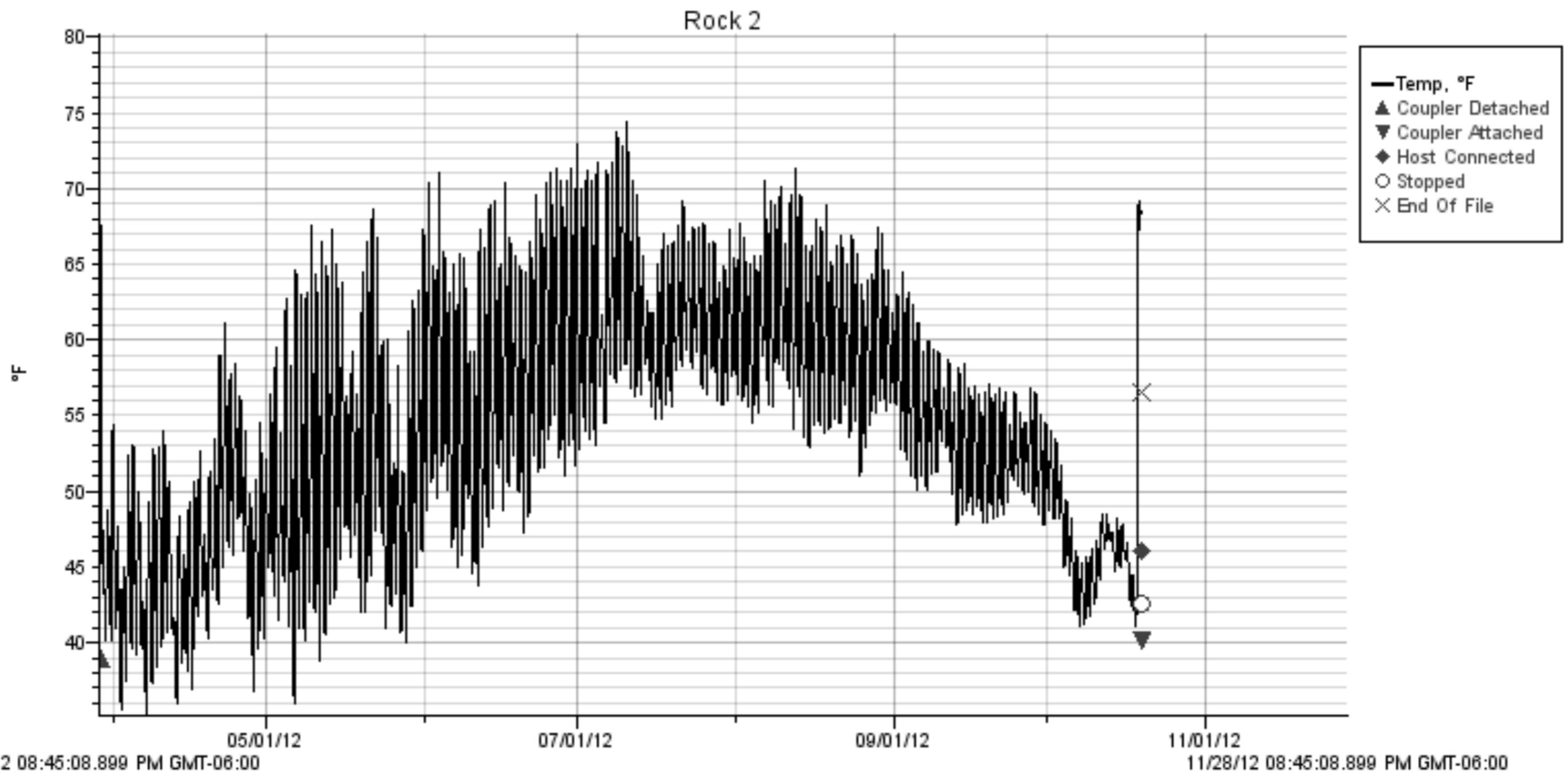
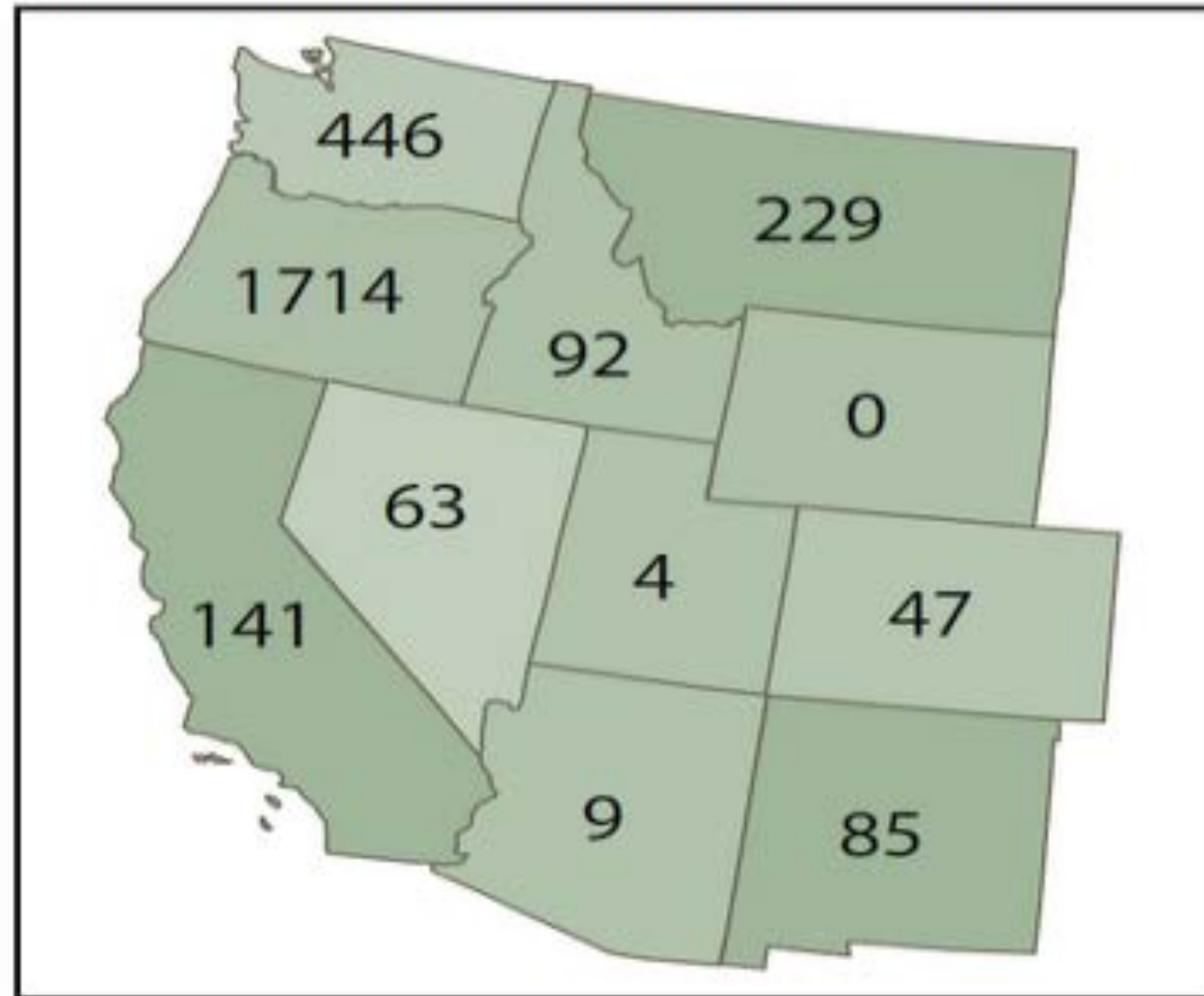


Figure 2. Instream Flow Transactions 1987–2007



Source: Transactional data were compiled by the author from a number of sources including state and federal agencies, private organizations, and the extant literature.

State Based Tools



	Montana	Colorado	Idaho	Utah	Wyoming
Overall legal situation for protection of instream flows*					
1. Wide array of instream “beneficial uses” includes enhancement of environment					
2. In-stream flow rights may contain enough quantity and variability to result in reasonably natural flows					
3. Existing senior rights may be transferred <i>both permanently and temporarily</i> to in-stream use					
4. Any public or private entity may own in-stream flow rights					
5. State administers instream flow rights proactively and without imposing lengthy or expensive procedural hurdles					
ISF program established	1973	1973	1978	1986	1986





- **Water Code has allowed instream flow as a legally recognized use of water since 1992**
 - The Washington Trust Water Rights Program holds private water rights in trust to benefit instream flows on a temporary or permanent basis.
 - Right cannot be relinquished
 - Right maintains its original priority



Washington Permanent Streamflow Transactions:

Project	Stream	cfs	AF	Funding	cost/cfs
Permanent					
METHOW					
	Methow	3.9	1097	\$327,126	\$83,878
	Methow	0.69	189.5	\$95,000	\$137,681
	Chewuch	0.5	138	\$193,000	\$386,000
	Wolf Creek	1	200	\$130,000	\$130,000
	Methow	0.5	151.5	\$130,000	\$260,000
	Beaver Creek	0.94	70.66	\$86,305	\$91,814
	Beaver Creek	1.57	142.99	\$121,571	\$77,434
	Chewuch	9.5		\$2,000,000	\$210,526
YAKIMA					
	Manastash	3.08	937.23	\$971,361	
	Manastash	1.7	254.8	\$364,192	\$220,492
	Manastash	3.61	1005.98	\$771,890	\$213,702
	Manastash	1.799	543.121	\$543,121	\$301,902
WENATCHEE					
	Wenatchee	38.27	7823.5	\$3,357,665	\$87,736
OKANOGAN					
	Nine-mile	2.2	460.32	\$225,000	\$102,273



Washington

nsactions:

Project	cfs	\$per cfs	Acre-feet	\$per acre ft	Total \$	cost/cfs
	0.152	\$ 569,693.40	46.33	\$ 1,869.06	\$ 86,593.40	
	2.8	\$ 301,510.71	844.23	\$ 1,000.00	\$ 844,230.00	
	0.094	\$ 465,361.70	32	\$ 1,367.00	\$ 43,744.00	
Permanent	0.059	\$ 463,389.83	20	\$ 1,367.00	\$ 27,340.00	
METHOW						
	0.08	\$ 443,950.00	26	\$ 1,366.00	\$ 35,516.00	\$83,878
						\$137,681
						\$386,000
						\$130,000
	0.044	\$ 559,227.27	18	\$ 1,367.00	\$ 24,606.00	\$260,000
	1.7	\$ 220,492.26	255	\$ 1,469.95	\$ 374,836.85	\$91,814
	4.929		1241.56		\$ 1,436,866.25	\$77,434
						\$210,526
YAKIMA						
	0.89	\$ 273,818.38	153.3	\$ 1,589.68	\$ 243,698.36	\$220,492
						\$213,702
	3.612	\$ 213,701.55	1005.98	\$ 767.30	\$ 771,890.00	\$301,902
WENATCHE						
						\$87,736
OKANOGAN	1.799	\$ 301,901.61	543.121	\$ 1,000.00	\$ 543,121.00	
						\$102,273
	0.73	\$ 281,303.42	139.54	\$ 1,471.63	\$ 205,351.50	
	7.031		1841.941		\$ 1,764,060.86	



Washington Temporary Streamflow Transactions and Leases

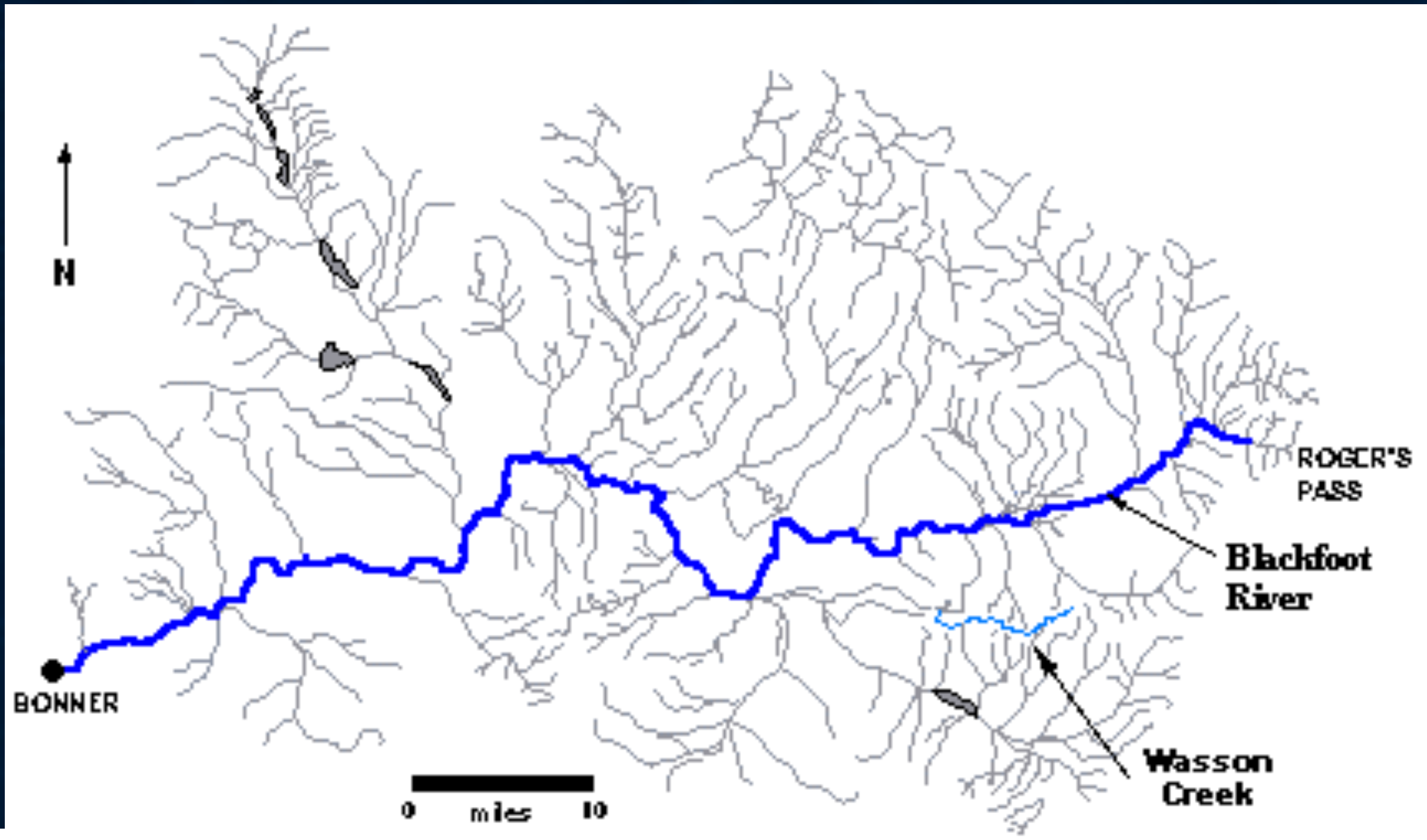
Project	Stream	cfs	AF	Funding	cost/cfs	
Leases						
METHOW						
2010 Late Season Drought Leases	multiple	10.5	1454	\$86,490	\$8,237.14	1-year lease
	Beaver Creek	2.63	141.58	\$11,252	\$4,278.33	1-year lease
	Methow	1.3	521.18	\$45,000	\$3,461.54	10-year lease
	Beaver Creek	1.14		\$35,415	\$3,106.58	20-year lease
	Methow River	0.34	302	\$5,149	\$15,144.12	1-year lease
	Beaver Creek	0.5	45.54	\$4,375	\$8,750.00	Late-Season Lease
YAKIMA						
	Big Creek	0.87	120.14	\$74,517	\$8,565.17	5-Year Lease





- In 1995, the MT legislature passed a private water leasing statutes which allows a private water right holder the opportunity to leasing a portion of a water right for streamflow purposes to entities outside of the state government
 - 10 years is the maximum lease term for retiring acres
 - 30 years is the maximum lease term if irrigation improvements are included in the transaction

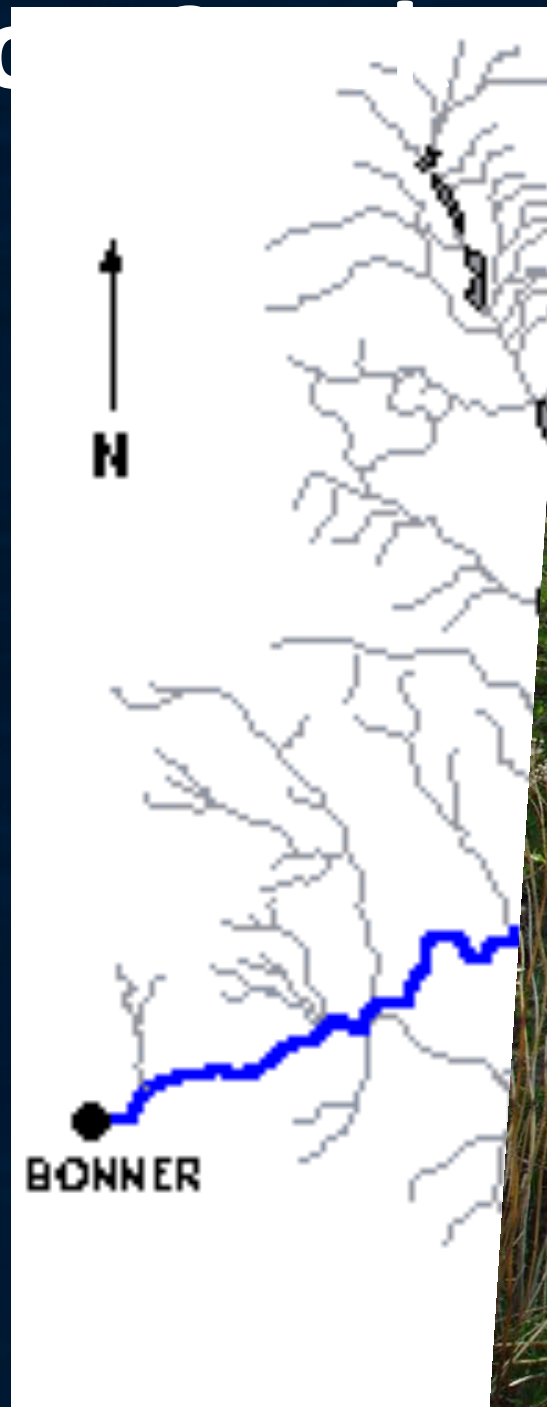
Wasson Creek



Wasson



Wasson



Wasson



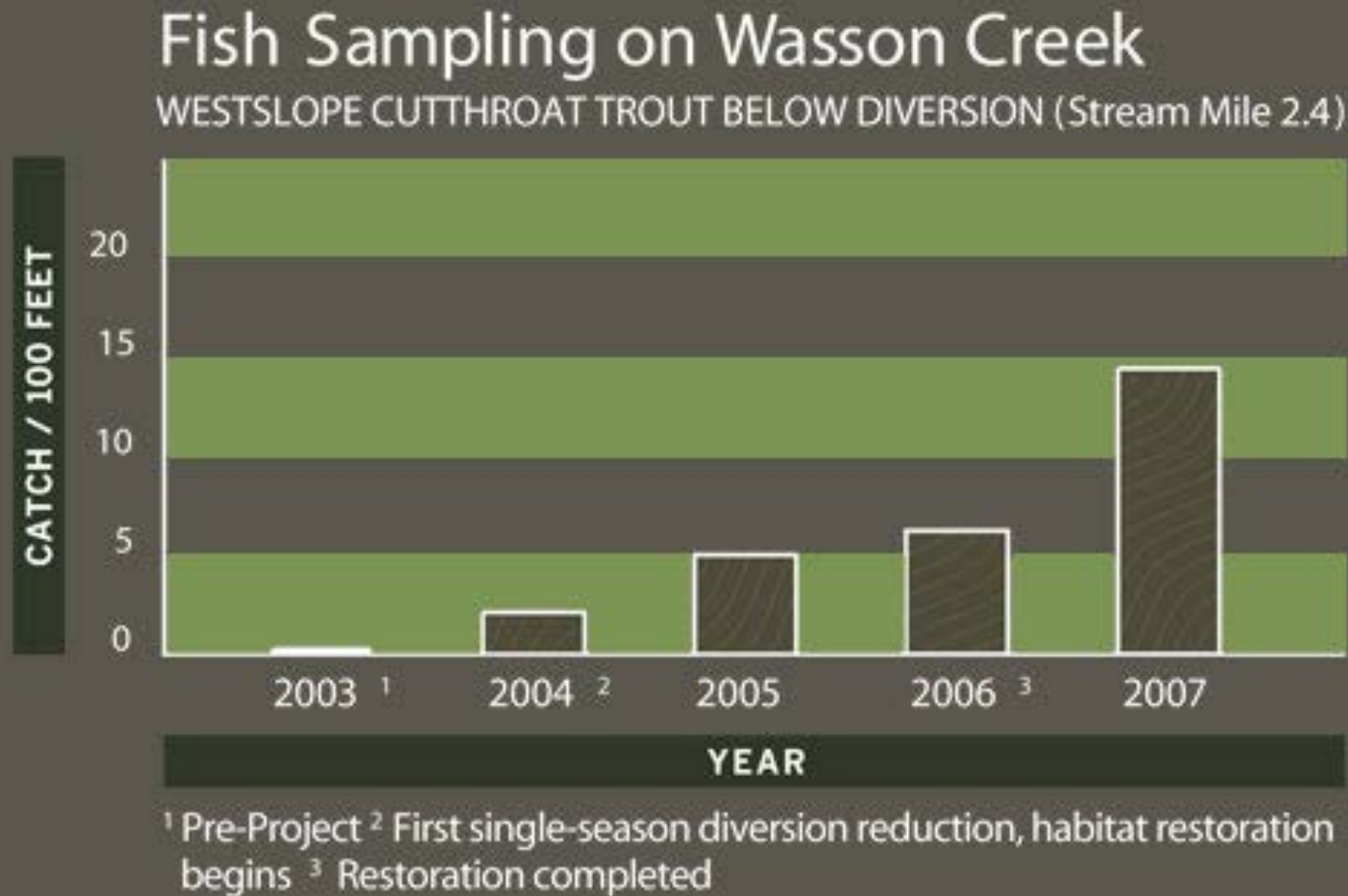
Wasson Creek

- **.75 cfs minimum flow**
 - Assumption of risk for both parties on when the lease will activate each year
- **\$75,000 for 10 years**

Wasson Creek

- .75 cfs
- Assu
- \$75,000

ivate each year



Water Right Appraisal considerations

- What would another user pay for the water for a consumptive use?
- Environmental benefits
- Legal characteristics
- Evidence from areas with frequent water right trading indicates that transactions involving large quantities of water sell for less on a per unit basis than small water right sales
- Estimate what the value of water when used for irrigation purposes
- **Premiums:** generally, appraisers assume a premium range of 50-100% of the estimated value



- The statutory challenge
 - Non consumptive use discouraged in Wyoming
 - A usufructory right with restrictions
 - No legal protection for leaving water instream to benefit streamflows
- Legislative efforts to pass laws to provide flexibility to use a portion of a water right to improve streamflows
 - Ongoing.....

Overcoming statutory hurdles that discourage “non-consumptive” uses



- *Existing Instream Flow Statute*
 - Transactions with private water right holders available but very rare
- *Non Diversion Agreements*
 - for landowners with specific circumstances
 - No upstream water user
 - Abandonment risk
- *Instream flow Districts*
 - Establish a minimum flow to maintain or improve a fishery
 - Create an agreement and water use plan between waterusers to leave water in the stream
- *Water use efficiency projects*

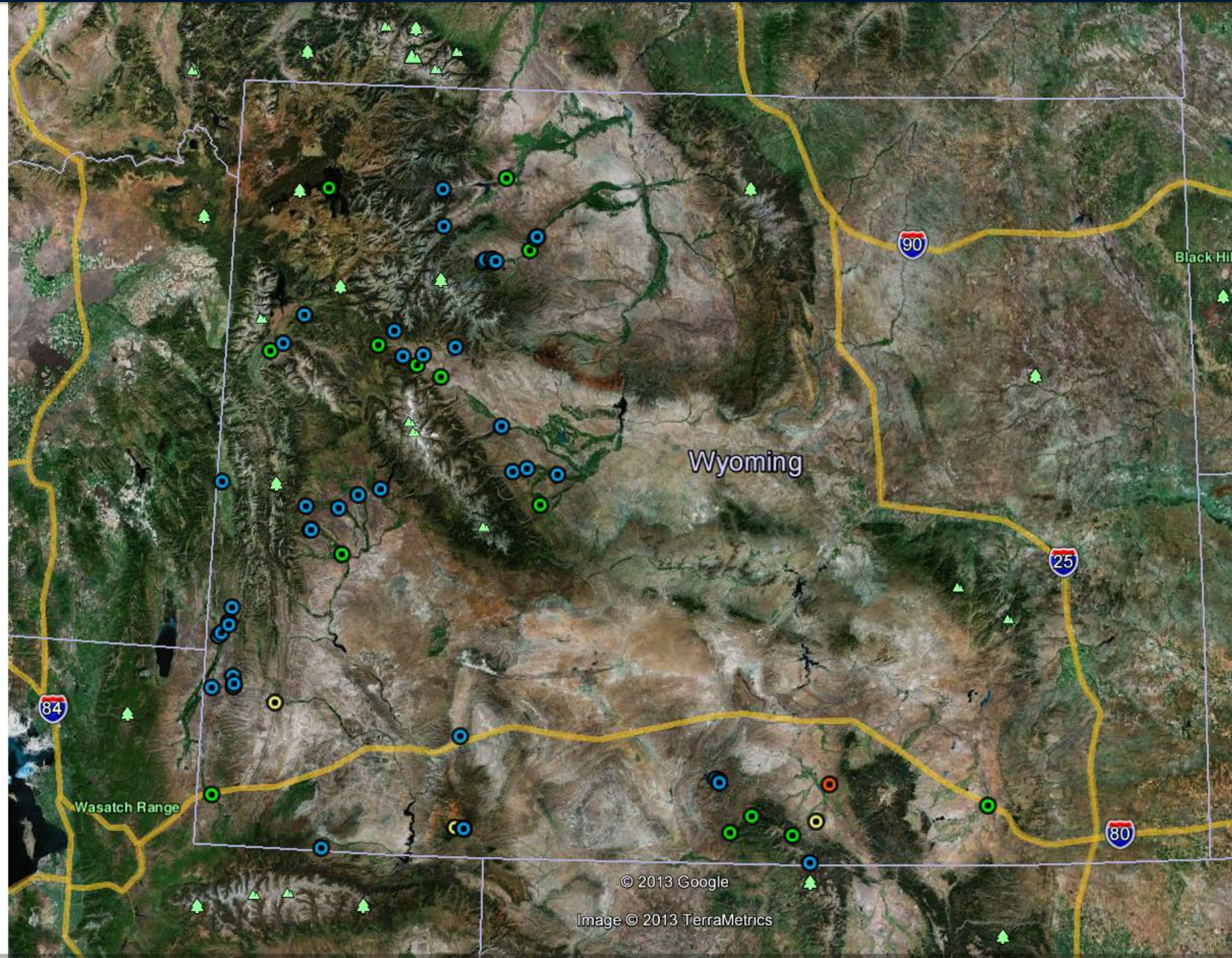




Wyoming Trout Unlimited Project Locations
2007-present

LEGEND

- Reconnect
- Protect
- Restore
- Sustain

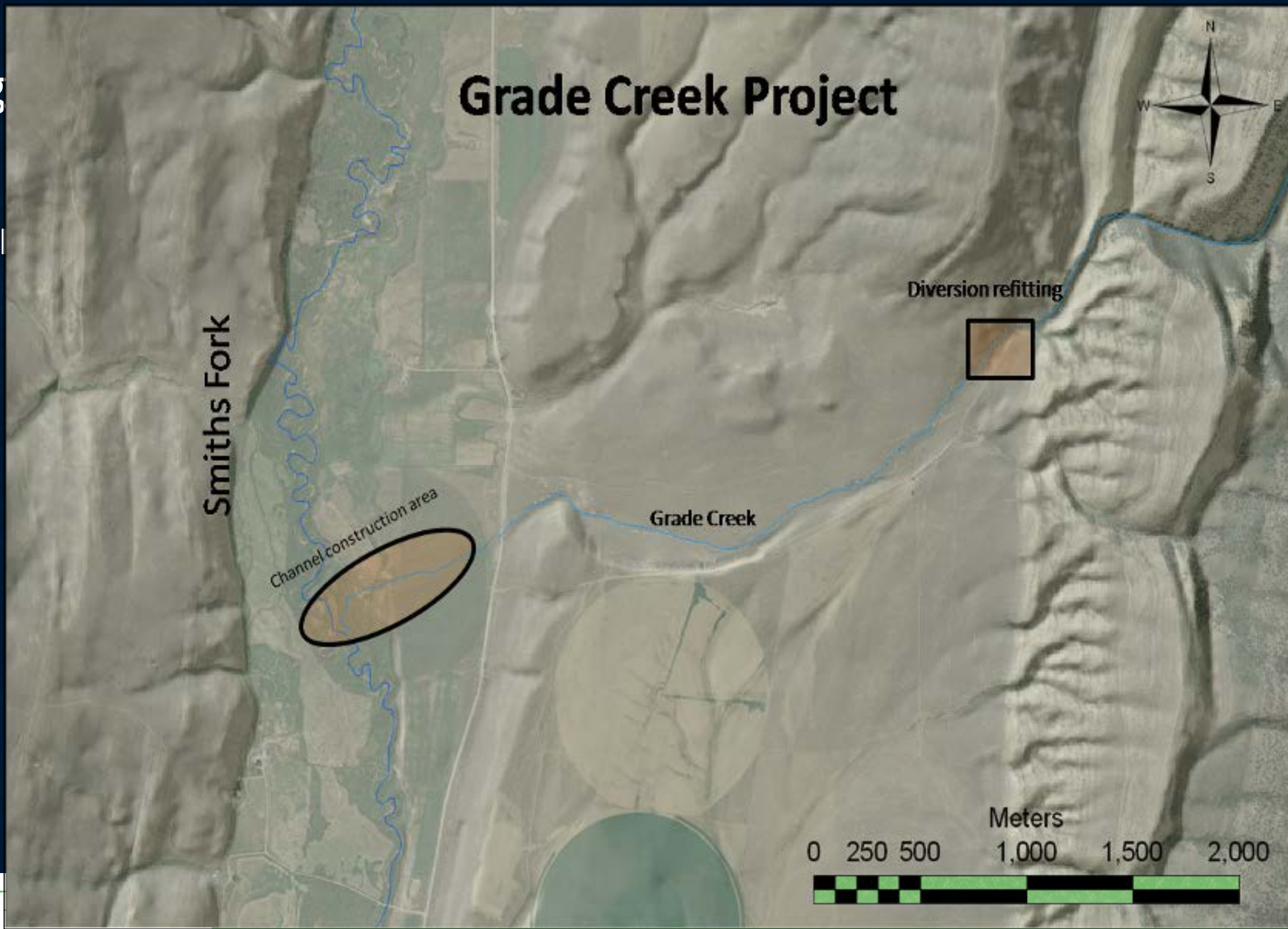


Irrigation Improvement Projects

- Irrigation efficiency projects to improve streamflow
 - Grade Creek
 - Bitterroot Ranch



Grade Creek Project



Irrig

- I



Irrig

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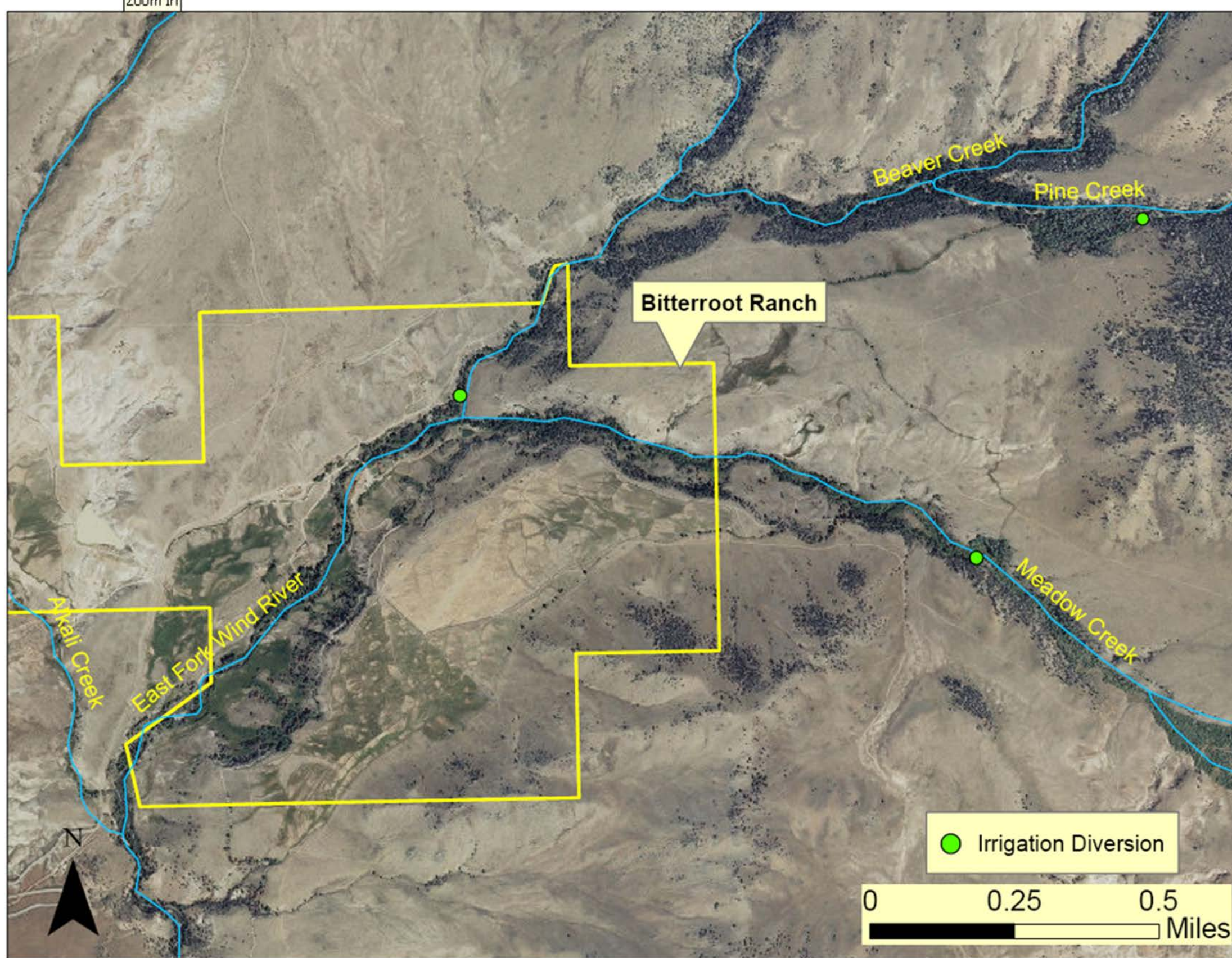
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conclusion (cited)

A water right is granted in perpetuity, the right is transferable so that it can move to higher uses in response to economic forces. (Frank J. Trelease, Land and Water Law Review Vol. 1 No. 1, 4, 1996).

The theory behind this doctrine is that by permitting persons to carve out for themselves, private property rights from the public owned assets, each person will attempt to achieve the greatest possible benefit for himself, and the total result of these individual actions will tend to produce maximum welfare for the state or nation. (Frank J. Trelease, Land and Water Law Review Vol. 1 No. 1, 4, 1996).



Thanks for your time!

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