

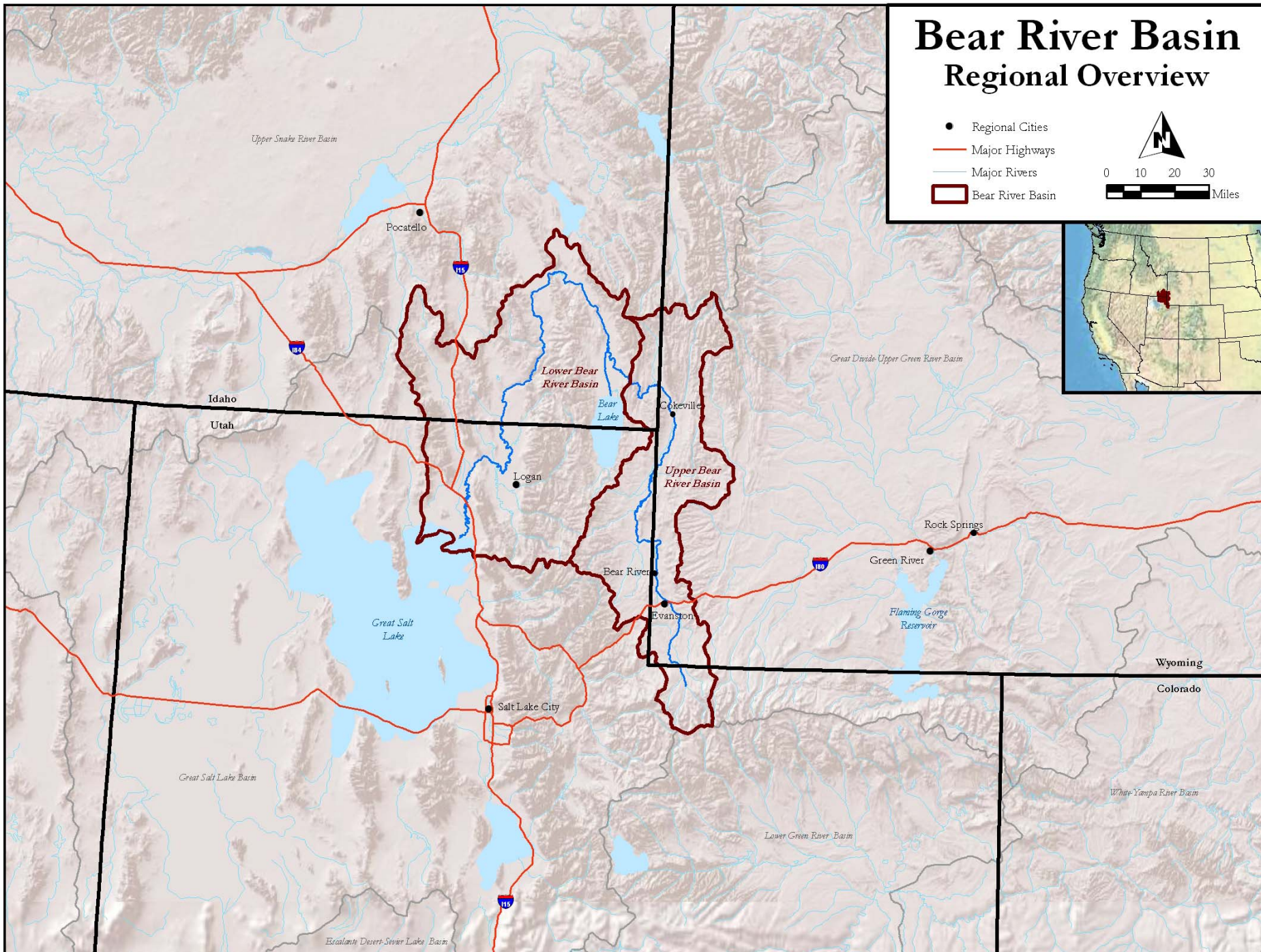
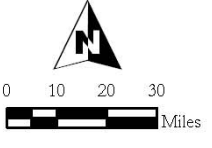
Bear River Basin Plan Review and Evaluation

Preliminary Results



Bear River Basin Regional Overview

- Regional Cities
- Major Highways
- Major Rivers
- ▭ Bear River Basin



Bear River Basin Map



0 3 6 12 18 24 Miles



Bear River Plan Review & Evaluation Work Tasks

- Background Info Review
- Water Use Profile
- Surface & Ground Water Availability
- Future Water Use Opportunities
- Basin Issues & Strategies
- Reporting



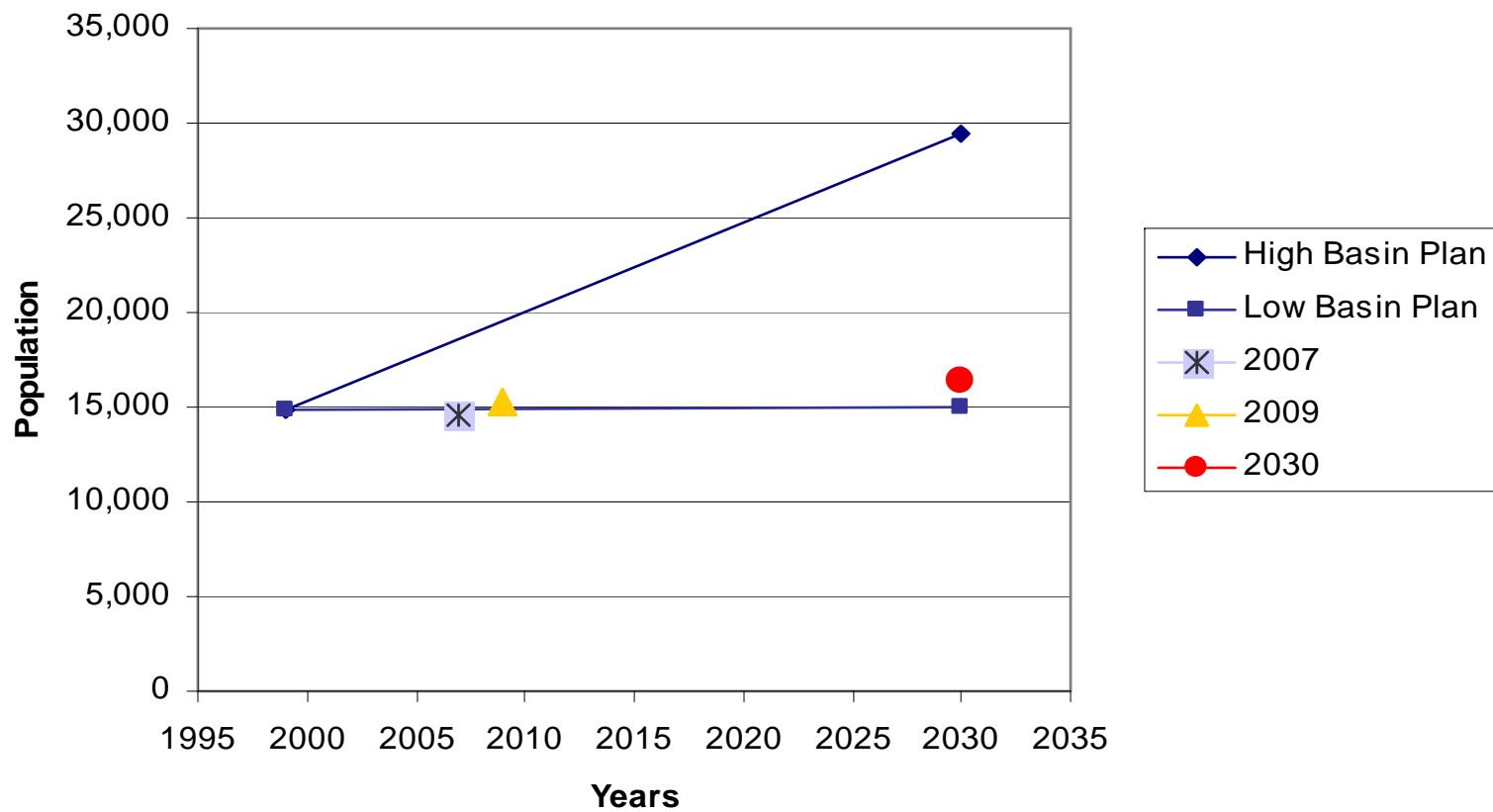
Bear River Basin Plan Technical Memoranda

- 17 Technical Memoranda presented as Appendices A through Q to the Plan Report.
 - Diversion Operating Memoranda
 - Storage Summary



Population and Economics

Bear River Basin Population Projections



Municipal Water Use

Service Area Populations – 2001 Plan

	Lincoln	Uinta	
Location	County 2001	County 2001	2001 Total
Evanston Service Area		12,200	12,200
Cokeville Service Area	500		500
Unincorporated Area	400	2,000	2,400
Total Basin	900	14,200	15,100

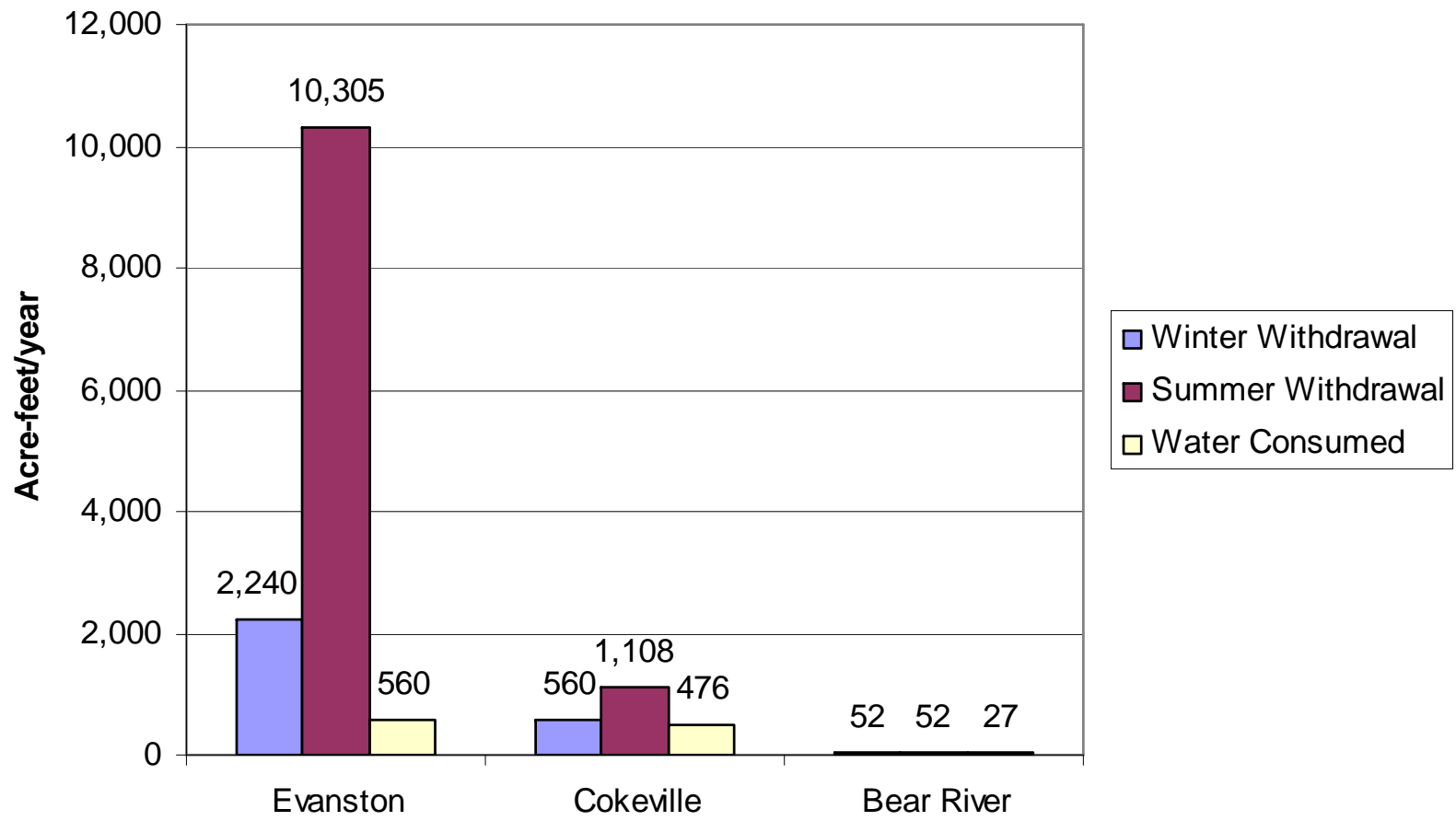
Municipal Water Use

Service Area Populations – 2007

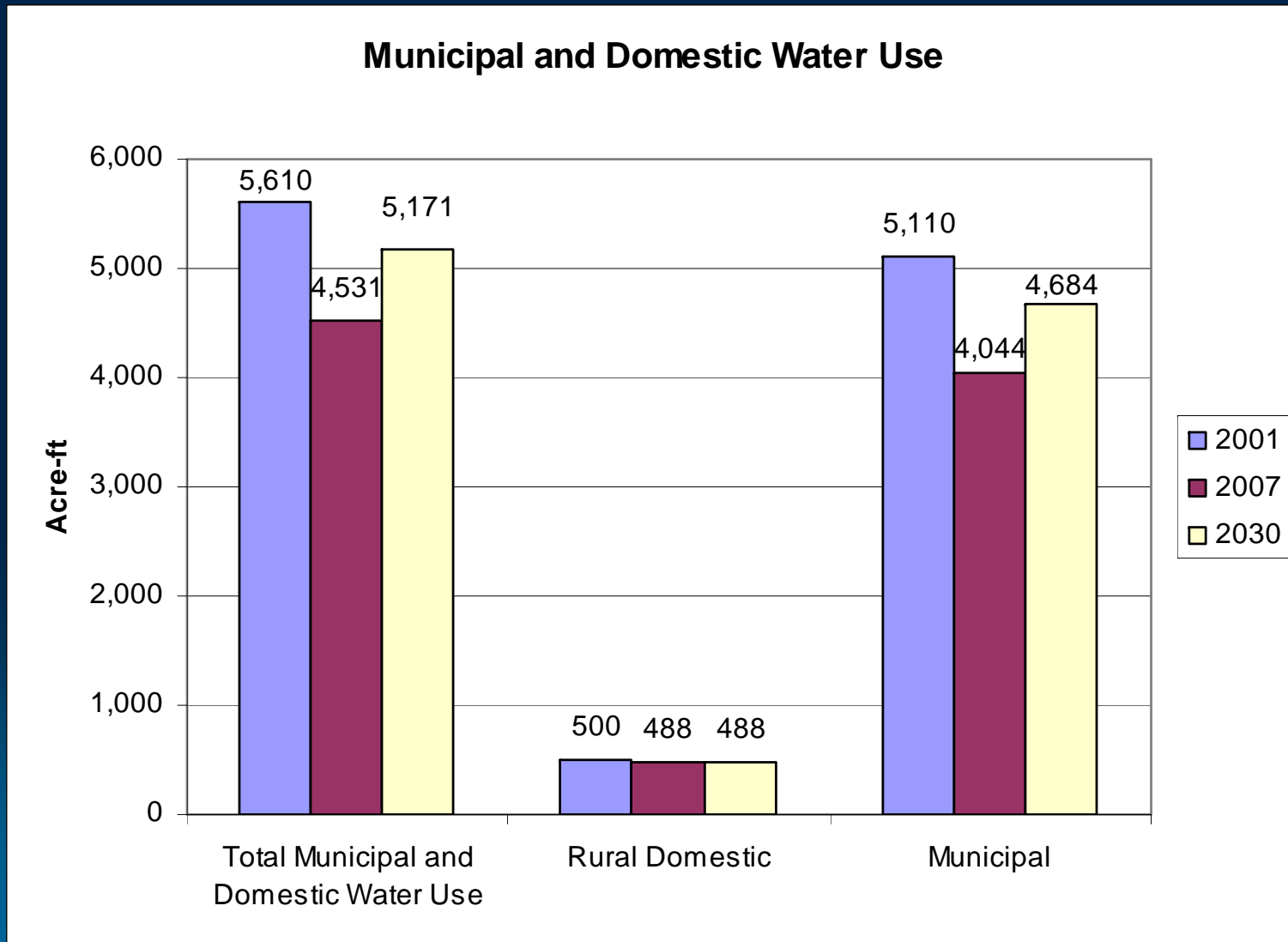
	Lincoln	Uinta	
Location	County 2007	County 2007	2007 Total
Evanston Service Area		11,500	11,500
Cokeville Service Area	520		520
Bear River Service Area		137	137
Unincorporated Area	311	2108	2,419
Total Basin	831	13,745	14,576

Municipal Water Use

2009 Municipal Water Use



Municipal and Domestic Use



Industrial Water Use

Year	Surface Water	Ground Water	Total
2001	310 AF	90 AF	400 AF
2008	37 AF	5 AF	42 AF

Bear River Basin Groundwater Use

Use	2001	2007
Crop Irrigation Use	1,900 AF	?
Municipal & Domestic Use	540 AF	1,000 AF
Industrial Use	90 AF	5 AF

Recreational and Environmental Update – What's Changed

- New National Wetlands Inventory
 - Updates are dated September 2009
- Received an updated Cokeville National Wildlife Refuge Map
- Added Several Trout Unlimited and Wyoming Wildlife and Natural Resources Trust Projects to the Basin GIS
- New Angler Days Calculations

Recreational and Environmental Update – What's Changed

- New Duck and Goose Hunter Days Data
- New Trout Stream Classifications
- Added USFS Campgrounds to the GIS
- Received State Park – Visitation Data
- Received State Park Boundaries for the GIS
 - With boundaries that are current following changes by the 2010 legislature.

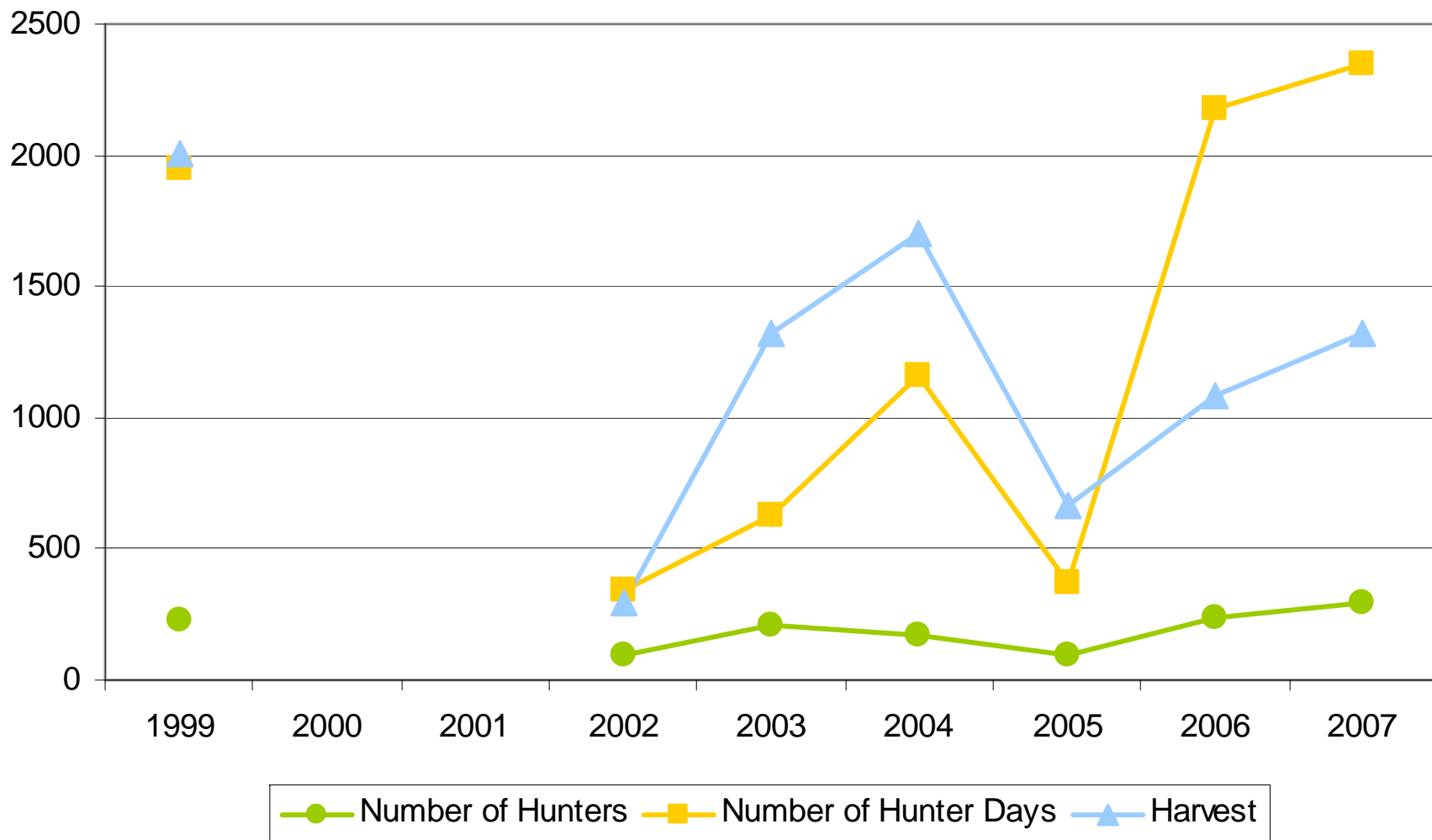
Estimated 2001 Angler Day Revenues

Water Type	Angler Days annually	Per day expense	Estimated Yearly Revenue
Lakes	7400	\$53.00	\$392,200.00
Streams	9400	\$53.00	\$498,200.00
Total	16800	\$53.00	\$890,400.00

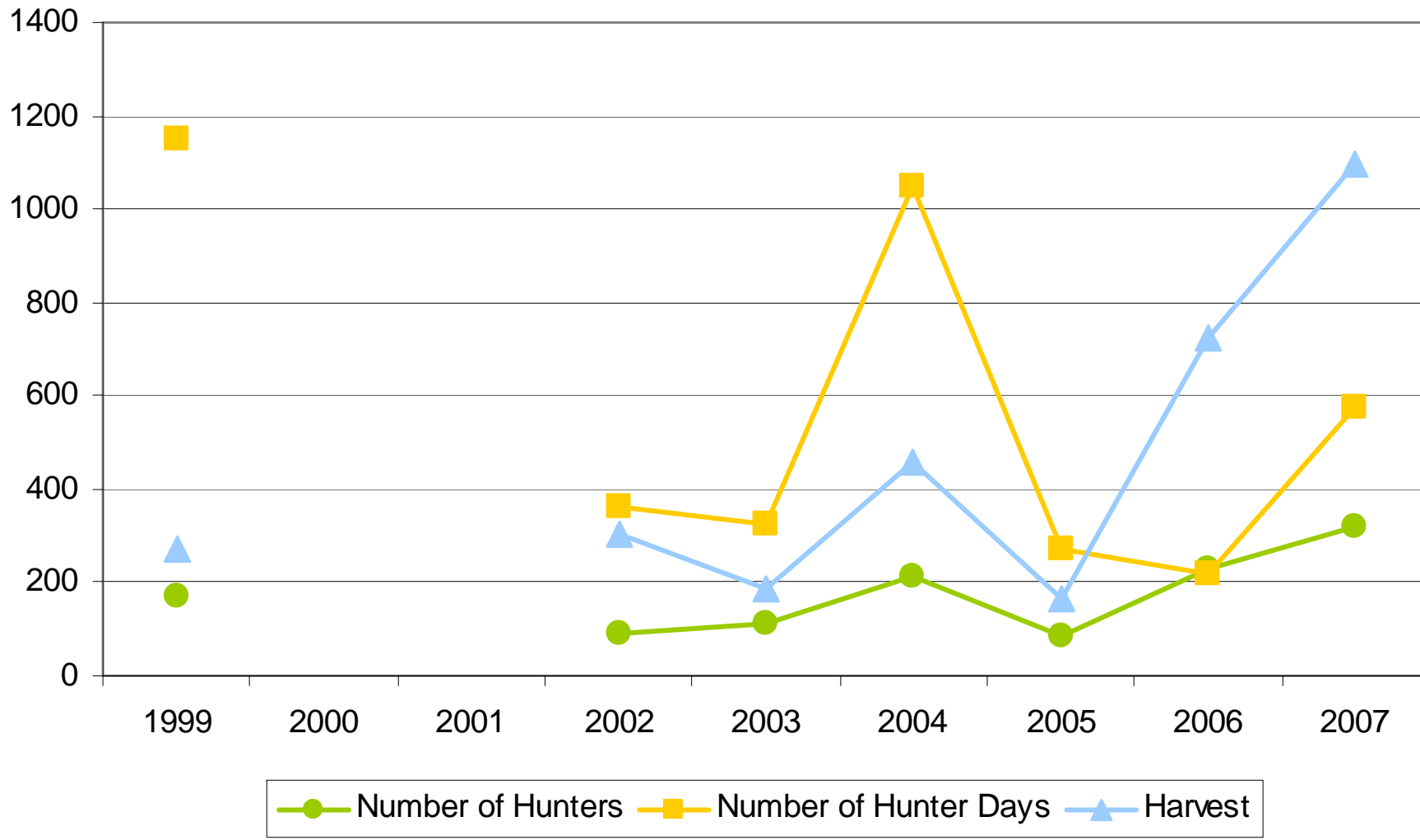
Estimated 2010 Angler Day Revenues

Water Type	Angler Days Annually	Per Day Expense	Estimated Yearly Revenue
Lakes	7,400	\$68.00	\$503,200.00
Streams	9,400	\$68.00	\$639,200.00
Total	16,800	\$68.00	\$1,142,400.00

Duck Hunter Data



Goose Hunter Data



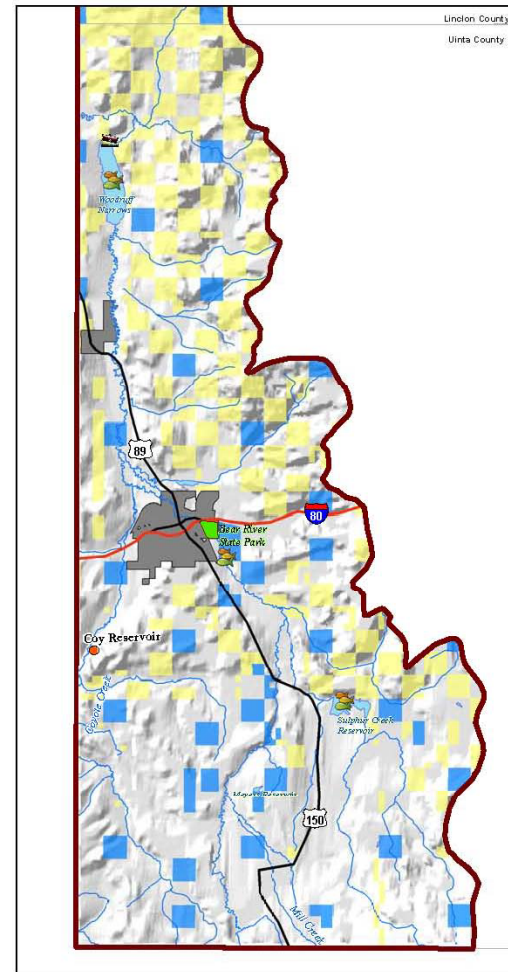
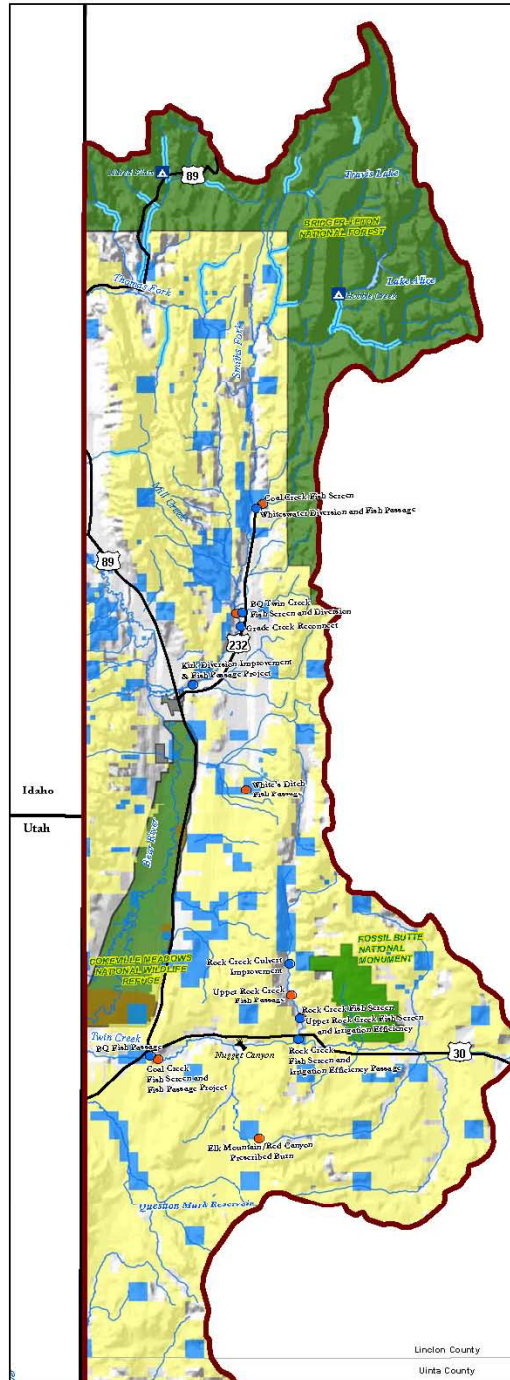
Bear River State Park Visitation



Bear River Basin

Recreational & Environment

- | | |
|--------------------------------|-----------------------------|
| National Forest Service Lands | Restoration Projects |
| National Park Service Lands | Trout Unlimited |
| USFWS National Wildlife Refuge | WWNRT |
| BLM | Fishing Access Points |
| Wyoming State Lands | Instream Flows |
| Municipalities | |



Water Quality

Bear River Surface Water Quality - Average Calculated TDS for Five Stations on Bear River				
Station Name	Station Number	2001 Plan TDS Data	Current TDS Data	Combined TDS Data
Bear River near Woodruff	10020100	238	270	248
Twin Creek	10027000	565	536	562
Smiths Fork at Cokeville	10035000	222	218	220
Bear River below Smiths Fork	10038000	340	326	337
Bear River at Border	10039500	338	327	338

Water Use / Availability

- Hydrology
 - Bear 1 → 1971 – 1998
 - Bear 2 → 1971 – 2008
- Diversion Data
- Consumptive Use
- Spreadsheet Model
 - Dry
 - Wet
 - Normal



Hydrology (dry, wet, normal)

USGS Gage	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
Bear Riv. State Line					Wet		Dry		Dry			Wet	Wet	Wet		Wet			Dry
Bear Riv. @ Evanston	Wet	Wet		Wet			Dry		Dry			Wet	Wet	Wet		Wet			Dry
Bear Riv. above Woodruff	Wet	Wet		Wet			Dry		Dry			Wet	Wet	Wet		Wet			Dry
Bear Riv. below Woodruff				Wet			Dry		Dry			Wet	Wet	Wet	Wet	Wet			Dry
Bear Riv. near Randolph		Wet					Dry					Wet	Wet	Wet	Wet	Wet			Dry
Bear Riv. below Pixley	Wet	Wet					Dry					Wet	Wet	Wet	Wet	Wet			Dry
Smiths Fork near Border	Wet	Wet					Dry				Dry	Wet	Wet	Wet		Wet			
Bear Riv. below Smiths Fork	Wet	Wet					Dry					Wet	Wet	Wet		Wet			
Bear Riv. at Border	Wet	Wet				Dry	Dry					Wet	Wet			Wet			

USGS Gage	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Bear Riv. State Line			Dry		Dry	Wet		Wet	Wet			Dry	Dry		Dry				
Bear Riv. @ Evanston			Dry						Wet			Dry	Dry	Dry	Dry				
Bear Riv. above Woodruff	Dry		Dry			Wet			Wet			Dry	Dry	Dry	Dry				
Bear Riv. below Woodruff	Dry		Dry					Wet	Wet	Wet		Dry	Dry	Dry	Dry				
Bear Riv. near Randolph	Dry		Dry		Dry			Wet	Wet	Wet		Dry	Dry	Dry	Dry				
Bear Riv. below Pixley	Dry		Dry						Wet	Wet		Dry	Dry	Dry	Dry				
Smiths Fork near Border			Dry		Dry			Wet	Wet	Wet		Dry	Dry	Dry	Dry			Dry	
Bear Riv. below Smiths Fork	Dry		Dry		Dry			Wet	Wet	Wet		Dry	Dry	Dry	Dry				
Bear Riv. at Border	Dry		Dry		Dry			Wet	Wet	Wet		Dry	Dry	Dry	Dry				

Dry	Dry Year
Normal	Normal Year
Wet	Wet Year

Diversion Data

Booth					
	MAY	JUN	JUL	AUG	SEP
1971	99.2	894.5	934.2	902.5	753.7
1972	232.1	967.9	882.6	918.3	216.2
1973	265.8	829.1	696.2	515.7	386.8
1974	489.9	894.5	846.9	743.8	372.9
1975	232.1	571.2	956.0	700.2	835.0
1976	462.1	777.5	775.5	255.9	238.0
1977	480.0	660.5	281.7	222.1	35.7
1978	172.6	1207.9	993.7	724.0	567.3
1979	357.0	1001.7	731.9	353.1	47.6
1980	0.0	946.1	747.8	634.7	295.5
1981	198.3	779.5	585.1	581.2	73.4
1982	309.4	981.8	1075.0	551.4	751.7
1983	240.0	222.1	1110.7	841.0	610.9
1984	125.0	944.1	1031.4	404.6	192.4
1985	186.4	585.1	1019.5	382.8	575.2
1986	240.0	912.4	710.1	456.2	416.5
1987	372.9	894.5	811.2	878.7	343.1
1988	430.4	1061.2	440.3	180.5	261.8
1989	359.0	680.3	519.7	295.5	244.0
1990	444.3	640.7	729.9	626.8	305.5
1991	317.4	726.0	890.6	412.6	414.5
1992	458.2	658.5	442.3	325.3	132.9
1993	224.1	632.7	515.7	573.2	416.5
1994	452.2	519.7	388.8	301.5	228.1
1995	194.4	484.0	654.5	460.2	271.7
1996	523.6	273.7	406.6	466.1	511.7
1997	554.8	557.4	549.6	368.3	302.3
1998	444.3	465.3	696.0	217.8	112.5

Bear River Commission
Biennial Reports

SEO Hydrographer
Commissioner Reports

Booth					
	MAY	JUN	JUL	AUG	SEP
1999	247.99	388.85	597.17	200.38	188.48
2000	306.12	545.59	462.26	379.53	90.86
2001	329.34	573.36	378.93	214.27	136.89
2002	377.74	421.99	482.50	114.87	484.88
2003	590.22	1281.04	1073.91	289.26	183.71
2004	351.16	538.84	514.64	295.01	290.05
2005	188.67	867.38	908.65	732.87	271.40
2006	284.70	1236.00	594.79	419.61	305.13
2007	335.49	732.87	536.46	301.56	68.84
2008	165.06	687.64	625.34	580.31	156.53

Spreadsheet Model

Bear River Planning Model: Dry Year Condition

Central Navigation Worksheet

Select a reach to view:

Reach 1

View a Diagram of
the Basin

Go to this Reach

Select an Input Table:

Options Tables

View List of All Nodes

Diversion Data

Evaporative Losses

Reach Gain/Loss

Return Flows

USGS Gage Data

Imports & Exports

Results Options

This reach is defined as:

Reach 1: Wyoming/Utah State Line to Confluence with Sulphur Creek

It contains the following Nodes:

Node 1.00 USGS 10011500: Bear River near UT-WY State Line
Node 1.01 Lannon & Lone Mountain
Node 1.02 Hilliard West Side
Node 1.03 Bear Canal
Node 1.04 Crown & Pine Grove
Node 1.05 McGraw & Big Bend
Node 1.06 Lewis
Node 1.07 Meyers No. 2
Node 1.08 Meyers No. 1
Node 1.09 Meyers Irrigation
Node 1.10 Evanston Pipeline
Node 1.11 Booth
Node 1.12 Anel
Node 1.13 Evanston Water Supply
Node 1.15 AggDiv BR-1

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