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## RESOURCE EVALUATION

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Identified as part of the basin goals and objectives is the need to identify and care for historic and archaeological sites, protect outstanding natural features, scenic values, and the quantity and quality of prime recreation waters, and maintain and enhance fish and wildlife populations and their habitat. Rivers that possess outstanding fish and wildlife, recreational, aesthetic, or geologic values can be designated as Idaho protected rivers. An assessment of the effects of protection on other identified resource uses is undertaken prior to designation. An initial attempt to assess these values in the Henrys Fork basin has been documented by the Pacific Northwest Rivers Study. Following is a matrix of stream segment assets based on the Pacific Northwest Rivers study, with resource data updated to reflect current information. The matrix was used to help identify and evaluate stream segments with "outstanding" natural and recreational resource values.

### Aesthetic and Geologic Values

Aesthetic and geologic values are addressed in the first two columns of the matrix. Aesthetic features are noted vistas and canyon environments. Geologic features are: waterfalls, canyons, caves, glacial features, active meander complexes, hot, warm, or cold springs, or an exceptional display of bedrock structural features. Three criteria were used to evaluate these features: (1) scarcity, (2) quality, and (3) scientific value. Scarcity refers to the distribution of the feature both within the state



Lower Mesa Falls on the Henrys Fork

and worldwide. Quality refers to the relative physical condition of a natural feature in comparison to other known occurrences of the same feature. The scientific value of a feature or a given site refers to its usefulness and importance as an educational resource. Scarcity, quality, and scientific value determinations weighed the final scenic/natural features evaluation for a stream segment. Only "Outstanding" = 1, or "Substantial" = 2, ratings were recorded on this matrix. The features of note for each stream segment are listed in the second column.

## Fishery Values

The following components were included in the resident fish resource assessments: habitat quality, species present and their current status, migration corridors, research sites, abundance of catchable sport fish, angler effort, quality of angling experience and potential fishery and habitat value. Resident fish include game fish and non-game fish.

High (=1), Intermediate (=2) and Low (=3) quality habitats were defined as those which provide optimum, satisfactory and poor environmental conditions, respectively, for the species present. Environmental factors considered in evaluating habitat quality included temperature, water quality parameters, instream flow, substrate composition, availability of instream cover, food abundance, and quality of riparian habitat.

Fish species of High (=1) concern are wild or native gamefish species of regional importance. In the Henry's Fork this would encompass cutthroat trout, rainbow trout, and mountain whitefish. Species of Intermediate (=2) concern are all gamefish species except as noted above; all native nongame species in natural, unimpounded environments; and exotic nongame fish that serve as a forage base for a species of high concern. Species of Low (=3) concern are all exotic nongame species not noted above, and native nongame fish populations in altered habitats.

Levels of fish abundance (High = 1, Intermediate = 2, and Low = 3) were correlated with catch per unit effort, actual population size based on field sampling data, or resource expert consensus estimates. Levels of angler use (High = 1, Intermediate = 2 and Low = 3) are expressed as fisherman-days per unit area, or are resource expert consensus estimates. For estimate purposes the following guidelines were used. High - supports a renowned fishery as evidenced by the number of anglers who come specifically to fish this particular stream segment, anglers from a national or statewide area. Intermediate - supports a fishery utilized by anglers from a 3-4 county area. Low - supports a fishery used by local anglers.

## Wildlife Values

The criteria used to assess wildlife resources were habitat quality, species composition and abundance, recreational use or potential, and geographic importance. Noted use of habitat for nesting, winter range, calving, or migration is listed under the Critical Use column on the matrix. Final wildlife values recorded on the matrix were further modified by IDWR staff to reflect water-associated species or land-associated species as follows:

- 1 = Outstanding wildlife value  
primarily water-associated animals, e.g., muskrat, beaver, bald eagle, swans
- 2 = Outstanding wildlife value  
primarily land-associated animals, e.g., bear, deer, moose
- 3 = Substantial wildlife value

Wildlife values are logged as "Outstanding" or "Substantial" for most of the stream segments evaluated in the Henry's Fork basin. This contrasts, however, with other river basins within the state which show substantially lower wildlife values for their respective streams. The Henry's Fork basin is unique on a state and regional scale in wildlife abundance.

## Recreational Values

In evaluating the recreational value of a stream segment it is impossible to rank all rivers on exactly the same criteria. The physiographic diversity of stream segments contributes to distinct settings and to the suitability for some activities over others. Consequently, the river segments were inventoried and ranked on a regional basis. Although some Idaho rivers boast users from throughout the nation and the world, the river segments with primarily regional and/or local use are no less important as recreation resources. Use figures were not seen as an appropriate measure of a river's recreation value. User counts do not exist for most of the rivers that do not require permits. The number of users does indicate the popularity of a river segment, but tells nothing of the quality of experience. The best source of recreational data was thought to be from the recreation planners and managers of the region.

Three major criteria, land-based recreation opportunities, water-based recreation opportunities and scenic factors, were used to evaluate recreational resources on each stream segment. Land-based recreation included activities that occurred within 1000 feet of the river or stream. Other factors such as the accessibility, type of experience desired, water level, and difficulty also played a role in the assessment of the recreational value. Each criteria was evaluated using an inventory and ranking matrix which documented the physical attributes and activity opportunity characteristics of each stream segment. Assessment values for the individual study reaches were determined by group consensus at meetings held throughout the state.

The Land and Water Opportunity Use columns in the matrix describe the recreation opportunities that occur along the river segment. Potential developed recreation sites located by the Targhee National Forest in the 1985 Management Plan are listed in the final recreation column. Recreation potential was considered but not included in the Parks and Recreation inventory and evaluation. The Targhee National Forest has mapped potential recreation sites as a part of its Forest Management Plan (1985). The following definitions describe the recreational value rating:

1 = "Outstanding" recreational resource

An outstanding recreational resource may be due to a unique combination of attributes or to one specific characteristic that creates exceptional recreational opportunities for one or more activities. Outstanding resources would be described by recreation experts and the public as "blue ribbon" resources--the epitome or classic of its type of setting and/or experience. Recreationists may be willing to travel substantial distances or endure difficult access to use these resources.

2 = "Substantial" recreational resource value

This class describes recreational resources that are highly valued but do not offer the special characteristics found in outstanding recreational resources. These may be somewhat scarce opportunities in a region due to the limited suitability for certain opportunities or based on the special physical attributes of the river segment. These opportunities and/or settings are of a higher quality than the resources typically found in the region. These are very important recreational settings in the region.

3 = "Moderate" recreational resource value

Moderate recreational resources are typically available in the region. They have considerable recreational value, but the physical setting or experience opportunity may be considered standard for what is available in the region.

## Development Use Values

Several columns in the matrix identify other uses or concerns for specific river segments or streams. Hydropower sites are summarized from the Power Development section of the Henry's Fork basin plan. If the project is an active FERC filing, it is noted in the column to the right with an "A". Potential sites are noted with a "P". Potential irrigation water supply sites are summarized from the Water Supply section of the Henry's Fork basin plan. A priority classification for further study is noted in the column to the right. Stream segments adjacent to scheduled Targhee National Forest timber sales, and/or noted for flooding problems in the Henry's Fork basin plan, and/or designated as "Special Resource Waters", (see also Water Quality chapter), are marked with an "X" in the appropriate column of the matrix.

## State Protection Eligibility Criteria

The final matrix column identifies that the segment meets particular eligibility criteria for defining outstanding aesthetic, geologic, fish & wildlife, and recreational values. Eligibility for state protected river designation is based solely on the relative significance of the reach as a public resource, e.g., to be eligible for protection a reach must contain at least one "Outstanding" fish and wildlife, recreational, aesthetic or geologic value. After eligibility is determined, an assessment of the effects of designation on other identified resource uses is undertaken.

In order to highlight outstanding stream segments in the Henry's Fork basin, screening criteria were applied to the matrix values. The following criteria were developed:

### #1 Fish & Wildlife

Fishery Habitat & Abundance = 1; and  
Species of Concern = 1 or stream  
segment is spawning habitat; and  
Wildlife value = 2 or  
Critical use by wildlife

### #2 Fish & Wildlife and Recreation

Fishery Abundance & Angler Use = 1; and  
Habitat & Species of Concern minimum = 2; and  
Wildlife Value = 2; and  
Recreation value minimum = 2

### #3 Aesthetics, Geology, and Recreation

Recreation value = 1; or  
Scenic/natural linear features value = 1

## **River Segment Values**

Stream segments in the Henrys Fork basin that met criteria for outstanding fish and wildlife, recreational, aesthetic, and geologic resource values are described below.

**Henrys Fork from Big Springs to Island Park Reservoir -**

Outstanding fish habitat, high fish numbers, and spawning use; outstanding wildlife habitat, water-associated species present, and critical use by species of concern; high angler use and outstanding recreation value based on current land and water opportunities; scenic terrain and outstanding geologic features: - Big Springs, hot springs, and volcanics.

**Henrys Fork from Island Park Dam to Harriman State Park -**

Outstanding fish habitat high fish numbers, and spawning use; high fish species value; outstanding wildlife habitat, water-associated species present, and critical use by species of concern; high angler use and outstanding recreation value based on current land and water opportunities.

**Henrys Fork through Harriman State Park -**

Outstanding fish habitat, high fish numbers, and spawning use; high fish species value; outstanding wildlife habitat, water-associated species present, and critical use by species of concern; high angler use and outstanding recreation value based on current land and water opportunities; scenic open vista and historic railroad ranch.

**Henrys Fork from Harriman State Park to Riverside Campground -**

Outstanding recreation value based on current land and water opportunities; outstanding scenic and geologic features: - view of Teton Range, canyon environment. Outstanding fishery habitat and spawning area; high fish abundance and high fish species value; outstanding wildlife habitat, water-associated species present, and critical use by species of concern; high angler use.

**Henrys Fork from Riverside Campground to Hatchery Ford -**

Outstanding recreation value based on current land and water opportunities; scenic canyon environment. Outstanding fishery habitat and spawning area; high fish abundance and high fish species value; outstanding wildlife habitat, water-associated species present, and critical use by species of concern; substantial angler use.

**Henrys Fork from Hatchery Ford to Upper Mesa Falls -**

Outstanding recreation value based on current land and water opportunities; outstanding scenic and geologic features: - Sheep Falls, volcanics, canyon environment. Outstanding fishery habitat and abundance; high fish species value; outstanding wildlife habitat, water-associated species present, and critical use by species of concern; high angler use.

**Henrys Fork from Upper Mesa Falls to Lower Mesa Falls -**

Outstanding recreation value based on current land opportunities; planned recreational development at Mesa Falls; outstanding scenic/geologic features: - Upper and Lower Mesa Falls, canyon environment.

**Henrys Fork from Lower Mesa Falls to Warm River -**

Outstanding recreation value based on current land and water opportunities; outstanding scenic canyon environment. Outstanding fishery habitat and spawning area; high fish abundance and high fish species value; outstanding wildlife habitat, water-associated species present, and critical use by species of concern; substantial angler use.

Henry's Fork from Warm River to Ashton Reservoir -

Outstanding recreation value based on current land and water opportunities. Outstanding fishery habitat and spawning area; high fish abundance and high fish species value; outstanding wildlife habitat, water-associated species present, and critical use by species of concern; substantial angler use.

Henry's Fork from Ashton Dam to Chester Dam -

Outstanding fish habitat and high fish numbers; critical use by species of concern; outstanding wildlife habitat, and water-associated species present; high angler use and outstanding recreation value based on current land and water opportunities.

Henry's Fork from Chester Dam to St. Anthony -

Outstanding fishery habitat and abundance; high fish species value; outstanding wildlife habitat, water-associated species present, and critical use by species of concern; high angler use and outstanding recreation value based on current land and water opportunities.

Henry's Fork from St. Anthony to Teton River confluence -

Outstanding recreation value based on current land and water opportunities. Outstanding fishery habitat and spawning area; high fish abundance and high fish species value; outstanding wildlife habitat, water-associated species present, and critical use by species of concern.

Buffalo River -

Outstanding fish habitat, high fish numbers, and spawning use; high fish species value; critical use by species of concern; outstanding wildlife habitat, and water-associated species present; substantial recreation value based on current land and water opportunities.

Warm River from Split Creek to Warm River Spring -

Outstanding scenic canyon environment.

Warm River from Warm River Spring to mouth -

Outstanding fish habitat, high fish numbers, and spawning use; outstanding wildlife habitat and critical use by species of concern; outstanding scenic and geologic features: - canyon environment, hot springs; campground, trails, and scenic route provide recreation opportunities.

Falls River from Wyoming Border to Yellowstone Diversion -

Outstanding fish habitat, high fish numbers; high fish species value; outstanding wildlife habitat, water-associated species present; substantial angler use and outstanding recreation value based on current land and water opportunities.

Falls River from Yellowstone Diversion to Conant Creek -

Outstanding recreational value based on current land and water opportunities. Outstanding fishery habitat and abundance; high fish species value; outstanding wildlife habitat, water-associated species present, and critical use by species of concern; substantial angler use.

Falls River from Conant Creek to mouth -

Outstanding fishery habitat and abundance; high fish species value; outstanding wildlife habitat, water-associated species present; high angler use and substantial recreation value based on current land and water opportunities.

Teton River from Spring Creek to Bitch Creek -

Outstanding fishery habitat and abundance, and high fish species value; outstanding wildlife habitat, water-associated species present, and critical use by species of concern.

Duck Creek -

Outstanding fish habitat, high fish numbers, and spawning use; critical use by species of concern; high fish species value; outstanding wildlife habitat.

Timber Creek -

Outstanding fishery habitat and spawning area; high fish abundance and high fish species value; outstanding wildlife habitat and critical use by species of concern.

Targhee Creek -

Outstanding scenic/natural features in proposed Research Natural Area. Outstanding fishery habitat and spawning area; high fish abundance and high fish species value; outstanding wildlife habitat and critical use by species of concern.

Howard Creek -

Outstanding fishery habitat and spawning area; high fish abundance and high fish species value; outstanding wildlife habitat and critical use by species of concern.

Robinson Creek -

Outstanding scenic canyon with hot springs. Outstanding fishery habitat and spawning area; high fish abundance; outstanding wildlife habitat; harlequin duck habitat.

Bitch Creek -

Outstanding fish habitat, high fish numbers, and spawning use; high fish species value; big game winter range.











Aesthetic, Natural or Geologic	Fish & Wildlife			Recreation			Cultural or Historic			Priority for Further Study	Adjacent Timber Sales	Designated Special Resource Waters									
	Scenic/NF Value	Fishery Habitat	Species of Concern	Angler Use	Wildlife Value	Critical Use	NPPC Protected Area	Recreation Value	Land Opportunity/Use				Water Opportunity/Use	Potential Developed	Cultural Features Value	Hydropower Site	Potential Timber Supply				
Fish Creek	1	Hot Springs	1	2	1	3	2					3	A	Fish Cr	P	Robinson Cr	2	X			
Snow Creek	1	Hot Springs	1	2	3	2						3	A	Fish Cr	P			X			
Rock Creek			1	2	1	3	1					3	A	Park Lake Fish Cr	P	Park Lake JY Ranch Howell Rich	1				
Poncupine Creek			2	2	2	3	2					2	ASH	Fish Cr	P						
Robinson Creek-Wyoming border to mouth	1	Hot Springs Canyon	1	2	1	3	2	FWW	2	Co.T, ORW/F				Fish Cr	P	Robinson Cr	2	X		1	
Boone Creek-Wyoming border to mouth			1	2	2	3	1	W						Boone Cr	P	Boone Cr Constant Cr Squinal Cr Squinal Cr	1			3	
Squinal Creek-Wyoming border to mouth			1	2	2	3	1	FWW													
Constant Creek-Wyoming border to mouth			2	2	2	3	1	W								Lane Lake Constant Cr Blitch Cr	1				
Blitch Creek-Wyoming border to mouth		Canyon	1	1	1	3	3	F	2	F				A	Justine	P	Blitch Cr Lane Lake Constant Cr Spring Cr	1			1

**Natural Features:**  
 PNH - Proposed National Landmark  
 PHN - Proposed Research Natural Area

**Fish and Wildlife:**  
 D - Deer  
 M - Moose  
 B/C - Beaver  
 T - Trout  
 C - Catfish  
 H - Herring  
 N - Noddy

**Recreation:**  
 C - Canoe  
 CO - Cross-country  
 CR - Canoeing  
 DR - Downstream  
 F - Fishing  
 H - Hunting  
 ORV - Off-Road Vehicle  
 P - Picnicking

**Water Opportunity/Use:**  
 R - Reservoir  
 T - Tubing  
 TR - Trail  
 PB - Power Boating  
 FB - Flood Boating  
 RY - Rafting  
 DRY - Dory

**Hydropower Site:**  
 P - Potential  
 W - Water

**Cultural or Historic:**  
 PNH - Proposed National Landmark  
 PHN - Proposed Research Natural Area

**Priority for Further Study:**  
 X - High  
 - - - - - Low



Aesthetic, Natural or Geologic	Fish & Wildlife			Recreation			Cultural or Historic			Priority for Further Study	Designated Special Resource Water						
	Scenic/NR Value	Scenic/Natural Features	Riparian Habitat	Species of Concern	Angler Use	Wading Use	Critical Use	NPPC Protected Area	Land Opportunity/Use			Water Opportunity/Use	Potential Developed Site	Cultural Features Value	Hydropower Site	Potential Ingestion	Adjacent Timber Sales
Canyon Creek-Headwaters to Calamity Creek			2	1	2	3	2	2	2	2	2	2	2	2	2	2	2
Canyon Creek-Calamity Creek to Mouth	2	pNNA, Pincock Hot Springs	3	1	3	3	2	2	2	2	2	2	2	2	2	2	2
Spring Creek			2	1	1	3	2	2	2	2	2	2	2	2	2	2	2
Calamity Creek			2	1	1	3	2	2	2	2	2	2	2	2	2	2	2
Moody Creek			2	1	2	3	2	2	2	2	2	2	2	2	2	2	2
			2	1	2	3	2	2	2	2	2	2	2	2	2	2	2

Natural Features:  
 pNNA - Proposed National Landmark  
 pNNA - Proposed Research Natural Area

Fish and Wildlife:  
 D - Deer  
 Mo - Moose  
 SCans - Savanah Crane  
 Tams - Turkeys or Trumpeter Swan  
 C - Cuckoo  
 M - Merganser  
 H - Heron

Recreation:  
 C - Canoe  
 CO - Campground  
 Cr - Camping  
 Dr - Drive  
 F - Fishing  
 H - Hunting  
 RW - Off-Road Vehicles  
 P - Picnicking

Cultural or Historic:  
 AGH - Archeological Historic  
 P - Potential Site

Hydropower Site:  
 P - Potential Site

Potential Ingestion:  
 P - Potential Site

Priority for Further Study:  
 2 - Priority for Further Study

Designated Special Resource Water:  
 Designated Special Resource Water

Recreation:  
 Rk - Road  
 S - Swimming  
 T - Tubing  
 Tr - Trail  
 PG - Power Boating  
 RB - Foot Boating  
 Rg - Kayak  
 Rv - Canoe  
 Rf - Raft

Cultural or Historic:  
 F - Fish and Wildlife  
 W - Wildlife

Hydropower Site:  
 P - Potential Site

Potential Ingestion:  
 P - Potential Site

Priority for Further Study:  
 2 - Priority for Further Study

Designated Special Resource Water:  
 Designated Special Resource Water