

**Final Meeting Notes  
Bear River Environmental Coordination Committee  
October 24, 2007  
Pocatello, Idaho**

<b>Commitments Made at the October 24, 2007 Bear River ECC Meeting</b>	
All	<ul style="list-style-type: none"> <li>• Review draft Soda Site Plan. Comments due to Eve Davies by Nov. 26.</li> </ul>
Mark Stenberg	<ul style="list-style-type: none"> <li>• Forward accounting of habitat enhancement and land &amp; water acquisition funds to ECC members via email.</li> <li>• Send copy of PacifiCorp's motion regarding the Bear River Narrows (Twin Lakes) to ECC members by mail.</li> <li>• Contact Mikkelson regarding exclusion agreement</li> <li>• Check to see that funding for Eight-mile and Georgetown Creek projects was disbursed.</li> <li>• Coordinate on "Partners" funding for Cove Easements once remaining parcel is in place.</li> <li>• Arrange a joint call with Sagebrush-Steppe Land Trust and Mathews to discuss conservation easement.</li> <li>• Send letter to Colyer about use of grants for match.</li> </ul>
Jim Capurso	<ul style="list-style-type: none"> <li>• Coordinate with Davies and Colyer regarding upcoming visit to Skinner Creek.</li> </ul>
Eve Davies	<ul style="list-style-type: none"> <li>• Finalize Soda Site Plan.</li> </ul>
Warren Colyer	<ul style="list-style-type: none"> <li>• Tour the Birch Creek Trib. to Mink Creek parcel and report back to the ECC. Coordinate with Lucia to set up tour and with Franklin County regarding culvert on property.</li> </ul>
Sagebrush Steppe Land Trust	<ul style="list-style-type: none"> <li>• Approach landowner of Groll property about a riparian easement</li> <li>• Coordinate with Colyer regarding Birch Creek trib. to Mink Creek Parcel</li> <li>• Pursue conservation easement on Harris property spring complex</li> <li>• Participate (with Stenberg) in joint call to Mathews to discuss conservation easement</li> </ul>

**Decisions Made by Consensus**

- Colyer may proceed with using matching funds from the ECC's thermal imaging and telemetry studies for the Mast project.
- Authorize Sagebrush Steppe Land Trust to pursue a draft agreement with landowner regarding a conservation easement on the Harris spring complex.
- Consensus was reached on an outline for a three-year ramp rate study.

**ECC Members Present**

Mark Stenberg, PacifiCorp  
Lynn Van Every, Idaho Department of Environmental Quality  
Warren Colyer, Trout Unlimited  
Jim Mende, Idaho Department of Fish and Game  
Jim Capurso, U.S. Forest Service  
Charlie Vincent, American Whitewater

**Others Present**

Eve Davies, PacifiCorp

Frank Shrier, PacifiCorp  
Claudia Conder, PacifiCorp  
Glen Pond, PacifiCorp  
Kelly Holt, PacifiCorp  
Arn Berglund, Bureau of Land Management  
Greg Mladenka, Idaho Department of Environmental Quality  
Kevin Colburn, American Whitewater  
Tom Lucia, Sagebrush Steppe Land Trust  
Ken Theis, USU Landscape Architecture Department  
Connely Baldwin, PacifiCorp  
Miriam Hugentobler, Project Coordinator

### **Participating by Phone**

Kit McGurny, Greater Yellowstone Coalition  
Mary Lucachick, Idaho Department of Parks and Recreation

### **June 2007 Meeting Notes**

Notes from the June meeting were lost due to a computer crash. A copy of the June agenda will be posted to the ECC's web site so that people are aware that a meeting was held and the topics discussed.

### **Review of Agenda**

Colyer requested time on the agenda to give ECC members an update on the Mast project .  
Stenberg requested that the review of habitat enhancement and land and water acquisition funding be removed from the agenda. Stenberg will forward an accounting of these funds to ECC members by email.

### **Updates**

#### **Bear River Narrows Project**

Stenberg told ECC members that PacifiCorp had submitted a motion to the Federal Energy Regulatory Commission (FERC) to dismiss the Bear River Narrows project (Twin Lakes). He said the motion cites Section 6 of the Federal Power Act, as the Narrows project would significantly alter PacifiCorp's existing Bear River license. He said that in the motion, PacifiCorp asks FERC to reject Twin Lakes' application. Stenberg said that ECC members will be provided with a copy of PacifiCorp's motion by mail. He said that FERC must act on the motion by approving it or denying it. The motion further states that PacifiCorp's dialogue with the Twin Lakes has ended. ECC members applauded.

#### **Grant Projects**

**Bunderson Project-** Stenberg said the landowner for this project has agreed to sign an exclusion agreement. Stenberg plans to meet with him on October 25.

**Clegg Projects-** Stenberg said that Clegg has been set up as a vendor but has not yet requested funds. He said the 404 permit process for Trout Creek is underway. (Graduate student) Dan Bolin has been working in the area and has billed for mileage.

**Mathews Project -** Stenberg said he will be checking in with the landowner in a week. No funds have been expended. Stenberg will ask the landowner about a conservation easement; an exclusion agreement is already being required.

**Mikkelson Project** – Stenberg said that the NRCS EQIP grant for this project has been cancelled. Stenberg will approach Mikkelson about an exclusion agreement. ECC funds have not been spent.

**Harris Project** – Davies said that the upper bridge that moves the Harris’s wintering operation away from the spring has been completed. She said that water sources need to be re-piped in order for fencing to proceed. The fencing will protect the area during other times of the year, she said. Willow plantings will go forward once fencing is in. Davies noted that the Natural Resources Conservation Service (NRCS) has been behind, so work on this project is progressing slowly. Capurso suggested bringing on a consulting engineer to jump-start the project. Colyer said Davies should ask for a list of Technical Service Provider (TSP) engineers. Mende said the ECC would support Davies on this project in any way possible.

**Skinner Creek Project** - Capurso said he has been preparing a progress report on Skinner Creek. He said he is impressed with the progress there. He said all project objectives have been accomplished. Capurso noted that the headwaters of Skinner Creek are a stronghold for Bonneville cutthroat trout. He said he plans to go out with the landowner next week to do more willow planting, then the project will be complete. Davies asked if Tony Brown could accompany them, to GPS the location for PacifiCorp’s records. Capurso said he would call Davies to let her know when he is going. Colyer offered to go as well and said he would help with planting.

**Eight Mile and Georgetown Projects** – Capurso said these projects are complete. Stenberg said he will check to be sure funds were disbursed.

**Ovid Project** – Colyer said that the irrigation company had told him they did not get enough water in the spring, during high water. Colyer said he checked and found that the headgate was only open halfway and was broken. He said he is working with the irrigation company to fix it and that he hopes NRCS will cover the cost. Users also say the headgate is clogging. Colyer said that the screen could possibly be replaced but additional funding may be needed. Davies said a continuing dialog may be needed regarding what works well and what doesn’t, so that problems could be avoided on the future ECC projects.

**Mast Project** – This project was considered for ECC funding in 2005, but was denied as the project location is outside the ECC’s action area. Colyer noted that there is fund matching available from the ECC’s thermal imaging and telemetry projects, and that most grant programs have a one-year window for fund matching, which will be ending soon for the thermal imaging and telemetry projects. Colyer requested that the ECC consider allowing the use of matching funds for the Mast project. ECC members agreed by consensus that Colyer may use ECC funding of the thermal imaging and telemetry projects as matching funds for grant applications for the Mast Project.

Capurso noted that there will be a need for operation and maintenance on the ECC’s funded projects. Van Every said it may be advisable to find someone (perhaps a 1385 employee), to work not only on the Bear River but on fish projects in the region. Colyer noted that monitoring the fish screens is a full-time job in the spring and that new screens in particular need a lot of attention. Van Every suggested that the ECC work towards estimating the cost to get an operation and maintenance program going. Colyer said he believed this would be an appropriate use for PacifiCorp funding. Colyer said that the new structures on Cottonwood and Cub worked very well. He said the Cub River structure had taken a big hit and needs

minor repair. He also noted minor problems caused by recent wildfires in the area wherein trees above the new fish screen were scorched and may need to be removed.

### **Soda Site Plan - Eve Davies**

Davies reviewed the Soda Site Plan with ECC members. A draft of the site plan was distributed to ECC members by email on Oct. 22. Davies noted that this is the third in the series of site plans that are planned. The biggest difference between this and other plans, she said, and greatest conflict, is grazing. Davies said that grazing will be eliminated on PacifiCorp land at Soda. She said this will eliminate the need for monitoring of grazing, though not the need for fencing. She said grazing is an adjacent land use and there is some trespass grazing. Davies said recreation is not as much of a conflict as at Oneida. Additionally, there are some pipeline easements at Soda. Davies said the ECC has 30 days to review the plan before it is made final. Comments are due to Davies by Monday, Nov. 26. Monitoring will be put in place at Soda next fall, she said.

### **Land Trust Activities – Tom Lucia, Sagebrush-Steppe Land Trust**

**Cove Easements** – Lucia said that title work is in process for the next-to-last parcel at Cove. He said that there have been some difficulties. Stenberg said he will coordinate on “Partners” funding once this parcel is in place.

**Groll Family Property** – Lucia said the landowners are asking \$1.5 million to buy the property, and while a conservation easement would be less, the owners are not sure that is what they want to do. Lucia noted that the stream on the property was dry when he walked the area. Lucia said the parcel was approximately 432 acres, and appears to be more important for deer winter range than fish habitat. Lucia said the land trust probably won’t pursue this property, but if the ECC would like to tour it, it would need to do so soon.

Capurso proposed that Lucia meet again with the landowner and pursue a riparian easement. Stenberg could also meet with the new owner once it sells. Colburn noted that there could be tax benefits to the new owner in having a conservation easement in place. Lucia offered to arrange a tour for interested ECC members, and will speak with the landowner today.

**Birch Creek Tributary to Mink Creek (800-acre parcel)** - Lucia said an ECC volunteer was needed to tour this parcel, determine whether it would be a worthwhile project, and see what restoration measures are needed. Colyer volunteered to review and report back to the ECC. He will coordinate with Lucia to set up the tour and will also coordinate with Franklin County on the culvert.

**Harris Property** – An easement on spring complex has been proposed as part of the fencing project on this property. Lucia said a survey would probably be needed for this to move forward. Davies estimated the area as roughly 20-30 acres. ECC members voted unanimously to authorize Sagebrush Steppe Land Trust to pursue a draft agreement with HARRIS on the spring complex.

**Mathews Property** - Lucia said the land trust has not yet contacted Mathews. Stenberg said he could arrange a joint call.

Lucia stated that Sagebrush Steppe will probably be hiring an executive director in January 2008. He also noted that Deb Mignogno will be returning from abroad and will continue to work with the land trust.

### **Kackley Springs – Ken Theis**

Theis updated ECC members on his work at Kackley Springs (Attachment 1 – Kackley Springs project status handout).

**Baseline Mapping** - Theis said at the outset of his work there, a good baseline map of the area did not exist. He said he has since gotten pretty good mapping of the wetlands and contours in the area, and grading and site plans can now go onto those maps.

**Wetland Functional Value Assessment** - See Attachment 1 - Kackley Springs riverine functional value assessment handout.

Davies asked about water quantity monitoring over time. Theis said he monitored dissolved oxygen and temperatures through the summer and that parameters had stayed within the range for trout. He said the data did not seem to be influenced by irrigation.

Stenberg invited Theis to the Dec. 11 ECC meeting to give a presentation that Theis previously gave to Stenberg and Davies. Capurso asked whether Theis wanted input and asked what his next step would be. Theis said flow modeling and preliminary channel design. For the site plan, Theis said he has conceptual ideas of what would improve functional values, which he will work on this winter.

### **Boater Flow Ramp Rates – Mark Stenberg**

Stenberg said he has been talking individually to ECC members regarding boater flow ramp rates since the last ECC meeting and outlined major discussion points for this meeting:

- 1) Schedule
- 2) Recap of previous discussions
- 3) High points from phone calls with ECC members
- 4) Provisions of PacifiCorp's proposal, which has been evolving
- 5) Whether anyone else has brought forward other proposals (no)

### **Schedule**

Oct. 24, 2007 ECC Meeting  
Dec. 11, 2007 ECC Meeting (Tuesday)  
Feb. 20, 2008 Grant proposals  
Mar. 19, 2008 ECC Meeting  
Apr. 1, 2008 Boater program starts

Stenberg said he believes any plans or studies needed should be developed by January 2008.

### **Recap**

- Met April 18, held a roundtable discussion. Reviewed history of the Settlement Agreement. Realized that boater flow ramp rate was a last minute item. PacifiCorp brought up using a step function for ramping. ECC asked for more time to consider.
- June small group meeting. Drew graphs, PacifiCorp had a proposal. Look for existing studies.

- June 27 ECC Meeting – PacifiCorp had another proposal. Study three ramps rates over three years. Normal flow regime. Heard again that more time was needed. Haven't talked since June.
- August 27 decided to talk in smaller groups

Stenberg said he has since talked to most ECC members one-on-one. Most everyone is interested in keeping boater flows but want to preserve aquatic resources. All want to make logical, informed decisions.

The following alternatives will be considered today:

- 1) Study three ramping rates
- 2) Choose one
- 3) Go out on first few releases. Monitor. Don't continue anything that's causing an impact. (i.e., adaptive management) – Kevin Colburn, American Whitewater

Stenberg said he would like to leave today with a high level decision and work through email, etc. to refine it. Another course of action would be to go to policy group, which is a lot of work for people.

He said he is concerned that the ECC won't have a decision (or consensus) before the boater program starts. Capurso said he doesn't believe lack of consensus will cause the issue to go to policy group. He requested a review of the language in the Settlement Agreement (SA p.28). Stenberg said if PacifiCorp does not agree, the decision can be elevated to policy group. Stenberg and Capurso said they don't believe the issue will go to policy group.

Stenberg asked if there were any more proposals. He acknowledged American Whitewater's adaptive management proposal. Stenberg said he would like to elevate decision making to more of a conceptual level today, i.e., what approach to take. He said he consulted with Brett Marshall and John Gangemi of Oasis regarding study design and was advised that likely five whitewater events and five study plots each would be needed to measure differences between ramp rates. Colburn noted the difference between statistical significance and ecological significance.

## Proposals

### Option 1

Study three down-ramp rates, one each year in 2008, 2009, and 2010

Least to greatest

0.25 – yr 1<sup>1</sup>, 0.50-yr 2, 1.0-yr 3 (ft per hr)

Up-ramp for whitewater flows during the study period will be equivalent to plant shutdown and should be within the following parameters:

- 1 megawatt/minute of generation reduction
- Approximately 30-45 minutes to shut down the Grace Plant when fully loaded

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<sup>1</sup> PacifiCorp informed the ECC this ramp rate is beyond economic bounds as the whitewater program is currently designed.

- Upramp rate should be approximately 1 foot/hour when Grace Bypass reach instream flow is at 65 cfs at the start of a boater event

Data on fish stranding will be collected during five events per year at five plots, details to be fine-tuned as study methods are further developed. (Need to be able to detect a significant difference/no difference in the number of fish stranded at each of the three ramp rates.)

Will need to quantify stranding habitat<sup>2</sup>.

Stage change will be measured at multiple sites during a whitewater event for each of the ramp rates.

Establish a critical flow, if one exists, above which downramp rate would not matter.

Sample the same fish as the Black Canyon Monitoring Study – all fish.

Determine surrogates, if applicable, to use for Bonneville cutthroat trout.

Stop and correct if the ECC agrees by consensus to change the study plan.

Reach agreement on a definition for stranding (i.e., when a fish is stranded and should be counted) and measurement method.

The ECC will pick stranding study plots, must have reasonable access.

### **Option 2**

One ramp rate

Three years

### **Option 3**

Test one year

Run and adapt for two years

Early releases experimental

Stenberg asked the ECC to consider outcomes for the study. He said there is a need to know where the hard wall is for impacts, and that the information needed to get that answer would be available.

Vincent said he believed Option 3 looked aggressive and Option 2 looked conservative, so he leaned toward Option 1 but with elements of the other two.

Colburn asked how trout stranding would be studied if there are no trout in the river.

Decision criteria:

- 1) What point do flows impact Bonneville cutthroat trout recovery
- 2) Statistically valid and detect change

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<sup>2</sup> This will be done using existing aerial photos and by recording on hard copy maps the boundaries of stranding areas during a whitewater release. This information will be digitized and areas calculated.

3) Some factors like seasonality will/may depend on professional judgment

Shrier asked when ramping occurs. He noted that fish, especially fry, are more active during crepuscular hours. Colyer added that was especially true at stream margins.

Stenberg asked for consensus to eliminate the second option. Consensus was reached.

Colburn said he would like to see flexibility in choosing flows from year to year. He said additional insight could be gained from year to year.

Stenberg said if a slower ramp strands fish, the group may not want to move on to faster rates. Stenberg said maybe faster ramps should not be omitted, as fish may sense something is going on and avoid stranding. Colburn suggested trying to find out when ramping is important at river level, etc. Shrier said that is determining critical flow.

Van Every said he agreed with the first approach, but the hard part would be picking out the sites. Mladenka said the hard part would be deciding what was significant.

Davies asked about staffing and the availability of volunteers. She asked whether each agency would be willing to supply someone.

Van Every suggested using the aerial photos to find locations.

The question was asked whether the ECC would pay people to do this work, or would the ECC do the work. Stenberg said both. He said consultants would be used to design a study plan, ECC members would pick the plots, and ECC members could also come out on the study or volunteer.

Colyer said he was concerned about adaptive measures affecting statistical integrity. Berglund stated concern about macroinvertebrates.

Stenberg said that if the ECC finds that 0.25 is the rate that is needed there will have to be a larger discussion of boater flows, etc. at some point as this ramp rate will not work within the large economic context of the Settlement Agreement.

### **Upramp vs Downramp**

Colyer said if the ECC believes upramps are a problem, the group must look at that from the beginning and must know to determine if downramps is causing impacts. Davies asked whether he believed that is what the language in the Settlement Agreement says.

Shrier said that upramp tends to drive fishes to the margins, if they have time to get there.

Van Every said that ultimately, if we find impact, it doesn't mean whitewater flows would go away, it could mean going to a more normative flow.

Capurso asked about upramp rates. He asked whether it was possible to have a fast up and slower down if the ECC finds that's what's best for aquatic resources. Baldwin said yes. Capurso said based on professional experience, literature, and what's out there, it should be possible to put together a proposal that people would feel comfortable about staying with for a couple of years for consistency.

Capurso said that PacifiCorp, in good faith, has agreed to match upramp with downramp. Stenberg clarified that he did not say that. He said PacifiCorp is proposing to use normal plant shutdown for the upramp.

Mladenka asked how people felt about using the 1 ft per hr downramp, as it approximately matches upramp. Baldwin said it would be best to try for an operational parameter, as specific ramp rate may be hard to hit.

Capurso clarified that during the course of the study, it won't be assumed that there is no impact to native fish if none are stranded. He said the ECC may decide to use certain nonnatives as surrogates. Stenberg said the study could sample the same fish as the Black Canyon monitoring study.

Shrier suggested that the ECC decide in advance what fish would be used as surrogates.

Stenberg asked for consensus on Option 1. Unanimous consensus was reached.

### **Bonneville Cutthroat Trout Restoration Plan**

The Bonneville Cutthroat Trout Restoration Plan work session was continued to the next meeting.

Next ECC Meeting: December 11, 2007

#### **Agenda Items**

Continue ramp rate discussion  
Kackley Springs - Ken Theis  
Soda Site Plan  
Land Trust  
Grant Flyers  
Annual Report  
BCT Plan

**Attachment 1: Handouts**

- 1) Kackley Springs project status
- 2) Kackley Springs riverine functional value assessment

# Kackley Springs Project Status

October 22, 2007

Short form tasks	Status	Work Remaining
Evaluate feasibility of restoring/improving hydrologic connection with Bear River	<p>A detailed topographic survey of the project site and majority of lower channel has been completed. The resulting topography map has half-foot contour interval accuracy.</p> <p>Elevation data indicates that the connection to the lower channel is feasible. Approximately 2 feet of sediment needs to be dredged in the upper impoundment to create an outlet channel to the south headgate.</p>	<p>Site plans and grading plans.</p> <p>Conduct preliminary modeling of increased discharge to determine flow effects on existing channel, stage-height relationship, and channel capacity requirements.</p>
Evaluate alternative reconnection alignments	One feasible reconnection alignment has been identified and remains the focus of ongoing evaluation.	Determine capacity requirements and preliminary design of a channel segment between upper spring sources and the lower outlet channel.
Evaluate functional values of Kackley Spring wetlands	<p>A functional values assessment has been conducted for the Kackley wetlands and lower outlet channel. This involved evaluating and rating plant community composition, soils, wildlife habitat, and hydrologic characteristics, etc.</p> <p>Ratings indicated existing conditions as Category 3 (Fair), but with potential to improve to significantly higher category.</p>	Develop plan to maximize functional values
Develop plan to maximize functional values	Conceptual planning underway.	Analyzing remaining hydrologic and sediment data
Prepare site plan	Site survey has been completed. Topographic base map in preparation.	Final editing of topo map underway.
Prepare cost estimate for implementing site plan	To be completed based on site plan.	
Literature Review	Underway.	

<b>Long form tasks</b>	<b>Status</b>	<b>Work Remaining</b>
<p>Evaluate potential extent of suitable BCT spawning habitat</p>	<p>Sediment samples from representative spawning sites in each reach have been collected and sorted.</p> <p>Preliminary analysis shows desirable substrate at surface, but % fines &lt; 6.3 mm exceed reference condition values.</p> <p>Little or no hyporheic flow evident in upper reach; slight localized hyporheic flow in spawning gravels of lower 2 reaches.</p> <p>Other habitat variables including water temperature, quality, cover, etc. appear within desirable ranges.</p>	<p>Determine potential for beneficial gravel recruitment and sorting at augmented flows of 6-8 cfs.</p> <p>Determine opportunity for artificial gravel augmentation.</p> <p>Complete the analysis of habitat suitability based on full range of HIS factors.</p>
<p>Identify potential to restore unique habitat</p>	<p>Information on habitat requirements for other riparian species such as yellow warbler and amphibians is being collected and reviewed.</p> <p>T&amp;E list shows no species in vicinity of project area.</p>	<p>Determine habitat components that can be incorporated into site plan and planting plan.</p>

## Kackley Springs Slope Wetlands Functional Values Assessment

Function/Value	Actual/ Possible Functional Points		Potential pts after implementation		Potential change	Measures necessary to achieve improvement
	UDOT Method	MDT Method	UDOT Method	MDT Method		
Plant Community Composition	.6/1	n/a	.8		+	Decrease noxious weeds, increase native wetland spp.
T&E Habitat	0/9	.1/1	0	.1		
Habitat for Species of Special Concern	0/9	.1/1	.9	.9	+	Increased high quality water available for spawning/rearing BCT, coldwater refugia at confluence
General Wildlife Habitat	.7/1	.7/1	.8	.8	Slight +	Increase acreage of emergent/slope wetland
General Fish/Aquatic Habitat	n/a	.5	n/a	.7	Slight +	Increase habitat for aquatic insects, amphibians
Short/Long Term H2O Storage	.8/1	.8/1	.9	.9	Slight +	Detain spring flow by routing through additional wetland area.
Flood Attenuation	n/a	n/a				
Sediment/Nutrient/Toxic Retention & Removal	.9/1	.5/1	.9	.8	Same or slight +	Detain spring flow in wetlands, channel
Sediment/Shoreline Stabilization	n/a	n/a				
Production Export/Food Chain Support	n/a	.5/1		.8	+	Nutrient processing in wetlands
Groundwater Discharge/Recharge	n/a	.9/1		.9	Same	
Uniqueness	n/a	.7/1		.8	Slight +	Restore additional flow to historic channel, reduce disturbance
Recreation/Education Potential	n/a	.3/1		.5	Slight +	Increased wetland functions may attract local/area students, bird watchers.
Rated Points/Possible	3/6	4.6/9	4.3/6	7.2/10		
Per Cent of Total Potential Points	50 (Cat. III)	51	72 (Cat.II)	72 (Cat II)		

## Kackley Springs Riverine Wetlands Functional Values Assessment

Function/Value	Actual/ Possible Functional Points		Potential pts after implementation		Potential change	Measures necessary to achieve improvement
	UDOT Method	MDT Method	UDOT Method	MDT Method		
Plant Community Composition	.6/1	n/a	.8	n/a	+ .2 (UDOT)	Increase width of riparian zone in wet meadow reaches by increasing flow to aid natural reproduction of forbs and sedges; Plant native riparian woody shrubs and trees in lower reaches.
Listed/Proposed T&E Species Habitat	n/a	n/a	n/a	n/a		
Species of Special Concern Habitat	0	.1	.9	.9	+ .9 (UDOT)	Increase potential use by BCT as spawning habitat and cold water refugia by increasing flow volume
General Wildlife Habitat	.6/1	.7	.8	.8	+ .2 (UDOT)	Increase woody native riparian cover in lower reaches
General Fish/Aquatic Habitat	.5/1	.5	.9	.9	+ .4 (UDOT)	Increase extent of aquatic habitat area, increase flow volume
General Amphibian Habitat	.2/1	n/a	.5	n/a	+ .3 (UDOT)	Increase extent of riparian and wetland habitat, increase woody debris
Flood Attenuation	n/a	n/a	n/a	n/a		
Sediment/ Nutrient/ Toxicant Removal	.9/1	.8	.9	.9	same	
Sediment/Shoreline Stabilization	.8/1	.9	.9	.9	+ 0.1 (UDOT)	Increase bank stability by preventing cattle access
Production Export/Food Chain Support	n/a	.8	n/a	.9	+ .1 (MDT)	Increase extent and quality of aquatic and riparian habitat, increase flow volume
Groundwater Discharge/Recharge	n/a	1	n/a	1	Same (MDT)	
Uniqueness	n/a	.5	n/a	.9	+ .4 (MDT)	Increase flow rate, aquatic and riparian habitat in Bear River watershed.
Recreation/Education Potential	n/a	.3	n/a	.6	+ 0.3(MDT)	Use by BCT could provide educational opportunities in Bear River watershed.
Rated Points/ Possible Points	3.6/6	5.6/9	5.7/7	7.8/9		
Per Cent of Total Points Possible	60	62	81	86		
Wetland Class	III	III	I*			

\*Based on total potential functional points > 80%