

**CHALLENGE COST SHARE PROGRAM
PROGRESS REPORT FORM
Bear River Migratory Bird Refuge**

Title of Project: Wetland Wonders to Mountain Wilds II: Connecting Kids, Nature, People, and Conservation Education

Challenge Cost Share Agreement No.: 65530-8-0045

Station/Location: Bear River Migratory Bird Refuge

Date Project Initiated and Federal Budget Year: Project initiated August 2008/Implemented during School Year 2008-09/Funds Obligation by December 31, 2008/Project to be completed June 30, 2009 with year-end reporting per CCS Agreement 65530-8-0045

Brief Overview and Highlights of Project:

- Every 4th grade student and teacher of the local Box Elder County will be invited to participate in Wetland Wonders to Mountain Wilds II: Connecting Kids, Nature, People, and Conservation Education;
- Box Elder School District 4th graders will participate in two fieldtrips and discover through hands-on field study the values of high quality water, values of wetlands and riparian zones to high quality water, and value to wildlife through a compare and contrast study of high desert montane (upper watershed) and wetland basin (Bear River Refuge);
- Teachers will be provided with two workshops addressing topics they will be teaching: Fall workshop is “Stream Study and Advanced Macroinvertebrates” and Winter Workshop will be “Ornithology 101” to learn background, content, and lesson activities for teaching student stations in a field-based curriculum highly correlated to the Utah Science Core;
- Box Elder School District will provide transportation funding to bus students to field trip sites;
- Students and teachers will learn about Service mission and role of Refuges in conservation of wetlands, watersheds, and wildlife with an emphasis on the value of the Bear River to the Refuge; and
- Fall field trip respondents expressed very high satisfaction with educational materials, workshop, and field trip experiences;

Project Status: IN PROGRESS-A DESCRIPTION THAT ADDRESSES

COMPONENTS OF PROJECT FOLLOWS WITH EXPECTED RESULTS:

Project Description: The project promotes awareness, understanding, and conservation of the Bear River wetlands and watershed by providing hands-on field instruction to Box Elder School District fourth graders in a two fieldtrip approach (i.e., riparian issues at Hardware Ranch WMA in the fall and basin wetland issues at Bear River MBR in the spring). Students will gain in understanding of Service mission, purpose, and the role of the National Wildlife Refuge System in the conservation/protection of Bear River wetlands and riparian zones. All fourth grade students within the Box Elder School District are invited to participate in this field science approach that is highly correlated to Utah's State Science Core Curriculum. Teacher workshops for leading fieldtrips, teaching trunks for fieldtrips and pre- and post- lessons and a part-time educator enhance this inter-agency partnership project.

Objectives:

- a) To invite every Box Elder School District fourth grade teacher and student to participate in the Wetland Wonders to Mountain Wilds Watershed Education project,
- b) To provide educational materials/supplies for two Teacher Workshop trainings, "Streamside Science" and "Ornithology 101",
- b) To employ an assistant educator in support of curriculum development, fieldtrip leadership, and procurement/development of educational materials,
- c) Procure Instructional Materials/Supplies for six pre-and post- fieldtrip trunks and four field station trunks, and
- d) Provide bus transportation for Box Elder fourth grade students (Fall and Spring Fieldtrips).

Accomplishments to Date:

- a) Provided fieldtrip instruction for every fourth grade teacher and student in Box Elder School District (riparian issues-Hardware Ranch WMA, Fall) whereby students conducted surface water assessment through identifying and counting macroinvertebrates and entering data into the GLOBE international database. Overall, 900 students and 29 teachers attended; Overall, 95 % of BESD teachers were highly satisfied or very highly satisfied with the field trips; Students showed a 30% increase in knowledge of wetlands, watershed, and wildlife after fieldtrips; Students will participate in a field trip to Bear River Refuge to study wetland issues, Spring 2009);
- b) Provided educational materials/supplies for one Teacher Workshop trainings: "Streamside Science" Overall, 98% of BESD teachers were highly satisfied or very highly satisfied with regards to preparation to teach. Winter, 2009 will see the presentation of teacher workshop for spring fieldtrips, "Ornithology 101";
- c) Employed an assistant educator in support of curriculum development, fieldtrip leadership, and procurement/development of educational materials; Utah DWR employed a educator to support program at 1,050 hours;
- d) Developed/revised three pre-and post- fieldtrip trunks and five field station trunks; 100% of BESD teachers were highly satisfied or very highly with educational support

materials in pre-/post-/and fieldtrip teaching trunks for Fall, 2008. Three pre- and post-fieldtrip teaching trunks will be offered to teachers in support of spring fieldtrips to Bear River Refuge;

e) Provided bus transportation for Box Elder fourth grade students' fall spring field trips; Utah DWR will pay out ~\$5,000 in bus transportation to Box Elder School District (invoice pending) for fall 08 and spring 08 fieldtrips;

f) Developed and revised curriculum guide for Wetland Wonders to Mountain Wilds Fieldtrips with field and pre- and post- activity instructional activities; and

g) Provided Bear River Watershed education/conservation workshop for Bear River Volunteer Environmental Educators; Volunteers, in turn, entered all the data from the fall fieldtrips into the Globe database.

Is Project Completed? No, in progress per terms in CCS-65530-8-0045 (transferred to Utah Division of Wildlife Resources with all Expenditures due by 12/31/2008.

Projected Budget	Total Allocated	In-Kind Contributions	Projected Expenditures by Utah DWR
Challenge Cost Share (FWS)	\$25,000 (transferred to Utah Division of Wildlife Resources)		\$25,000
Lead Cooperator: Utah DWR-Hardware Ranch: -Fieldtrip stations (supplies & materials for teaching trunks) -Teacher workshops (supplies and materials) -Bus transportation (Box Elder School District 4 th graders) to fieldtrips -Part time educational assistant In-Kind Contributions: -Provide 50 days of Asst. Mgr. Instruction x \$240/day -Provide 2 days in-kind services for Teacher Workshops @ \$300/day -Provide technical assistance in curriculum development, materials development, and project monitoring (\$30/hr. x 120 hours) -Provide housing for part-time educator (\$600/month x 10 months) -Provide transportation for part-time educator (\$.45/mile x 3000 miles) -Provide supervision and training for part-time educator (\$30/hr. x 300 hours)		\$ 12,000 \$ 600 \$ 3,600 \$ 6,000 \$ 1,350 \$ 9,000 (Sub-total: \$32,550)	\$ 5,000 \$ 750 \$ 5,000 \$ 15,750
Partners: Box Elder School District:- -Provide in-kind services for Teachers Instruction (15 days @ \$300/day x 2 fieldtrips x 2 teachers) -Provide in-kind services for teachers to attend training for fieldtrip instruction (\$240/day x 2 days x 29 teachers)		\$ 18,000 \$ 17,400 \$ 1,800	

Utah Department of Water Resources: -Provide in-kind services to develop Bear River student instructional materials (oversized watershed maps, student watershed activity and game) -Provide in-kind materials (student activity guide and water conservation kit to take home @ \$2/student -Provide in-kind services for instructing Watershed/water conservation workshop for Bear River MBR EE Volunteers and provide Fieldtrip instruction (\$30/hr. x 14 hrs.)		\$ 1,000 \$ 1,600 \$ 420 (Sub-total \$38,620)	
Total:		\$69,370 (Total non-federal match)	\$25,000

Additional Information: Photos Documenting the Project



One of the 29Box Elder District 4th grade classes participating in the Wetland Wonders to Mountain Wilds project – Fall, 2008



Fourth graders collecting macroinvertebrates with a kicknet – Why is the water so clear?



Identifying and classifying the macroinvertebrates - What do they indicate about the water quality of this mountain stream?



Karl Fleming, USFWS, assists teachers in "Streamside Science" workshop to prepare for the Mountain Wilds to Wetland Wonders field trips; The workshop prepared the teachers to teach student stations during the field experience.

Some Quotes from Teachers:

"The macroinvertebrate station is the definitive station in teaching about water quality to fourth graders."

"I feel so much more comfortable and confident after the workshop in identifying the macroinvertebrates and teaching the students."

"I liked the organization of the stations – They are so well connected to the core curriculum."

“I found the whole experience to be very valuable to my students. It also was fun!”
“I find the fieldtrip and pre- visit activities useful and YES I want to participate next year!”
“I love this field trip and all of the activities both pre- and post-.”
“I think you guys do a fantastic job. You hit the nail right on the head with teaching science core concepts.”

Here are some quotes from kids:

"I never know there was so much living in here."
"Wow - look at that - It looks like a scorpion!"
"Awesome!!! What is that?!"
"Wow, I found the biggest stonefly!"
"Can we take these home?"
“This fieldtrip is so much better than the trip to Walmart last year!”

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2008

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