Attachment 2

Summary of Projects Recommended for Funding and Board Discussion
Fish Restoration and Enhancement Board
2009-2011 Biennium – Cycle 8 of 8

The Restoration and Enhancement (R&E) Board met February 3-4, 2011 in Salem to review 42 projects requesting funding from the R&E Program. A project must receive a majority of Board votes to be recommended for funding; seven Board members attended the meeting. A summary of each project, funding requested, designation as sport or commercial funding, public comment, and Board discussion points are below. Major issues raised are identified in the Board discussions and any public comment submitted by individuals or groups other than project sponsors are noted. Internal department staff review of each project is provided to the Board and the project sponsor prior to the meeting, and sponsors typically respond to this staff review during their presentation to the Board.

The Board recommends funding the following projects:

Restoration

Project Number:	09-262
Project Title:	NWWD Fishery Management Support
Project Type:	Monitoring – ODFW
Sponsor:	ODFW – NWWD
Sport/Commercial:	Sport
Enhancement/Restoration:	Restoration
Funds Requested:	$35,000
Total Project Cost:	$42,500
Match	
ODFW – Cash	$7,500

Description: Funds would go towards the purchase of an aluminum jet boat to better serve district needs. This work includes sea lion hazing below Willamette Falls, collecting and tagging spring Chinook along the Clackamas River for radio telemetry studies and assessing returns based on release location, reservoir assessment and monitoring in Henry Hagg Lake, cutthroat monitoring/brook trout eradication in Timothy Lake, and habitat assessment work in the mainstem Willamette River, Columbia River, lower Clackamas River and Sandy River. There are safety concerns about using the current boat for sea lion hazing at Willamette Falls, in particular. Also, the speed of the newer boat would be more effective for hazing operations.

Board Discussion: Bill Lovelace mentioned that he can see why this would be a safety issue. Jack Glass was asked if he thought the new boat would be appropriate for the work at Willamette Falls, and he said that it would be, but suggested that they might want to add a tiller. Lonnie asked if they had already gotten

three different price quotes. The applicant said yes, and they chose a price estimate for this request which seems very reasonable.

Project Number:	09-264
Project Title:	Grande Ronde Watershed District Fishery Monitoring
Project Type:	Monitoring – ODFW
Sponsor:	ODFW – GRWD
Sport/Commercial:	Sport
Enhancement/Restoration:	Restoration
Funds Requested:	$5,308
Total Project Cost:	$22,708
Match:	
ODFW In-kind	$17,400

Description: Funds would be used to purchase equipment to support the La Grande and Wallowa Fish Districts in conducting fish monitoring activities at lakes and reservoirs managed to provide recreational fishing opportunities. Lightweight Swedish monofilament gillnets (6), ultra light rafts (2), and a lightweight backpacking tent will be purchased to improve survey data collection efforts at high lakes in the Wallowa and Elkhorn mountains, which are stocked by airplane. Six regular, nylon mesh gillnets will be purchase to replace old gillnets used for sampling and monitoring trout populations in coldwater lowland lakes and reservoirs in the La Grande District. Electroshocking equipment (batteries, dip nets, camera and life jackets) will be purchased for conducting monitoring activities in warmwater lakes and fish salvages associated with implementation of habitat restoration projects.

Board discussion: Jack Glass asked if we could check with Englund marine on getting lower net costs. The applicant said they would look into it, but wasn't sure that Englund would have these kinds of Swedish nets. Jack also asked about the length of the nets. Bob Bumstead asked about the ease of using the Swedish nets. The applicant said that they are more fragile. Gary Soderstrom suggested that they keep them out of the sun, and mentioned that he'd like to see one of these nets, as gillnets are his specialty.

Project Number:	09-266
Project Title:	Klamath Watershed District: Fish Management Equipment
Project Type:	Monitoring – ODFW
Sponsor:	ODFW – Klamath WD
Sport/Commercial:	Sport
Enhancement/Restoration:	Restoration
Funds Recommended:	$9,910
Total Project Cost:	$9,910
Match:	$0

Description: The Klamath Watershed District needs to replace or repair some of the primary equipment used for sampling fish populations. Items in need of replacement or repair include basic items such as batteries for electrofishing backpacks (6), gillnets (5), a boat trailer, electrofishing battery chargers (2), and boat maintenance. The watershed district also needs to purchase new equipment that will enhance and refine fish management activities and provide a more sophisticated analysis of fish populations. New items include a low-profile boat, zooplankton nets (3), rotenone, two cattle guards, drift boat electrofishing retrofit ($5545), and snorkel survey lights (4).

Board discussion: Terry Learned asked if they were asking for $6,000 for each cattle guard or both. The applicant replied, both. The Board decided to provide partial funding for this project in the amount of $9,910 with the stipulation that funds be spent on the items that were critical for serving Klamath District needs: Electrofishing backpack batteries, gillnets, boat trailer, electrofishing battery chargers and boat maintenance.

Project Number:	09-272
Project Title:	Electrofishing raft – Deschutes redband monitoring
Project Type:	Monitoring/Research
Sponsor:	ODFW – High Desert Region Office (Bend)
Sport/Commercial:	Sport
Enhancement/Restoration:	Restoration
Funds Requested:	$23,741
Total Project Cost:	$44,521
Match:	
ODFW In-kind	$20,780

Description: These funds would go towards materials and construction of an electrofishing cataraft. The boat will be used for an ongoing redband trout population monitoring efforts in the Deschutes River. One of the main objectives is to evaluate their response to increases in stream flow realized through water conservation projects. In order to conduct redband trout sampling surveys on the Deschutes River near Bend (town to Lake Billy Chinook) the Deschutes District needs an electrofishing cataraft to sample this reach of river, which is in canyon, and includes white-water and deep water habitat. ODFW does not currently own a cataraft boat. After some research, the applicants determined that they could build and design an electrofishing cataraft for half the cost of purchasing one from the company, Smith-Root. This equipment will be available to other ODFW districts when not in use by the Deschutes District.

Board discussion: Bob Bumstead had questions about using current data as baseline data if the river is already up to 30 cfs at this site. He asked whether they knew that the flow would increase even more in the future. The applicant replied, yes, there is a possibility of recharge and 250 cfs in the near future. Plus, there is another site in the "difficult to access" area where they'd like to examine the improvement in fish passage. Bob also had concerns that this project would not be tied to improving fishing opportunities, but was still in favor of recommending funding, because it is important to measure the effects of the increased stream flow.

Project Number:	09-275
Project Title:	SWWD Sampling and Survey Equipment
Project Type:	Monitoring
Sponsor:	ODFW - Corvallis
Sport/Commercial:	Sport
Enhancement/Restoration:	Restoration
Funds Requested:	$11,619
Total Project Cost:	$11,619
Match:	$0

Description: The purpose of this funding request is to allow the South Willamette District to purchase various sampling and survey equipment for better monitoring of the district's fish resources. They conduct regular sampling activities on the district's lakes, streams, and rivers to determine the status of fish populations and track changes over time. The information gathered through these activities is crucial for effective management of the fish resources. Equipment currently used for these purposes, such as various nets and boats are becoming increasingly degraded or are obsolete and need to be replaced. R&E funds will be used to cover four experimental gill nets, 15 fish dissection kits, one flow meter, one conductivity field kit, and two pontoon boats.

Board discussion: No Board comments.

Project Number:	09-277
Project Title:	Mid-Columbia Creel Hand-held CWT Detectors
Project Type:	Monitoring
Sponsor:	ODFW – The Dalles
Sport/Commercial:	Sport
Enhancement/Restoration:	Restoration
Funds Requested:	$10,000
Total Project Cost:	$10,000
Match:	$0

Description: The ODFW Mid-Columbia Fisheries District conducts sport and tribal, salmon and steelhead creel surveys annually on the Lower Deschutes River. These surveys, which have been conducted continuously for over 30 years, provide managers with important harvest information. The harvest information collected from these projects is used to monitor salmon and steelhead populations in the Deschutes River, and is utilized to set regulations for future angling opportunities. In the course of the creel surveys, surveyors frequently encounter harvested fish that may be carrying a coded-wire tag (CWT) in the snout of the fish. Recovery of coded-wire tags provides important information needed to accurately access escapement and other important fishery parameters. Frequently surveyors encounter fish that don't have fin-marks indicating a CWT, but fish are indeed carrying a CWT. Therefore the only way to determine if a fish is carrying a CWT in the field is to interrogate the fish with CWT detection wand. These funds will be used to purchase two handheld detectors for use on Deschutes creel surveys.

Board discussion: Dixie Boley asked how long the wands usually last. The applicant said a long time. The Board decided to provide funding for two handheld CWT detectors ($10,000), though the original request was for three detectors ($15,000).

Project Number:	09-279
Project Title:	Coos-Coquille-Tenmile Fish District Equipment
Project Type:	Miscellaneous (Restoration)
Sponsor:	ODFW – Charleston Field Office
Sport/Commercial:	Sport
Enhancement/Restoration:	Restoration
Funds Recommended:	$11,575
Total Project Cost:	$26,925
Match:	
ODFW In-kind	$15,350

Description: These funds will be used to obtain the proper equipment necessary to monitor and manage fish and fish habitat in the Coos-Coquille-Tenmile Fish District. Equipment requested would be used for kids' fishing events, angler education, fish propagation, tagging/marking, fish population monitoring, and habitat monitoring. R&E

Board discussion: Lonnie Johnson asked about what kind of computer costs $1,700. The applicant answered that it is one with GIS capabilities. The Board decided to partially fund this request in the amount of $11,575. The original request was for $37,744. The recommendation was made with the stipulation that the funds be used to purchase the following items on the list of District needs in the application: a gas-powered water pump for loading water during broodstock collection operations, a monofilament net for collecting broodstock for ODFW hatchery and STEP hatchery programs, 2 fresh-flow aerators for transporting fish to hatcheries, aluminum materials for construction of a replacement fish trap, 50 scissors for fall Chinook fin marking, a Little Giant pump to operate the fin-marking apparatus, 2 oxygen meters for transporting fish, a digital Crane scale for fish-rearing operations, 2 juvenile and 2 adult dip nets for fish rearing and broodstock collection efforts, and 2 handheld CB radios to ensure safety of seasonal biologists while driving to spawning survey sites.

Project Number:	09-281
Project Title:	Willow-Whitehorse Lahontan Cutthroat Trout Assessment
Project Type:	Monitoring
Sponsor:	ODFW – Malheur Watershed District
Sport/Commercial:	Sport
Enhancement/Restoration:	Restoration
Funds Requested:	$10,000
Total Project Cost:	$202,737

Match:	
ODFW In-kind	$41,867
Natl. F&W Foundation - Cash	$75,435
Western Trout Initiative – Cash	$75,435

Description: This project seeks to estimate population abundance and distribution of age 1+ Lahontan cutthroat trout in Willow and Whitehorse creeks of Coyote Lake basin. Trends in population abundance will be compared to previous efforts in 1989, 1994, 1999, and 2005. In addition population abundance will be examined in relation to water year and varying climatic conditions. ODFW is obligated by the ESA status of the species to monitor population levels. This information is used to maintain the rational that a fishery is acceptable in the basin. R&E funds will be used to cover field supplies (batteries, clipboards, backpacks), and travel per diem.

Board discussion: Dixie Boley commented on the fact that this proposal had an amazing amount of match funding secured.

Project Number:	09-283
Project Title:	Umpqua District Monitoring and Safety Equipment
Project Type:	Monitoring
Sponsor:	ODFW – Umpqua Watershed District Office
Sport/Commercial:	Sport
Enhancement/Restoration:	Restoration
Funds Requested:	$8,484
Total Project Cost:	$46,734

Match:	
ODFW In-kind (1500 hrs.)	$38,250

Description: Half of these funds will be used to secure much needed equipment for the district such as waders, a boat pump, boat sealant, fish measuring boards, professional fish ID/protocol manuals, and life vest re-arm kits. The other portion of these funds will be used to install catwalks on Winchester Dam to ensure staff safety when walking to the various steps of the ladder to adjust water flows to maintain fish passage and fish counting activities. Finally a small portion of funs will be used to purchase a backup DVR for recording the fish passing at the dam, in case the system fails. Counts have been made at Winchester Dam since 1946 and provide a valuable assessment of the annual population, trends, hatchery returns, and run timing for salmon, steelhead, lamprey and other species

in the Umpqua. This data will be used to help make management decisions for population maintenance and recreational use.

Board discussion: No Board comments.

Project Number:	09-285
Project Title:	Wallowa Lake Limnology
Project Type:	Monitoring
Sponsor:	ODFW - Enterprise
Sport/Commercial:	Sport
Enhancement/Restoration:	Restoration
Funds Requested:	$15,855
Total Project Cost:	$20,855
Match:	
ODFW In-kind	$5,000

Description:
These funds will be used to purchase a Hydrolab DS5 multiparameter water sampler to monitor water quality parameters in Wallowa Lake. The sampler will be equipped to measure water temperature, dissolved oxygen, pH, conductivity, chlorophyll-a, and turbidity. The sampler will also be available for use in monitoring water quality parameters in other water bodies. Water sampling would complement sampling of kokanee, lake trout, mysids, and plankton in Wallowa Lake. Temporal and spatial variations in water quality parameters will be used to help us better understand variations in aquatic biota of Wallowa Lake.

Board discussion: Bob Bumstead asked them whether they would have time to analyze most of the wide-spectrum of data that will be collected by this sampler. The applicant answered that a lot of these data will be incorporated into the same mathematical model. Lonnie Johnson asked if this sampler could be shared with other districts. The applicant replied, yes, and it's easy for anyone to use. Bill Lovelace asked if it would be handy to have for the Phillips Reservoir and other large lakes in area. The applicant replied, absolutely.

Project Number:	09-286
Project Title:	Big Creek Hatchery Tractor
Project Type:	Hatchery Maintenance
Sponsor:	ODFW – Big Creek Hatchery
Sport/Commercial:	Commercial
Enhancement/Restoration:	Restoration
Funds Requested:	$20,000
Total Project Cost:	$41,500
Match:	
Mitchell Act funds	$21,500

Description: These funds would be used to help replace Big Creek Hatchery's outdated and broken down tractor with a new tractor. A little more than half of the cost of the tractor will be covered using ODFW funds, mainly Mitchell Act funds.

Board discussion: Gary Soderstrom mentioned that he has visited this hatchery a few times and knows how badly they need a new tractor. Lonnie Johnson asked if this was just a tractor. The applicant said that it includes a front-end loader and a backhoe.

Project Number:	09-288
Project Title:	Young's Bay Forklift Replacement
Project Type:	Hatchery Maintenance
Sponsor:	Clatsop County Fisheries
Sport/Commercial:	Commercial
Enhancement/Restoration:	Restoration
Funds Requested:	$23,500
Total Project Cost:	$28,600
Match:	
CCF – cash	$5,100

Description:
Clatsop County Fisheries (CCF) is looking to purchase a new forklift to replace their current forklift at the Young's Bay net pen project site. The Young's Bay site is the main fish food storage and distribution site for the Clatsop County Fisheries Project. This forklift will also be used in the day-to-day operations of moving various items such as mechanical pumps and totes full of netting used in the raising of fish at this site. R&E funds will be used to pay for most of the tractor purchase.

Board discussion: Both Lonnie and Dixie Boley agreed that they have seen the current forklift and know how badly the Young's Bay site needs one. Gary Soderstrom asked if their forklift is only used for moving fish food. The applicant said that no, they use it for many other reasons. Bob Bumstead asked about how long ago they purchase the old forklift. The applicant said a long time, and that they spent $3,000 on repairs for it just last year.

Project Number:	09-290
Project Title:	Rock Creek Hatchery Maintenance Bundle
Project Type:	Hatchery Maintenance
Sponsor:	ODFW – Rock Creek Hatchery
Sport/Commercial:	Sport
Enhancement/Restoration:	Restoration
Funds Requested:	$44,250
Total Project Cost:	$59,370
Match:	
ODFW In-kind	$14,120
Tractor trade-in value	$1,000

Description:
Funds will be used to replace an old, worn out diesel tractor, and to purchase materials to rebuild deteriorating brood pens and to replace river screens with durable aluminum frames and screening. The brood pen project is a hatchery improvement project listed in the Draft Executive Summary for Hatchery Reform Bill HB3489. R&E funds will be used for most of the tractor cost (60%), and 60% aluminum screen, aluminum channel and aluminum rectangular tubing costs.

Board discussion: Lonnie Johnson mentioned that the ROCK-ED program, which is housed at this hatchery, is great. There were questions about the prioritization of items. The applicant said that the brood pens are most important, then the tractor, and then the aluminum screens.

Project Number:	09-298
Project Title:	Electrofishing Boat for South Willamette WD
Project Type:	Monitoring
Sponsor:	ODFW – Springfield Field Office
Sport/Commercial:	Sport
Enhancement/Restoration:	Restoration
Funds Requested:	$11,432
Total Project Cost:	$11,432
Match:	$0

Description:
ODFW relies on many tools to collect fish population information to inform management decisions. The offices of the South Willamette Watershed District share a drift boat equipped with electrofishing capabilities to sample fish populations in non-wadeable rivers and boat accessible ponds. The District electrofishing boat requires some major improvements and maintenance to improve safety and allow efficient operation during sampling. R&E funds will be used to for purchase of an electrode array, boom kit, cathode array, boat repair materials, one dip net, electrofishing unit repair costs, a foot switch, electrical gloves, equipment installation and boat repair costs, and a generator battery.

Board discussion: Bob Bumstead mentioned that he approves of the fact that the SWWD are requesting funds to fix existing equipment instead of asking for new equipment.

Project Number:	09-299
Project Title:	NCWD Equipment and Supplies
Project Type:	Monitoring
Sponsor:	ODFW – Tillamook office
Sport/Commercial:	Sport
Enhancement/Restoration:	Restoration
Funds Recommended:	$28,605
Total Project Cost:	$28,605
Match:	$0

Description:
The NCWD conducts biological surveys and gathers data to inform fishery management and enhance angling opportunities on the North coast. In addition, the NCWD provides technical assistance and support to a variety of groups and organizations including but not limited to watershed councils, city and county public works departments, timber companies, private landowners, and many others. These funds would be used to furnish the Oregon Department of Fish and Wildlife (ODFW) North Coast Watershed District (NCWD) with equipment items used in the implementation and monitoring of programs and projects within the District. Due to continued budget shortfalls, there hasn't been funding to replace old and failing equipment. These funds are needed to meet management objectives and provide needed services within the NCWD. R&E funds will be used to purchase 80 radio tags for the study of migration habits and return timing of winter steelhead on the North Fork Nehalem River, and a new Yamaha 80 Hp jet-drive outboard motor to replace the old, 2-stroke motor.

Board discussion:
The board decided to recommend partial funding for this project ($28,605 out of $38,105 requested) to cover purchase of the motor and the radio tags as the applicant stated that these were the two equipment items that the NCWD needed the most.

Project Number:	09-305
Project Title:	Wallowa District Hydroacoustic Sampling Boat Motor
Project Type:	Monitoring
Sponsor:	ODFW – Enterprise Field Office
Sport/Commercial:	Sport
Enhancement/Restoration:	Restoration
Funds Requested:	$10,000
Total Project Cost:	$12,000
Match:	
ODFW In-kind	$2,000

Description:
The ODFW Wallowa District is seeking funds to replace a troublesome and underpowered two-stroke outboard motor (plus steering controls, propeller and installation labor) on a lake sampling boat. Funds would be used to purchase a four-stroke motor that compliments the hull size of the boat and that is better-suited for work objectives. Replacing the current motor will be more cost-efficient for ODFW to operate and maintain in the long-term. This request will help ODFW meet objectives of two previously R&E-funded projects; 1) Wallowa Lake trophic and fish population sampling (05-156), and 2) Wallowa Lake plankton and lake trout sampling (07-027). As part of these projects, we conduct annual hydroacoustic estimates of Kokanee in Wallowa Lake. Conducting these estimates require extensive low-RPM use of the motor. The Wallowa District has committed to making this equipment available statewide to other districts that have needs for hydroacoustic estimates to help meet monitoring and/or research objectives.

Board discussion: Lonnie Johnson said to consider whether the fuel source for the motor would be kept outside or inside the boat. Bob Bumstead asked why they didn't ask to buy a kicker for the new motor to enable them to move at slower speeds. The applicant replied that they would use the old motor for slower speed activities. Jack Glass had some concerns that the weight of this motor might be too heavy for the stern of the boat and told the applicant to make sure they get the information they need to make the right decision before making their purchase.

Enhancement

Project Number:	09-263
Project Title:	NWWD Radio Telemetry Studies
Project Type:	Research – ODFW
Sponsor:	ODFW – NWWD
Sport/Commercial:	Sport
Enhancement/Restoration:	Enhancement
Funds Requested:	$38,600
Total Project Cost:	$62,100
Match:	
ODFW In-Kind and cash	$14,000
PGE – In Kind and cash	$9,500

Description: These funds will be used to purchase 30 tags, and 4 of 6 receivers plus other supplies that the NWWD needs to conduct several studies in the coming years. These studies will utilize radio telemetry to track fish as they migrate within a particular water body. The District does not currently possess any of the equipment necessary to carry out these types of studies and has only been able to in recent years by borrowing equipment from Portland General Electric. These projects would include: assessment of spring Chinook migration in relation to new off –site acclimation ponds to determine whether they are improving angler success (funded by R&E); assessment of spring Chinook migration within the vicinity of Sandy Hatchery; determination of bull trout distribution in the Clackamas, post-reintroduction; assessment of coho migration and distribution above Willamette Falls.

Board discussion: Jack Glass asked the applicant if they can easily recover most of the tags that they will be putting out there. The applicant replied that if they are not caught and turned in that they should show up at either hatchery. Gary Soderstrom mentioned that he has caught fish with radio tags in them and that they didn't seem to be in good shape.

Project Number:	09-265
Project Title:	Phillips Reservoir Trap Nets
Project Type:	Miscellaneous (Enhancement)
Sponsor:	ODFW – GRWD
Sport/Commercial:	Sport
Enhancement/Restoration:	Enhancement
Funds Requested:	$13,161
Total Project Cost:	$23,409

Match:

ODFW In-kind	$10,248

Description: Funds would be used to purchase two Merwin trap nets (plus dock construction materials and two anchors) to support the ongoing Phillips Reservoir Perch Removal Project. To date, six Merwin trap nets have been borrowed annually from the Idaho Department of Fish and Game for this project. Purchasing two of their own nets will allow them to conduct a reduced perch removal project when Idaho nets are not available, and will enhance the project when they are available to them. Removal of the yellow perch will help increase the growth and survival of rainbow trout in the reservoir, which is the preferred species by anglers. In addition to the yellow perch removal project, the trap nets will be used for standard monitoring at the reservoir which takes place during the perch removal process (as it is very labor intensive). Under project #09-057 the R&E program has funded a large portion of the personnel costs for implementation of the project in 2010 and 2011.

Board discussion: The Board asked the applicant if they would like to request more money for a few more nets, as they tend to get worn out fairly quickly, but the applicant assured them that the current request would suffice because they are not sure that this will be a long-term project and he knows that gillnets are not useful for longer term studies. Lonnie Johnson wondered about the tiger muskies that they are thinking of adding to the lake once the yellow perch are removed... have they determined how many fish will be stocked per acre? The applicant said that it depends on the hatchery source, which affects the size. Bob Bumstead had a question about how long the tiger muskie lived. The applicant said that they do live long but there should be some biological separation between them and the trout. Other Board members had some concerns that the tiger muskie could end up disrupting the ecosystem in the lake or could get out of the lake into nearby waters.

Project Number:	09-267
Project Title:	Portable fish pump for south coast Chinook smolt liberation
Project Type:	Liberation
Sponsor:	Curry Anadromous Fishermen and Oregon South Coast Fishermen
Sport/Commercial:	Commercial
Enhancement/Restoration:	Enhancement
Funds Requested:	$22,747
Total Project Cost:	$89,187

Match:	
CAF Cash	$1,000
CAF In-kind volunteer	$52,560
OSCF Cash	$1,000
OSCF In-kind	$2,880
OSCF (net pen purchase)	$9,000

Description: This grant would benefit 2 STEP Volunteer Groups and their projects. Curry Anadromous Fishermen's (CAF) primary project is Indian Creek Hatchery where approximately 75,000 smolting fall Chinook salmon are released annually into the Rogue River estuary. Oregon South Coast Fishermen (OSCF) produces a total of 150,000 fall Chinook smolts in the Chetco River hatchery program. A portion of the Chetco fish will be acclimated in Ferry Creek Reservoir before release. Funding has been approved to mark 37,500 acclimated smolts and 37,500 tradition river release smolts with CWTs before release in order to help evaluate fishery contributions, stray rates and acclimation success. Purchase of a gas powered fish pump would greatly reduce scale loss and stress to smolts during transfer from raceways and/or a net pen to a transport tank and will be used by both of these programs and possibly other hatchery programs in the area.

Board discussion: Lonnie Johnson asked if they had looked into buying a similar pump from a U.S. manufacturer. The applicant replied that they did do a little searching, but this pump met their needs and specifications far better than any other one.

Project Number:	09-268
Project Title:	2011 Kids Fish Camp at Camp Angelos
Project Type:	Education
Sponsor:	Oregon Wildlife Heritage Foundation
Sport/Commercial:	Sport
Enhancement/Restoration:	Enhancement
Funds Requested:	$9,860
Total Project Cost:	$47,290

Match:

Camp Angelos Board –cash	$18,000
OWHF – cash	$8,140
OWHF – In-kind	$2,400
Camper tuition	$8,890

Description: The Camp Angelos Youth Fishing Camp is a one week resident summer camp for 80 boys and girls ages 9-14 (including some disadvantaged youth). The camp includes daily meals, lodging, equipment and professional instruction by volunteers from ODFW Angler Education, NW Steelheaders, Oregon Bass and Panfish Club and other local fishing groups. Campers will experience a variety of fishing related activities and projects throughout the 5-day camp including classes about different types of angling, fishing equipment, and safety, ecology of streams and pools and fish conservation challenges. R&E funds will be used to cover a portion of the following: administrative costs, camper insurance, facility rental, rafting packages, volunteer background checks, volunteer gifts, fish food and fishing equipment.

Board discussion: The Board agreed that this is a great use of R&E funds but would rather not fund things like volunteer gifts for this program. Gary Soderstrom also mentioned that the R&E program has continually provided funding for this camp in the past and requested that R&E not be considered as a funding source for each and every Camp Angelos Kids' Fishing Camp in the future. Jack Glass asked how long the camp lasts. The applicant replied, five days and that they are not allowed to bring their cell phones. Jack also asked whether these kids have ever spent any time outdoors. The applicant replied, no, not most of them.

Project Number:	09-269
Project Title:	Web-based GIS reporting of hatchery data
Project Type:	Monitoring
Sponsor:	ODFW Corvallis Research Lab
Sport/Commercial:	Commercial
Enhancement/Restoration:	Enhancement
Funds Requested:	$42,004
Total Project Cost:	$53,218

Match:

BPA In-kind	$11,214

Description: The funds would be used to cover staff time for positions within NRIMP which are not permanent positions within ODFW (GIS applications developer, two database developers, and a project manager). These employees will be paid to develop a SQL database and integrated GIS application for publishing data on hatchery releases (size, numbers, locations, rearing history etc) and recovery (for CWT fish this includes numbers, location harvest, method etc). They will also develop the ability to query the database for a breakdown of harvest and/or escapement by location for specific stocks or brood years and display this in both map and data file format. The completed product will be

compatible with existing and planned upgrades to other database components within the hatchery system. The project has been designed by ODFW staff including NRIMP staff and has received support from Conservation and Recovery, NRIMP and Fish Propagation staff.

Board discussion: Bob Bumstead asked if these would improve the quality of the location data. The applicant replied, yes, it will be accurate within 1 meter and there will be less room for error in the collection and entry of the data. Dixie wondered whether this project could be completed by June 30th. The applicant said, yes, all they have to do is develop the database, the data that will go into it is ready and waiting to go into it once it's developed. Also, the data that will go into is already collected every year and kept in an older database by the applicant, but once the new database and website application is developed it will be simple to update the website when new data becomes available. Terry Learned wondered if this would make the return data available at an earlier time. The applicant said no, because that is mainly dependent on the collection of CWTs.

Project Number:	09-270
Project Title:	Boat ramp signs to prevent illegal fish releases
Project Type:	Education
Sponsor:	ODFW – Rogue Watershed District Office
Sport/Commercial:	Sport
Enhancement/Restoration:	Enhancement
Funds Requested:	$5,147
Total Project Cost:	$6,397

Match	
In-kind hours from several agencies	$1,250

Description: This project is part of an ongoing effort to educate the public on issues involving aquatic invasive species and illegal fish releases. These funds will be used to purchase 50 vinyl signs that say "No Angling with Live Bait Fish" and 50 pre-formed thermoplastic signs which will say "No Live Fish In, No Live Fish Out". These signs will be put up at public boat ramps on lakes and reservoirs in the Rogue Watershed to discourage the transport and release of non-native fish. In some cases the signs will be used to replace existing signs that were put up in 2009 and are beginning to deteriorate or have disappeared.

Board discussion: The Board recommended this project for full funding with the stipulation that the thermoplastic boat ramp signs are prioritized first, and that the vinyl signs include the 1-800 tip line phone number on them, as well as the R&E Program logo. Lonnie Johnson had concerns about how long the boat ramp signs last. Bill Lovelace asked if any evidence exists which shows that these kinds of signs are actually effective at educating or deterring. The applicant answered no, but he believes that the more people who see and hear about the issue, the better.

Project Number:	09-271
Project Title:	Camp Sherman Hatchery Property Enhancement
Project Type:	Education/Access
Sponsor:	ODFW – High Desert Region (Bend)
Sport/Commercial:	Sport
Enhancement/Restoration:	Enhancement
Funds Recommended:	$10,000
Total Project Cost:	$19,040
Match:	
ODFW In-kind	$9,040

Description: The Metolius River hatchery property is located in the Camp Sherman area on Spring Creek, a tributary of the upper Metolius River. In 1947 the Oregon Fish Commission constructed the Metolius Hatchery and began artificial propagation of spring Chinook; the hatchery closed in 1967. Currently, the property is used by ODFW's STEP program. Through STEP's Kokanee Karnival Youth Education Program, several Bend, Redmond and Tumalo classes visit the site and conduct stream and fisheries investigations. They sample macro-invertebrates, test water quality and observe Kokanee salmon spawning. The ODFW property includes 15 acres of meadow, a small forested riparian area and 0.4 miles of Spring Creek riverfront, which provide an excellent location for students to perform nature studies, but some of the old hatchery structures have been identified as safety hazards and need to be removed or fixed. Located on the site are five unused concrete raceways, a water diversion system, a dam and a house. R&E funds will go towards an archaeological site inspection, which must be completed before the rest of the project can move forward (i.e. site boundary survey boundaries, culvert replacement, pipe removal, construction of turnaround for school buses and a parking lot area for 20 vehicles, existing roadway improvement (widen and gravel).

Board discussion: The Board approved partial funding for this project ($10,000 of $34,840 originally requested) with the stipulation that it be used for the archaeological site inspection. The Board did not believe that the remainder of this project could be completed before the June 30th spending deadline, and did not think it was wise to fund the construction work until the initial inspection was done. Jack Glass asked if they planting steelhead in the Metolius? The applicant answered, no, predominantly redband, sockeye and Chinook.

Project Number:	09-278
Project Title:	Warmwater Fish Habitat Structures
Project Type:	Miscellaneous Enhancement
Sponsor:	South Willamette Watershed District Office
Sport/Commercial:	Sport
Enhancement/Restoration:	Enhancement
Funds Requested:	$11,400
Total Project Cost:	$36,552
Match:	
ODFW In-kind	$7,296
Volunteer In-kind	$17,856

Description: The project would purchase materials (cinder blocks, concrete, and polyethylene pipe) that ODFW warmwater and district staff, and volunteers would use to construct 500 "spider block" artificial fish habitat structures that will be placed in ponds, lakes, and reservoirs throughout Oregon to enhance warmwater and other recreational fisheries.

Board discussion: No Board comments.

Project Number:	09-280
Project Title:	Crooked River Redband Genetic Analysis
Project Type:	Monitoring
Sponsor:	ODFW – High Desert Region (Bend)
Sport/Commercial:	Sport
Enhancement/Restoration:	Enhancement
Funds Recommended:	$4,000
Total Project Cost:	$7,520
Match:	
ODFW – In-kind	$1,216
OSU – Cash	$1,100
OSU – In-kind	$704
Central Oregon Flyfishers – cash	$500

Description: The Crooked River and its tributaries below Bowman Dam are some of the most prolific redband (Oncorhynchus mykiss) fisheries in central Oregon. Steelhead (Oncorhynchus mykiss) was added to the system in 2009. Although redband and steelhead share similarities and can readily interbreed, differences in life history strategies may cause their populations to be affected in different ways. To facilitate successful steelhead reintroduction (including a new recreational fishery) while maintaining the popular redband fishery, we must be able to distinguish between juveniles of the two life history populations. Unfortunately we cannot visually distinguish between the two fish and we must rely on genetic determination, which we propose to assess with help from the USFWS Abernathy lab. R&E funds will be used to cover a proportion of the lab analysis costs, primarily those needed for completion of a study being conducted by an OSU graduate student.

Board discussion: The Board recommended partial funding ($4,000 of $7,000 requested) provided that these funds be used primarily for the genetic analyses which are most critical to the graduate student's thesis work on Crooked River redband trout (which began previous to and became confounded by the steelhead reintroduction decision). The applicant told the board that by providing $4,000 they could afford to process the grad student's samples, while also processing a few more samples from other locations and thus help to improve the statistical rigor of a similar study being conducted by the Bend office. The applicant said that the results of the grad student's research will all be very important in future land use management and in deciding how the Prineville Reservoir water will be used. Bob asked whether the results would also help them decide whether or not to terminate the steelhead reintroduction. The applicant replied that no, that is mostly dependent on the success of the steelhead returns. Right

now they are using hatchery broodstock, but if those offspring return successfully, they will consider switching to wild broodstock.

Project Number:	09-282
Project Title:	Malheur District Monitoring Equipment
Project Type:	Monitoring
Sponsor:	ODFW – Malheur Watershed District Office
Sport/Commercial:	Sport
Enhancement/Restoration:	Enhancement
Funds Requested:	$21,769
Total Project Cost:	$21,769
Match:	$0

Description: The Malheur District is seeking funding to purchase new equipment to improve function, efficiency, and safety for ODFW staff and volunteers. Funds will be used to purchase Garmin GPS radios, Type 2 metal fuel cans (to adhere to safety requirements), a new ATV to improve survey coverage and safety, and new thermographs and gillnets. The thermographs will replace outdated ones to assess habitat of native fish species, and gillnets will be purchased to survey populations of hatchery stock rainbow trout in reservoirs.

Board discussion: Though the Board members had some reservations about funding the purchase of what seemed like heavily over-priced fuel cans, they voted to recommend full funding. Dixie Boley said she could see how a majority of these items would help improve safety and efficiency for the Malheur District during sampling activities.

Project Number:	09-287
Project Title:	Fall River Hatchery Fish Troughs
Project Type:	Propagation
Sponsor:	ODFW – Fall River Hatchery
Sport/Commercial:	Sport
Enhancement/Restoration:	Enhancement
Funds Requested:	$100,000
Total Project Cost:	$154,138
Match:	
ODFW – installation costs paid by FRH budget	$54,138

Description:
This is the completion phase of a 1994 R&E grant to develop a deep well for incubation water and domestic water at the Fall River Hatchery (FRH). Providing warmer well water allows triploid trout incubation, early rearing, and program production. It is part of the High Desert Fish Propagation Plan to efficiently balance regional pond space and streamline production. FRH has been dependent on other

hatcheries in the past to incubate eggs and to transfer fingerlings for grow out. Providing fish tanks will allow FRH to spawn broodstock, incubate triploid trout and raise Crane Prairie rainbow trout (Cranebows) and other stocks of fish for release. R&E funds will be used to pay for up to 16 fish troughs and freight charges.

Board discussion: Bob Bumstead had concerns that by funding this proposal, it would keep them from funding many other projects in cycle 8 and wondered if it would be better to approve something like this in cycle 1. Bob also asked why it is important to raise Cranebows in this hatchery. The applicant said that he has easier access to the eggs via hatchery broodstock. Plus, Wizard Falls and Warm Springs don't have room for this kind of operation. Plus the incubation cycle requires both warm and cold water. Gary asked about how the sterilization is carried out. The applicant said that they apply 10,000 lbs. of pressure to the eggs. The Board ultimately chose to recommend $100,000 in funding for this project (out of the original request for $111,483). The applicant agreed that this amount of funding will definitely help them get their proposed projects off-the-ground, if not fully operational, depending on the ultimate cost of the fish troughs.

Project Number:	09-289
Project Title:	Statewide Strategic Rotenone Supply
Project Type:	Miscellaneous (Enhancement)
Sponsor:	ODFW – Salem HQ
Sport/Commercial:	Sport
Enhancement/Restoration:	Enhancement
Funds Recommended:	$43,215
Total Project Cost:	$97,855

Match:
ODFW – In-kind (rotenone application) $54,640

Description:
This project will use R&E funds to purchase a strategic stockpile of rotenone (liquid and powder forms) which will be used by ODFW Fishery Managers to chemically rehabilitate recreational fisheries and restore fishery production in the state. The stockpile will also be available to ODFW staff to allow for immediate response to illegally introduced species and invasive fish species, when circumstances allow for effective chemical treatments. In the past, fishery managers went to R&E on an as-needed basis for rotenone purchases. Having rotenone on hand for specific projects will ensure managers with adequate supplies of rotenone for a base level of project implementation. 7,000 pounds of powder rotenone would be purchased to replenish the supply of rotenone in the Upper Deschutes District of the High Desert Region. Liquid rotenone would be purchased for future projects and stored at several sites throughout the state. District staff time and equipment would be used for planning, implementing, and evaluating rotenone treatments.

Board discussion: Dixie Boley asked whether we have designated locations where it would be appropriate to store this. The applicant said yes. Bob Bumstead wondered if there was an advantage to buying in bulk. The applicant said that it doesn't help you get a reduced price, but it allows you to buy

what you need when it is actually available. There are times when the worldwide rotenone supply can be very low. Lonnie Johnson had concerns about a certain bass fly-fishing lake being treated with rotenone which was mentioned in the proposal as a potential site for treatment. The Board decided to recommend partial funding for this project ($43,215 of the original $73,000 request). The applicant agreed that this would help ODFW staff replenish some of their rotenone supplies, and buy a small amount of liquid rotenone that will be readily available when needed. The Board was reluctant to fund the purchase of too much rotenone for storage, due to concerns about expiration dates, etc. The applicant replied that the shelf life is five years and there is a standard way to test whether it has expired.

Project Number:	09-291
Project Title:	Gold Lake Brook Trout Removal
Project Type:	Miscellaneous (Enhancement)
Sponsor:	ODFW – Springfield Office
Sport/Commercial:	Sport
Enhancement/Restoration:	Enhancement
Funds Requested:	$14,252
Total Project Cost:	$24,677
Match:	
McKenzie Flyfishers – In-kind	$10,425

Description:
Since 1975, the Oregon Department of Fish & Wildlife and local volunteers, predominantly from the McKenzie Flyfishers, have invested a large amount of time working to reduce the number of brook trout in Gold Lake. Numerous methods have been used including a regulation change in the 1990's removing the daily bag limit, blocking tributaries during spawning migration, and trapping and removing brook trout from the lake. Though some success has been achieved in years following larger removals, annual summer trap net data shows ODFW's management objectives are not being achieved. This project is intended to provide equipment for the removal of a significant portion of brook trout from Gold Lake to provide anglers a balanced population of brook and rainbow trout of reasonable size. R&E funds will be used to purchase a trap net, aluminum fish transportation box, an electrofisher, floor for drift boat, oarlock blocks, paint and a rope seat for drift boat.

Board discussion: No board comments.

Project Number:	09-300
Project Title:	Junction City Pond Barrier Boulders
Project Type:	Access
Sponsor:	ODFW – South Willamette Watershed District Office
Sport/Commercial:	Sport
Enhancement/Restoration:	Enhancement
Funds Requested:	$4,335
Total Project Cost:	$4,522

Match:

ODFW In-kind	$187

Description:
Junction City Pond is a popular urban fishing site and the property belongs to ODFW. The barrier cable around north side of Junction City Pond and the west side of the parking lot was recently stolen. The R&E funds will be used to replace the missing safety cable with more aesthetically pleasing, natural boulders (procurement and placement by contractor) that will keep cars, etc. from rolling into the pond, while also providing more access points to the pond than a new barrier cable would. An additional $145 is being requested to provide signage at the site about fishing regulations and general park rules.

Board discussion: The Board recommended full funding for the project and requested that the R&E logo be included on the sign. One Board member asked if anything had been done to keep the trash cleaned up at this park. The applicant replied, yes, a little bit, but there are a few bad apples who continue to litter there.

Project Number:	09-302
Project Title:	Umpqua Fish District Electrofishing Boat
Project Type:	Miscellaneous (Enhancement)/ Monitoring
Sponsor:	ODFW – Umpqua Watershed District Office
Sport/Commercial:	Sport
Enhancement/Restoration:	Enhancement
Funds Requested:	$57,450
Total Project Cost:	$95,574

Match:

Umpqua Fish Derby Grant – Cash	$4,030
Diamond Lake donation acct - Cash	$23,893
ODFW In-Kind	$10,200

Description:
This request is to purchase an outfitted Smith-Root electrofishing boat for the Umpqua Fish District to use. Primarily, this boat would be used to a) remove invasive fish from Diamond Lake or other lakes, b) monitor and improve angling opportunities at district lakes, and c) conduct warmwater monitoring on the North Umpqua, South Umpqua, Mainstem Umpqua and Smith River. If needed, this boat could be loaned to other fish districts for use. R&E funds will be used to pay for a majority (85%) of the electrofishing boat purchase including a GPP unit.

Board discussion: Jack Glass had questions about why they chose to order the boat from Smith-Root. The applicant said that they are basically the only company who make these electrofishing boats.

Project Number:	09-303
Project Title:	NCWD Fisheries Sampling Equipment
Project Type:	Education / Monitoring
Sponsor:	ODFW – North Coast Watershed District
Sport/Commercial:	Sport
Enhancement/Restoration:	Enhancement
Funds Requested:	$12,154
Total Project Cost:	$15,154

Match:

ODFW In-kind	$3,000

Description:
The ODFW Mid-Coast District is in need of new and improved equipment used for fish monitoring, sample collection, management and education. The equipment will be used to: 1) monitor spawning Chinook salmon and winter steelhead; 2) identify fish use as necessary to implement the Oregon Forest Practices Act (FPA); 3) determine fish resources associated with land use activities; 4) capture fish for research purposes such as genetic or pathology assessment; 5) capture fish to remove them from dewatered stream sections during construction activities; 6) improve educational opportunities for local youth and volunteers by involving them in ODFW fishery and aquatic education activities. The new equipment will assist ODFW in managing and protecting coastal fisheries and associated habitat and in recruiting future sport anglers and outdoor enthusiasts. R&E funds will be used to purchase a canoe trailer, an electroshocker, 10 pairs of hip boots, and 2 mad river canoes.

Board discussion: The Board recommended that the applicant look into the use of pontoon rafts with flooring as an alternative to canoes, because they might be easier to maneuver and stand up in. But one member mentioned that those might be better in some aspects though they are not nearly as durable and long-lasting as canoes. Gary Soderstrom asked how you can get a decent pair of hip boots for $40. The applicant said that they are kids' hip boots, and they are easy to patch up if they rip. Bob Bumstead asked if the canoes can be transported in a vehicle or if they really need the canoe trailer. The applicant replied that it's better to use a trailer for several reasons.

Project Number:	09-304
Project Title:	Wallowa District Forest Pond Signs
Project Type:	Access
Sponsor:	ODFW – Enterprise Field Office
Sport/Commercial:	Sport
Enhancement/Restoration:	Enhancement
Funds Requested:	$3,200
Total Project Cost:	$5,200

Match:

Wallowa-Whitman Natl. Forest	
In-kind	$1,500
ODFW In-kind	$500

Description:
This project will make fishing opportunities easier to find and therefore improve fishing access in the Wallowa-Whitman National Forest (WWNF). This project proposes to install signs at four pond locations in the WWNF to direct users from major forest roads to the pond locations. Signs with a 'fishing opportunity' symbol and the pond name will be added to main forest service road signs and will be visible from both directions. On the side roads, signs with a 'fishing opportunity' symbol and a directional arrow leading to the pond will be added. R&E funds will be used to purchase 4 signs plus installation materials (and reserve signage to be used when/if signs become damaged or stolen).

Board discussion: Lonnie Johnson asked if they would be able to order and purchase these by June 30th. The applicant said, yes, they will be easy to order. Dixie Boley agreed that it would be worth giving them another $700 for the purchase of reserve signage.

Project Number:	09-306
Project Title:	Field Computers For Data Collection and Navigation
Project Type:	Monitoring
Sponsor:	ODFW – Springfield Field Office
Sport/Commercial:	Sport
Enhancement/Restoration:	Enhancement
Funds Requested:	$13,541
Total Project Cost:	$13,541
Match:	$0

Description:
District fish management activities are extremely varied and time consuming. The ability to collect, transfer and analyze data quickly and efficiently is an important component of the work. Newer technology available in certain computers can provide district biologists with field-tough data collection tools that include Global Positioning and Geographic Information Systems (GPS and GIS). This proposal seeks to purchase two tablet computers with an IP67 rating capable of withstanding the water, dust and bumps associated with the field environment (plus GPS receiver, office docking station, 2 MS Office Pro software packages, 2 field charger units, 2 extra batteries and 2 ArcGIS software packages). The units will be used by staff at the Corvallis and Springfield offices of the South Willamette Watershed District. An added benefit to purchasing these units will be the ability to use them for navigation of the helicopter during high lake stocking.

Board discussion: Bob Bumstead agreed that this could be a great pilot project for ODFW to find out just how well these field computers work and how much they increase work efficiency (and whether they are more than worth the cost).