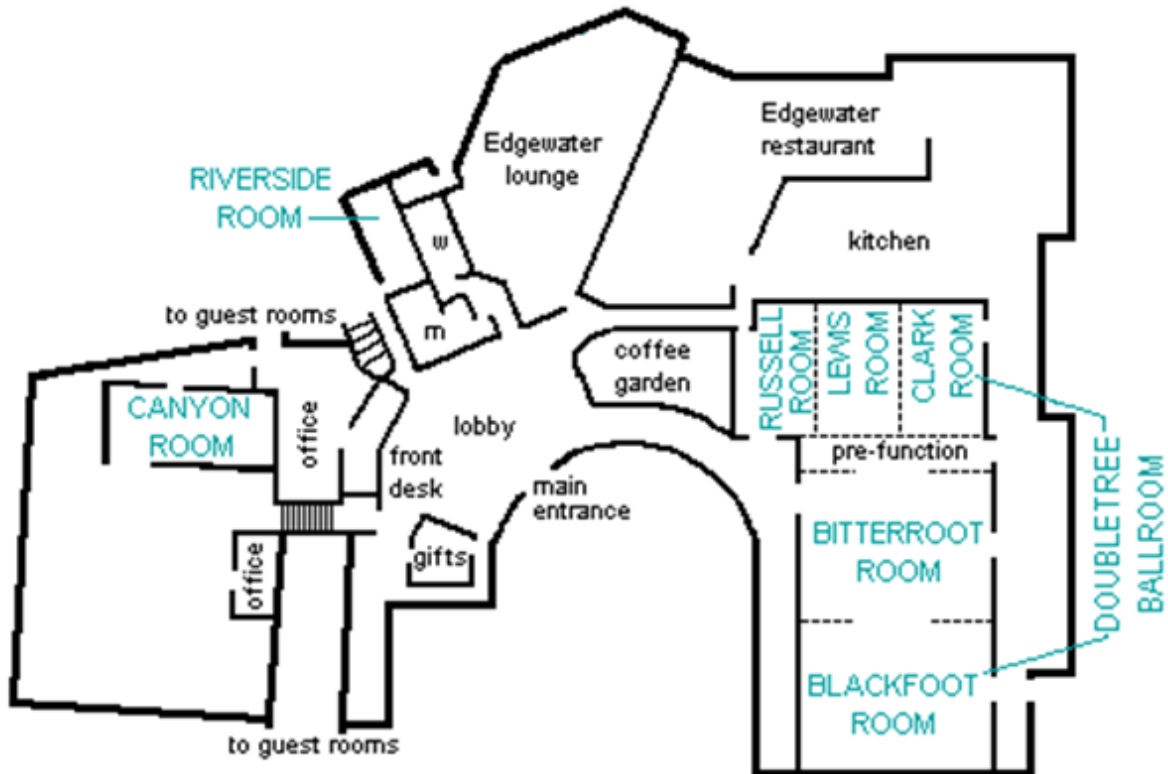


# **2013 Pacific Northwest Fish Screening and Passage Workshop**



**Missoula, Montana  
September 17—19, 2013**

## DOUBLETREE HOTEL MISSOULA / EDGEWATER - LOBBY LEVEL



### Eateries within walking distance of Double Tree:

Finn and Porter – in motel

Tom Dooleys Gourmet Hot Dogs – 744 East Broadway Street

Five Guys Burgers and Fries – 820 East Broadway

Press Box – 835 East Broadway

Pizza Hut, Burger King, McDonalds, and Taco Bell are all located on East Broadway near motel

Tons of eateries can be found going east six blocks to Higgins Avenue

### Sample of eatery/drinking establishments recommended by local yokels:

Iron Horse Brew Pub – 501 North Higgins Avenue

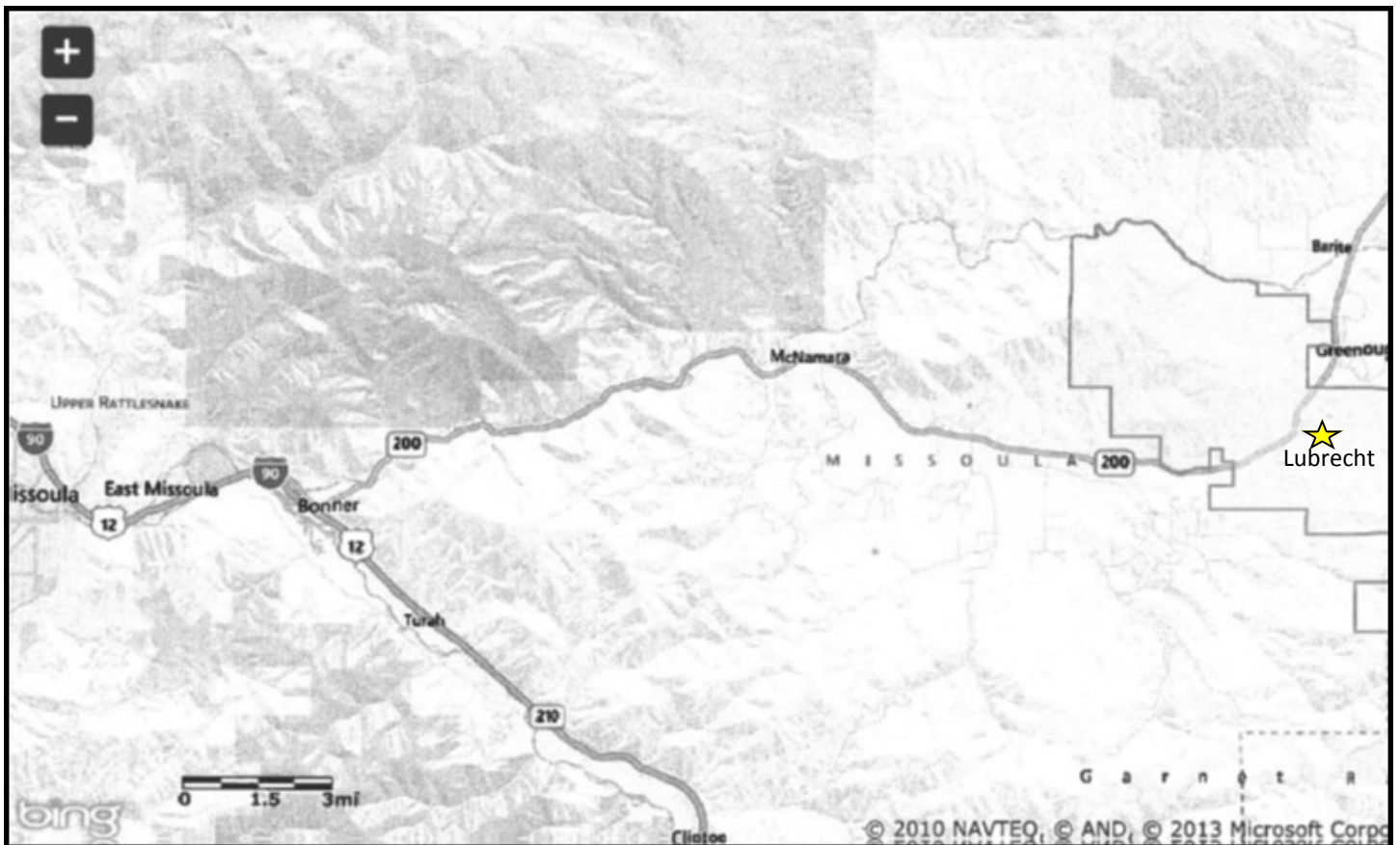
McKenzie River Pizza – 2 locations, 137 W Front Street and 5210 Grant Creek Road

Ciao Mambo – 541 South Higgins

Johnny Carinos – 3630 North Reserve

Mustard Seed – 2901 Brooks Street

## BBQ Social—Directions to Lubrecht Experimental Forest Pavilion



- From Missoula on Interstate 90 proceed east for approximately 5 miles and take Exit 109 (Bonner/Highway 200 Exit).
- Proceed on Highway 200 through Mill Town and Bonner and past the small town of Potomac (mile marker 16).
- Continue past mile marker 22 and the Garnet Range Road. **Do not turn on the Garnet Range Road.**
- Continue past the Garnet Range Road for about 0.2 mile and look for the entrance sign to the Lubrecht Forest Headquarters and Conference Center **on the right side of the highway.**
- A few hundred feet beyond the timbered arch entry way, the road forks at the log cabin. This road circles the headquarters area.
- Take a right and you will come to a large parking lot for the pavilion.

# 2013 Pacific Northwest Fish Screening and Passage Workshop

## Monday, September 16

- 3:00 PM to 5:00 PM** Registration (Prefunction Room)
- 6:00 PM to 8:00 PM** Registration Social (Russell/Lewis Room)

## Tuesday, September 17

- 7:30 AM to 8:30 AM** Registration (Prefunction Room)

### **OPENING REMARKS AND STATE UPDATES (Blackfoot/Bitterroot Room)**

- 8:30 AM** Housekeeping and review of agenda
- 8:40 AM** *Opening Remarks* - Pat Saffel, Regional Fisheries Manager, Montana Fish, Wildlife and Parks
- 9:00 AM** *Washington Update* – Timothy Burns, Washington Department of Fish and Wildlife
- 9:15 AM** *Oregon Update* – Pete Baki, Oregon Department of Fish and Wildlife
- 9:30 AM** *Idaho Update* – Paddy Murphy, Idaho Department of Fish and Game
- 9:45 AM** *Montana Update* – Mark Lere, Montana Department of Fish, Wildlife and Parks
- 10:10 AM** *Break*

- CONTRIBUTED PAPERS** Moderator: Alan Ritchey, Oregon Department of Fish and Wildlife

- 10:30 AM** *The Challenges of Implementing Fish Screens on Pressurized Irrigation Systems: A Biological Perspective* – Paddy Murphy, Idaho Department of Fish and Game
- 10:45 AM** *The Challenges of Implementing Fish Screens on Pressurized Irrigation Systems: An Engineering Perspective* – Jared Bragg, PE, Idaho Department of Fish and Game
- 11:00 AM** *The Challenges of Implementing Fish Screens on Pressurized Irrigation Systems: A Fabrication Perspective* – Jim Hardy, Idaho Department of Fish and Game
- 11:15 AM** *Using Fish Screens and Siphons to Reconnect a Migratory Westslope Cutthroat Trout Population: Did this Work?* – Chris Clancy, Montana Fish, Wildlife and Parks
- 11:35 AM** *Modifying Existing Structures to Install New Fish Screens* – Robert Edwards, Oregon Department of Fish and Wildlife
- 11:55 AM** **Questions and Discussion**

**12:05 AM – 1:30 PM**

**Lunch** (on your own)

**CONTRIBUTED PAPERS**

Moderator: Mark McNearney, Montana Fish, Wildlife and Parks

**1:30 PM**

***Horizontal Screens: Project Design, Implementation, and Operation*** – Les Perkins, FCA Solutions, Hood River, OR

**1:50 PM**

***Proposed Replacement of Roza Screens*** – Mark Briggs, US Bureau of Reclamation, Yakima, WA

**2:10 PM**

***Utilizing Technology in Fish Screening and Passage*** – Ray Gilmour, Washington Department of Fish and Wildlife

**2:30 PM**

***Peoples Irrigation District & ODFW Cost-share Program, Look before You Leap*** – Martin Olson, Oregon Department of Fish and Wildlife

**2:50 PM**

**Questions and Discussions**

**3:00 PM**

**Break**

**3:20 PM to 5:00 PM**

**FSOC meeting** (Canyon Room)

**3:10 PM to 5:00 PM**

**Trade Show** (Blackfoot/Bitterroot Room)

**6:00 PM to 9:00 PM**

**BBQ Dinner** (Lubrecht Experimental Forest, 38689 Hwy 200 East, Greenough, MT) – see directions in Program – provide your own transportation

**Wednesday, September 18**

**7:45 AM to 8:00 AM**

**Meet in DoubleTree front parking lot** (for those that registered prior to tour quota being filled)

**8:00 AM to 5:00 PM**

**Depart on projects tour** (see project descriptions in Program – lunch provided with registration)

**6:00 PM to 7:30 PM**

**Social** (Russell/Lewis Room)

**TRADE SHOW VENDORS**

**Farmers Conservation Alliance**

**Hendrick Screen Company**

**Hydrolox**

**Morrison-Maierle**

**Pitman Machining**

**Rainier Hydro Solutions**

**River Design Group**

**Fostco**



## SITE TOURS

### Wednesday, September 18, 2013

**7:45 – 8:00 AM**      **Meet in front parking lot of DoubleTree** (Applies to only those that registered prior to tour quota being filled)

**8:00 AM**              **Depart** (Lunch provided with registration)

### Vans 1, 2 and 3

**9:30 – 10:10 AM**      ***Tin Cup Creek Fish Screen*** – Tex Marsolek, Tincup County Water and Sewer District; and Pitman Machining, Seeley Lake, MT

**10:40 – 11:20 AM**      ***Hedge Canal Fish Screen*** – Molly Scorpik, P.E., Morrison Maierle, Inc. or Yakima screen shop representative

**11:50 – 12:50 PM**      **Box Lunch at River Park in Hamilton**

**1:05 – 1:45 PM**        ***Skalkaho Creek Fish Screens*** – Leslie Nyce, Montana Fish, Wildlife and Parks

**2:00 – 2:40 PM**        ***Republican Canal Siphon*** – Mark Lere, Montana Fish, Wildlife and Parks

**3:00 PM**                **Restroom Break** – River Park in Hamilton

**4:10 – 4:45 PM**        ***Milltown Dam Overlook*** – Doug Martin, Montana Natural Resource Damage Program

**5:00 PM**                **Arrive at DoubleTree**

### Vans 4, 5 and 6

**9:10 – 9:50 AM**        ***Hedge Canal Fish Screen*** – Molly Scorpik, P.E., Morrison Maierle, Inc. or Yakima screen shop representative

**10:20 – 11:00 AM**      ***Tin Cup Creek Fish Screen*** – Tex Marsolek, Tincup County Water and Sewer District; and Pitman Machining, Seeley Lake, MT

**11:40 – 12:50 PM**      **Box lunch at River Park in Hamilton**

**1:10 – 1:50 PM**        ***Republican Siphon*** – Mark McNearney, P.E., Montana Fish, Wildlife and Parks

**2:05 – 2:45 PM**        ***Skalkaho Creek Fish Screens*** – Chris Clancy, Montana Fish, Wildlife and Parks

**3:00 PM**                **Restroom Break** – Blodgett Park

**4:10 – 4:45 PM**        ***Milltown Dam Overlook*** – Doug Martin, Natural Resource Damage Program, Montana Department of Justice

**5:00 PM**                **Arrive at DoubleTree**

## PROJECT SITE DESCRIPTIONS

### Tin Cup Creek Fish Screen

Tin Cup Creek is an important fluvial westslope cutthroat spawning stream and also supports populations of brook trout, rainbow trout and bull trout. An M.S. study conducted in 2005 and 2006 estimated that about 70% of all fish entrained into the numerous diversions found on the stream were lost to this ditch. Westslope cutthroat trout were the most common species being entrained. As part of their ditch easement, the Tin Cup County Water and/or Sewer District was required by the U.S. Forest Service to install a fish screen on this ditch to prevent entrainment of bull trout. The screen design flow is 30 cubic feet per second. The size of the screen opening is 5/32 inch (exceeds NMFS criteria). The screen was completed in 2013. Cost: approximately \$72,250.00.

### Hedge Canal Fish Screen

The Hedge Canal diverts about 140 cubic feet per second from the Bitterroot River. Although not considered a screening priority by the state, the ditch was known to entrain brown trout, rainbow trout, westslope cutthroat trout and a few bull trout. The Daly Ditches Irrigation District was required to install a fish screen into this canal as part of receiving federal funds to repair their failing diversion dam. The screen and associated components were built by Washington's Yakima screen shop. The screen was designed to be NMFS compliant and was completed in 2012. Cost: approximately \$415,000.00.

### Skalkaho Creek Fish Screens

Skalkaho Creek is an important tributary to the Bitterroot River that supports brown trout, brook trout, rainbow trout, westslope cutthroat trout and a resident population of bull trout. A remnant fluvial population of westslope cutthroat trout also has been identified. This project involved installing screens in three of the major diversions on the stream. We're visiting the lower two screens. The Ward canal diverts about 35 cubic feet per second on the right side of the stream. The Hughes canal diverts about 15 cubic feet per second on the left side of the stream. The screens were designed to be NMFS compliant, but approach velocities on the Hughes screen commonly exceed criteria. The screens were completed in 2004. Cost: approximately \$64,000 for Ward screen and \$25,000 for the Hughes screen.

### Republican Canal Siphon

The Republican Canal diverts approximately 140 cubic feet per second from the Bitterroot River and carries this water across Skalkaho Creek. Prior to the siphon installation, flow in the canal merged with Skalkaho Creek and then was allocated either down channel or down canal. Fish migrating down Skalkaho Creek became readily entrained. The siphon consists of a 108-foot HDPE pipe that's 63 inches in diameter. A nearly identical siphon also was installed on the Hedge Canal located about one mile upstream. Cost: approximately \$320,000.

### Milltown Dam Removal

Milltown Dam is a super fund site. Built in 1908, the reservoir became filled with toxic sediment (6.6 million tons of metal laden mine waste from the Butte – Anaconda mine complex) after the flood of record occurred the same year the dam was completed. The contaminated sediment, laden with arsenic and copper, poisoned local wells for years and killed off fish and other aquatic life during high flows and ice jams. The dam also blocked all fish migration into the upper Clark Fork River and the Blackfoot River. The dam, following the extensive removal of contaminated sediment, was breached in 2009. River channel restoration work was completed in 2012. Cost: \$120 million???



## ACTIVITIES IN THE MISSOULA AREA

**Weather:** Normal high-72 F Normal Low-41 F Average monthly precipitation – 1 inch

**Sunrise/sunset for September 17th:** 7:16 AM / 7:45 PM

### **FISHING**

Possibilities include the Blackfoot River, Bitterroot River, Clark Fork River and Rock Creek

Non-resident 2-day fishing license (\$10 conservation license plus \$15 2-day non-resident fishing license = \$25 total)

Sportsman's Warehouse  
2323 N Reserve  
523-9000

Grizzly Hackle International  
215 W Font Street  
721-8996

Bob Ward & Sons  
3015 Paxson Street  
728-3220

Missoulian Angler Fly Shop  
401 S Orange Street  
728-7766

Kessels Four Rivers Fly Shop  
926 E Broadway  
721-6141

King Fisher  
1522 S Reserve  
721-4796

### **GOLF**

Larchmont  
3200 Fort Missoula Road  
721-4416

Canyon River  
1268 Bandmann Trail  
721-0222

University of Montana  
515 South Ave East  
728-8629

Linda Vista  
4915 Lower Miller Creek Road  
251-3655

### **WHITEWATER RAFTING**

Float through Alberton Gorge of the Clark Fork River (note that flows likely will be low)

Montana River Guides  
722-7238

Western Waters  
822-8282

Zoo Town Surfers  
546-0370

### **SHOPPING**

Southgate Mall  
2901 Brooks Street

The Fish Screen Oversight Committee

***2013 Pacific Northwest Fish Screening and Passage Workshop***

Is made possible in large part by the generous contributions from our sponsors.

***Thank you!***

