

**Meeting Notes
Lewis River License Implementation
Aquatic Coordination Committee (ACC) Meeting
May 10, 2012
Conference Call**

ACC Participants Present (12)

Shannon Wills, Cowlitz Indian Tribe
 Diana M. Gritten-MacDonald, Cowlitz PUD
 Jim Malinowski, Fish First
 Adam Haspiel, USDA Forest Service
 David Hu, USDA Forest Service
 Eli Asher, Lower Columbia River Fish Recovery Board
 Beth Bendickson, PacifiCorp Energy
 Erik Lesko, PacifiCorp Energy
 Frank Shrier, PacifiCorp Energy
 Pat Frazier, WDFW
 Eric Kinne, WDFW
 Peggy Miller, WDFW

Calendar:

June 14, 2012	ACC Meeting	Merwin Hydro
July 12, 2012	ACC Meeting	Merwin Hydro

Assignments from January 12, 2012 meeting		
Coordinate a summer tour of the Swift Downstream Collector Construction for the Cowlitz tribal council. (One month delay was recommended. Shannon Wills to confirm with Tribe leadership). <i>June 2012: Frank Shrier added that it might be easier, and better for access, to wait until the trestle has been floated down.</i>		Pending
Assignments from February 9, 2012 meeting		
Set up meeting to discuss how to release fish at the Release Pond site until pond is constructed.		Pending
Discuss Crab Creek Acclimation Pond alternatives at the next ACC meeting.		Pending
Merwin Trap: Review Settlement Agreement for clarification on Coho production, to get to the required 1.9 million.		Completed 5/10/2012
Assignments from March 8, 2012 meeting		Status
Lesko – SA 8.4, Coho Production Targets: PacifiCorp will bring back more detail regarding impact on the 2013 budget for WDFW and PacifiCorp to review and discuss at the next ACC meeting on April 12, 2012.		Completed 4/20/12
Murdock - indicated that she will email literature to Shrier regarding Yakama Nation acclimation reports. <i>May 2012: Shrier is still awaiting</i>		Pending

<i>information.</i>	
Kinne - will get some information for the ACC on the White River acclimation and any other information his agency might have.	Pending

Assignments from April 12, 2012 meeting	Status
Shrier/Lesko: Interpretation/Discussion of SA 8.4.1 (1.9 million Coho production). PacifiCorp will respond to the ACC on or before Friday, April 27, 2012.	Completed 4/20/12 (Attachment A) Approved by ACC on 5/10/12

Opening, Review of Agenda and Meeting Notes

Frank Shrier (PacifiCorp) called the meeting to order @ 9:10 a.m. The ACC reviewed the agenda, and added one new topic: Merwin Trap Operation. The agenda was then accepted at 9:15 a.m. The April 12, 2012 meeting notes were reviewed and accepted to include the changes submitted via email by Shrier at 9:17 a.m.

Kim McCune (PacifiCorp) will finalize the meeting notes for posting to the Lewis River website.

Study Updates

Acclimation Pond Site (Crab Creek) –

A site visit was conducted on April 30, 2012 and the ACC was sent the trip report and photos via email of the sites toured (see [Attachment B](#)). Shrier asked Bob Rose (Yakama Nation) to give an overview of the site visits. Rose mentioned that Quartz Creek was not visited due to the weather. He said if there is any speculation on this site, we could go back up, but on a warm, sunny, dry day. The general consensus is even if the ACC goes through the process it could take a year, which should not be the limiting factor. His observations on Crab Creek is that with the water so high in the main river, structures would have to be pretty significant. He is not sure this would be a good site. If we are going to be capturing water from this site, or next to it, given the small amount of water relative to mainstem flows, would it acclimate fish to the Crab creek area? He thinks it wouldn't, as it's only a trickle of water.

Adam Haspiel (USFS) communicated that he took the Deputy District director along with wildlife folks to view a potential site at the Lower Falls Campground to see if there would be anything that would throw a wrench right away. No issues emerged. The 90480 road would be the most desirable location. He asked if there were more disturbances would the Deputy or the staff have issues and there were no big concerns. Rose said a pipe could be run a couple hundred feet from a fish truck to stock the Chinook. There is an option to use the backwater area, but a portable tank could also be considered; something we can set up/tear down on annual basis, although water would have to be pumped to a tank. The 90480 site is viable, but questions how many fish could be put there. He asked if Adam measured the area. Haspiel said he didn't but there was much lower flow than when the subgroup visited. Adam noted it was shallow, but the surface area might be adequate.

Eric Kinne (WDFW) said that depth is a concern. High flows that aren't always going to be present.

Rose asked if anyone had talked about moving fill from the road entrance. There are boulders too that would have to be moved; they are weighing out what would have the least disturbance. Rose asked if they were looking at 90480 and Lower River Falls. Haspiel said yes; the temporary pond would sit right where recreationist could get too. The steep falls didn't make much sense.

Shrier asked Kinne to weigh in. Kinne preferred the one at the campsite. It has the capacity for size of pond needed. Shrier said the Lower Falls site looked the most promising and that the portable pond would look similar to the Foster Creek pond shown in the Acclimation Pond Plan.

Haspiel indicated that USFS people don't want to see any lasting effects from excavating for a tank. Shrier said he didn't see a need to excavate. Shrier's preference is for Lower Falls because it would have the least amount of impact and plenty of room for tank. Haspiel asked for approx. dimension of tank. Shrier said it was approximately 4 ft wide/5ft high/60ft long. Haspiel said it would have to have a lockable screen on top, for safety. There is a concern for kids drowning if they fell in.

Shrier said it seems that the best way is to let fish go right to the river, or truck them down. He also said that if this site keeps rising high in possibility; perhaps make the release at Lower Falls this year, and tag, so we know it would work. Haspiel thought this would be a good idea. Shrier also said we could wait until this time of year, because survival rates going over the falls would be higher because there would be more water. He also added that a lot of design money was wasted on Crab creek. He wants to make sure we have everyone on board (especially USFS staff) if we are going to go through another design process. Shannon Wills (Cowlitz Indian Tribe) agrees! Shrier says we'll have to go through another NEPA process; so it wouldn't be constructed until next summer anyway. Haspiel agreed that we need to flush it out and that we should have an adaptive management approach; both sites as alternatives so if one fails we could go to the other; it would save a lot of trouble in the NEPA process. Pat Frazier (WDFW) said that if you want to conduct test and release fish above Lower and below we could PIT tag two groups and evaluate survival through juvenile capture facility. Shrier said that in order to be most effective we should not push fish in until screw trap and downstream collector are in operation (after December 2012).

Shrier suggested the ACC should think about the alternatives and have a discussion next month at the June ACC meeting.

Kinne said survival over the falls is one piece but we should also tag some fish below the falls (Crab Creek) to evaluate survival for both groups.

Frazier expressed that one of the questions is if there any spring access problems in campground that wouldn't allow us to get fish there. Shrier responded that there could be and it varies from year-to-year. We would have to adjust release times to when the site becomes accessible.

Woodland Release Ponds –

PacifiCorp has nearly completed biological assessment (BA) which will go out to NMFS. There is some additional work remaining to evaluate subsurface water quality if an infiltration gallery were to be the preferred option. The water quality analysis is due to high iron concerns. Don't want to go down that path if the iron is too high. In BA, staying on path for using proposed pump with NMFS screen criteria for fry, as with the other pump rebuild at Lewis Hatchery. A

take-analysis was done even though there is no take prohibition. There will be impacts, but the BA finds that the pumps will adversely affect the Eulachon but will not jeopardize the population. NMFS will have to decide if it makes sense to them.

Frazier wanted to clarify that “PacifiCorp is likely to adversely affect, but not jeopardize.” Shrier confirmed this.

Hatchery Upgrades

Lewis River Hatchery – Upstream Intake Screen Repair -

Permitting is on track for repairs on Upper Intake screen; procurement could add some delay but we are working towards a start date of August 1, 2012.

Lewis River Hatchery – Downstream Intake Screen

Project has been delayed due to permitting issues related to Eulachon coverage. We anticipate starting the project in the summer of 2013; however, if Eulachon coverage is not provided in time the project could be delayed further.

Speelyai Hatchery, Pond 14 – This project will be delayed until next year.

Speelyai Hatchery, Water Intake Structure Repair - This project will be delayed until next year

Merwin Ozone Upgrades -

This project needs to use internal staff to upgrade the Programmable Logic Control (PLC). Because of this, we need to design the type of PLC and work with hatchery staff to determine alarming and metering readouts on the computer interface. Our schedule includes purchasing equipment this year and scoping the work with hatchery staff and implementing in 2013.

Merwin Rearing Ponds –

Remaining two ponds scheduled for completion after the fishing derby is completed at the hatchery this July 2012.

Hatchery and Supplementation Program –

66 wild winter steelhead have been transported upstream; 39 of which have radio tags. Radio tracking has shown that a majority of the fish are residing in the Pine Creek and Muddy River area; however several fish have been detected in Drift Creek. During spill last week we detected at least 6 fish that had passed through the spillway. We are finishing up in river steelhead collection efforts. Current egg take is approximately 72,000 (target is 96,000)

2012 Bull Trout Plan –

Netting will start next week; monitoring tagging effort not started yet.

Merwin Upstream Construction Status –

Construction is moving along and we’re going to start moving hatchery to new area. Everything else is moving along. The walls are going up in the sorting facility. Still on estimated date of substantial completion in December 2013. Wanted to make sure everyone knows it will be pushed out.

Merwin Trap Operation –

Kinne stated there is a big concern regarding Spring Chinook in the Merwin trap. We haven't been in there since April 27, 2012. There are other fish in trap that we can't get out as well. The river is at 6,000 cfs; need to get to 5,500 cfs to trap. Looking for help in explaining why the river can't be lowered the extra 500 cfs. Shrier sent an e-mail this morning to the ACC explaining the situation. PacifiCorp is looking at scheduling trap access flows at the first possible opportunity. Kinne asked if there is a reason why we can stay at the higher flow Merwin. Shrier said that there is a glut of power on grid and they don't want any more – there is no place to put it. At Merwin we have to generate because of the minimum flow requirement. To the company, it cost them to run turbines because there is a negative market. But we have to run them. Spilling to make a bigger hole is not a good option at Merwin because of the construction activities in the tailrace. We can't "turn things on and off at will." It's not a new issue; we struggle every year to find opportunities to get into the trap. Kinne asked how many feet do we need to get to 5,500. Shrier replied the operation is driven by ramp rates and inflow and the ability to hold back flows from a rapid snowmelt. We are currently spilling at Swift and Yale to maintain a hole for high runoff. PacifiCorp has to work a lot of different angles to keep a fine balance.

Jim Malinowski (Fish First) said that he understands the off-peak issue; but is it true during the day? Shrier said Malinowski was getting beyond his knowledge of the grid but added the wind component throws a new twist to the mix. Malinowski thinks it isn't a problem during the day.

Diana MacDonald (Cowlitz PUD) asked if we were going to spill at Swift tomorrow. She's taking some folks on a tour and was curious.

Peggy Miller (WDFW) doesn't think PacifiCorp is being belligerent as Shrier's email indicated. They realize everyone is trying to find a solution. It's just working together to find a solution; prioritizing; where Settlement Agreement comes in. Dam safety is #1.

Shrier expressed that he is frustrated; realized there would be issues running the old trap every day even though it's in the Settlement Agreement. The situation changes every day and we are trying to find solutions.

Frazier following up to Miller's comment said he understands we can't get into the trap; everyone has priorities. Drives concerns; but it helps when we understand why we can't fill the hole. When PacifiCorp runs the grid, do they say we will only run at X megawatts or .is there an option; is it a recommendation or is it economics? Malinowski said where there is no place to put the power, and wind comes up; overloading power lines is a real capacity issue; it will shut the system down.

MacDonald mentioned that it's potentially going to become more than just an offpeak problem. Columbia is having same issues; snowmelt...too much power and too much water.

Frazier thanked Malinowski and MacDonald for providing power grid explanations.

Swift Downstream Collector Construction Status –

The Swift Downstream Collector is floating and anchored off Swift boat area. Need to take small boat to get equipment out there. Contract is looking to moving it into the swim area; it might be deeper. Everything is progressing. Tanks in sorting area are being rigged up. Computer room and break room are dry walled in. Getting ready to install the HVAC for those rooms. Everything is being run off generator right now. But they are following criteria for

fueling. Any questions? Kinne asked if we know when repairs to screens will be done? Shrier saw areas he was talking about – he'll be out there tomorrow. Screen area is in the dry; and this is where people are accessing the FSC. There is a stairway that climbs up through screen area so it makes it easy to see the screen issues that need attention. It will be six to eight weeks until the FSC is moved to trestle; working on it where it sits. Kinne asked Shrier to let him know when repairs would be done.

Future Fish Passage Facilities New Information Status –

Procurement is working with potential contract. They are very close; Shrier will let everyone know when this happens and will talk about study plans.

Miller asked if this was normal for contracts to drag on this long. Shrier said yes; it does take a long time and this is a long contract. Big contracts can take up to 6 months or more.

Yale Spillway Barrier Net –

Still planning to put it in, in the fall. Need FERC approval. Bull trout critical habitat consultation w/NFMS currently going on.

Eli Asher (LCFRB) noted that he has accepted another job with the Cowlitz Indian Tribe, and will not be attending any more ACC meetings as an official member. He may, however, attend in the future as an interested party. They are currently looking for a replacement. Bernadette or Jeff will be attending next meeting.

<10:12 a.m. meeting adjourned >

Agenda items for June 14, 2012

- Review May 10, 2012 Meeting Notes
- Study/Work Product Updates
- Acclimation Pond Discussion

Public Comment

None

Next Scheduled Meetings

June 14, 2012	July 12, 2012
Merwin Hydro Control Center	Merwin Hydro Control Center
Ariel, WA	Ariel, WA
9:00 a.m. – Noon	9:00 a.m. – Noon

Meeting Handouts & Attachments (sent via e-mail)

- Notes from 4/12/12
- Agenda for 5/10/12
- [Attachment A](#) – Email from PacifiCorp, Coho Production Schedule dated 4/20/12
- [Attachment B](#) - Acclimation Pond Agenda, Summary, and Photos 4/30/12

McCune, Kimberly

From: McCune, Kimberly
Sent: Friday, April 20, 2012 9:04 AM
To: 'Adam Haspiel (ahaspiel@fs.fed.us)'; 'Bart Stepp'; 'Bill Bakke'; 'Bob Rose (rosb@yakamafish-nsn.gov)'; 'Bryan Nordlund'; 'Craig Olds (colds@cowlitz.org)'; 'David Hu'; 'Diana MacDonald'; Doyle, Jeremiah; 'Eli Asher (easher@lcfwb.gen.wa.us)'; 'Eric Kinne'; 'Eychaner, Jim (RCO)'; 'Jeff Breckel'; 'Jim Malinowski'; 'Kathryn Miller (kmiller@tu.org)'; Lesko, Erik; 'lindsay_wright@fws.gov'; 'LouEllyn Jones'; 'Mariah Stoll-Smith Reese (M.Reese@tds.net)'; 'Maynard, Chris (ECY)'; 'Melody Tereski'; 'Michelle Day'; Olson, Todd; 'Pat Frazier (frazipaf@dfw.wa.gov)'; 'Patrick Lee'; 'Paul Pearce'; 'peggy.miller@dfw.wa.gov'; 'Rhidian Morgan (rmmorgan@plasnewydd.org)'; 'Ruth Tracy'; 'Shannon Wills'; Shrier, Frank; 'Taylor Aalvik (taalvik@cowlitz.org)'
Subject: RE: Lewis River SA 8.4 - Coho production schedule - Lewis River Hatchery

Please see Erik Lesko's email below:

ACC Members:

We have reviewed Section 8 of the Lewis River Settlement Agreement (see below) as well as the Hatchery and Supplementation Plan. While we continue to believe the production schedule for coho can be interpreted two ways, PacifiCorp will defer to the Agencies interpretation as to the year in which coho are released as smolts from the hatchery into the Lewis River.

Based on this interpretation, PacifiCorp will begin taking additional broodstock and eggs for the production of an additional 100,000 coho in the fall of 2012. Releases from this additional egg take will be released as smolts in the spring of 2014 (total release target of 1.9 million). In the fall of 2013, PacifiCorp will take additional broodstock and eggs for the production of an additional 100,000 coho. These smolts will be released in spring of 2015. This schedule will bring total production of coho smolts to 2 million in Year 6 of the Hatchery and Supplementation Plan as conveyed in Table 8.4 of the Lewis River Settlement Agreement and Table ES-3 of the Hatchery and Supplementation Plan.

Erik Lesko

Lead Aquatic Biologist
PacifiCorp Energy
Office (503) 813-6624
Mobile (503) 412-8401

8.4 *Anadromous Fish Hatchery Juvenile Production.* Each year, the Licensees shall provide for the production of spring Chinook salmon smolts, steelhead smolts, and coho salmon smolts at levels specified below ("Juvenile Production"). The Licensees shall use the Juvenile Production to provide (1) juveniles for the supplementation program under Section 8.5, and (2) juveniles for harvest opportunities. To the extent that there are not sufficient juveniles for the Hatchery and Supplementation Program and to ensure that enough adults will return to ensure adequate broodstock for the Hatchery and Supplementation Program in future years, the Licensees shall, in Consultation with the ACC and subject to the approval of the Services, determine how best to allocate juveniles.

8.4.1 Juvenile Production Targets. The Licensees shall provide for the implementation of the following Juvenile Production targets (“Juvenile Production Targets”) when the Hatchery and Supplementation Program commences. The following Juvenile Production Targets shall be used unless and until modified by the Licensees pursuant to Section 8.4.2 as part of the Hatchery and Supplementation Plan in accordance with Section 8.2.5:

Table 8.4 – Juvenile Production Targets

<i>Smolt Production</i>	<i>Spring Chinook</i>	<i>Steelhead</i>	<i>Coho</i>
<i>H&S Plan Years 1 – 3</i>	<i>1.35 million</i>	<i>275,000</i>	<i>1.8 million</i>
<i>H&S Plan Years 4 – 5</i>	<i>1.35 million</i>	<i>275,000</i>	<i>1.9 million</i>
<i>H&S Plan Years 6 – 50</i>	<i>1.35 million</i>	<i>275,000</i>	<i>2.0 million</i>

Acclimation Pond Agenda 4/30/2012

Leave Merwin HCC- 9:15

Stop 1-Curly Creek-10:00

Pros-Open 90 road opened to this point year round

Cons- not very far from Swift Reservoir, steep exit from pond to river, long cross country pipe run.

Stop 2-90480 Decommissioned Road10:15-11:30

Pros- Road gets within 100 feet of the river, Road is rocked and in good shape so would only require minimal effort to open it, Already closed so we can replace the berm with a gate, Old side channel can be used for pond, Out of sight from the 90 road and most tourists activity (might be able to see it from the Lewis River Trail on opposite side of river).

Cons-about ¾ mile off 90 road, snow plowing will be necessary, road may not support a large tanker truck so will have to use smaller 4 wheel drive pick ups.

Stop 3-Crab Creek 11:45-12:15-

Pros- Right off 90 road, good water supply most of year, May be able to tap into several other small creeks and combine water to keep pond full of water.

Cons-Crab Creek does not have enough water by itself to keep pond full in June, In full view of recreationists so Wild and Scenic River act will be of high importance, Might have to pump water from Lewis River into pond during June.

Stop 4- Lower River Falls Campground Lunch Stop-12:30-1:30

Pros- Above bull trout critical habitat, Low spot adjacent to river.

Cons- Above Lower Falls-a natural barrier to salmon, in full view of campground, Lewis River Trail and recreationists, might require a long pipe run visible to recreationists,

Stop 5- Quartz Creek 1:45-2:00

Pros- Near the 90 road

Cons-Above Lower River Falls, Middle and Upper Falls, Quartz Creek has resident fish which could negatively affected by chinook smolts or disease, could require a long pipe run to acquire enough pressure.

Arrive Merwin HCC-3:00

Summary - ACC Acclimation Sub-Committee
Field Evaluation, April 30, 2012

This past Monday, April 30 six members (a subcommittee) of the ACC toured the upper Lewis River watershed to evaluate potential sites for salmonid acclimation. This is in response to some complications that were recently identified with the Crab Creek site, which necessitated a reconsideration of other options. In attendance were Frank Shrier, Adam Haspiel, LouEllyn Jones, Eric Kinne, Jim Byrne and myself, Bob Rose.

Adam provided the group with a tour agenda, including a brief narrative and maps of the sites that we visited. This is attached as Appendix A. Other than persistent rain, this was a good day to visit the sites, as the river flows were pretty high and it helped our understanding of what a site would look like under these conditions - which was not necessarily considered "extreme" flow conditions.

In short, we visited four sites for review: (1) Curly Creek, (2) 90480 Decommissioned Road, (3) Crab Creek, and (4) Lower River Falls Campground. We did not feel the need to visit the Quartz Creek site, due the location (and associated issues that places it lower in priority), it was getting late in the day, and folks were just plain wet. There was excellent discussion at each of the sites focusing on some pros, cons and implementation considerations.

A brief synopsis of these discussions are as follows:

(1) Curly Creek is just too low in the system, and the site is less than "ideal". I do not believe there is much interest from any of the group to move forward with additional evaluation of Curly Creek at this time.

(2) 90480 Decommissioned Road does have an interesting backwater pool associated with a side channel that, with relatively minimal disturbance could be suitable for acclimation. One obstacle is reopening the decommissioned road, and then bringing a truck to an area close to the river. The road bed is in pretty good shape, apparently from significant hardening when active - but it is a bit steep in places. Fish would be "piped" from the truck - approximately 100+/- yards to the acclimation site. The functional area of the acclimation pool is about 2500 - 3000 square feet, so a bit smaller than the envisioned Crab Creek site. Much of this area (30-40%?) has less than 2 feet water depth, at the present flow. This would also be an ideal situation for predators (otters) to stage and feast. I believe there was some interest in considering this site in the future, but clearly, there are issues (both technical and procedural) that will need to be better defined and addressed to make this a viable option.

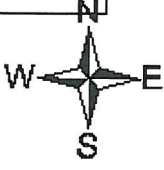
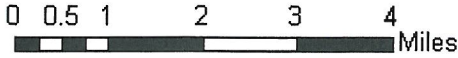
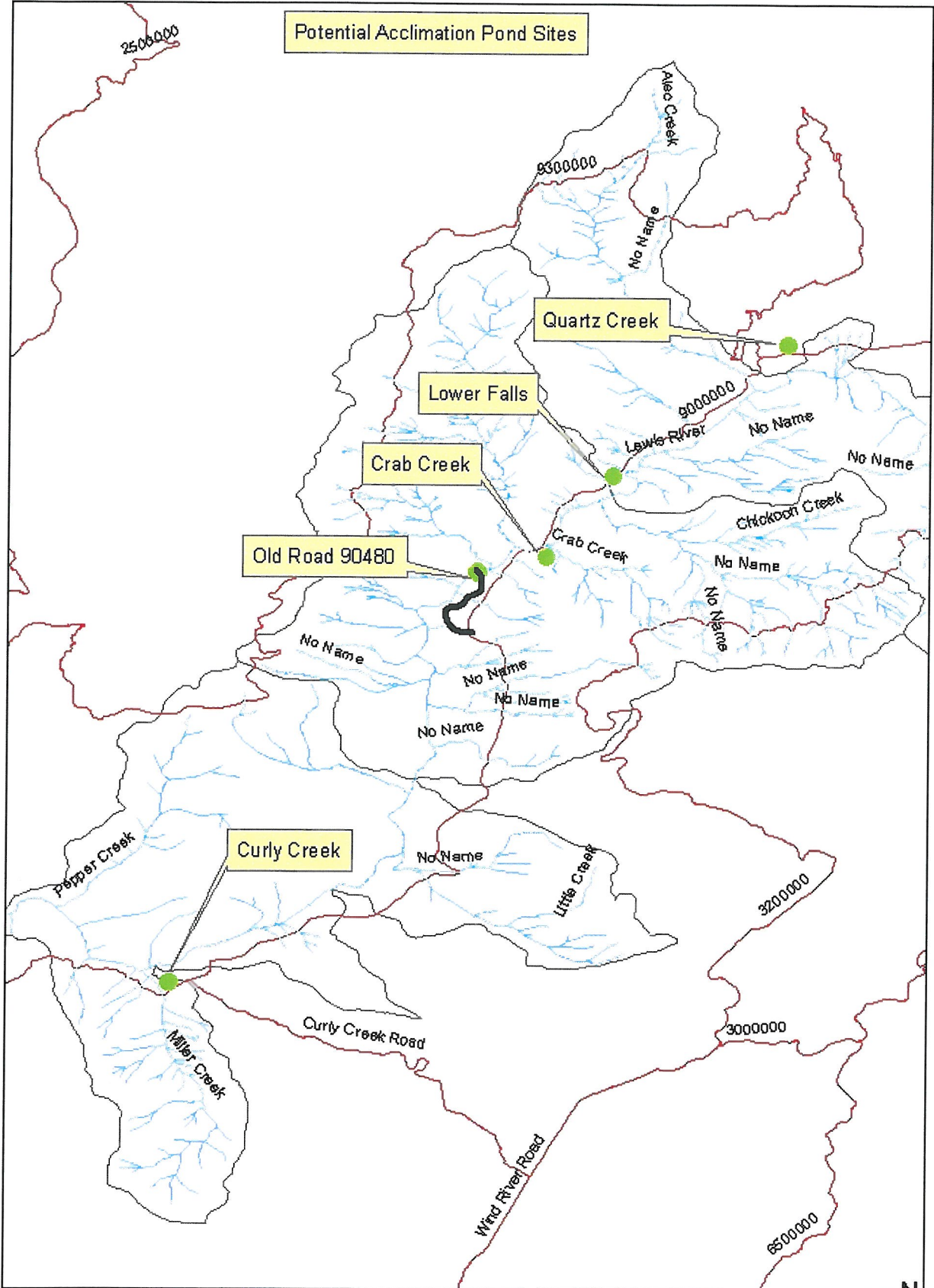
(3) Crab Creek site was reviewed from the bridge, in the pouring rain. There was some discussion that water could be taken from both Crab creek and an ephemeral non-fish-bearing stream just below the bridge to feed the acclimation facility, if it were located on the left-bank, below the bridge. The site is close to the road, and sufficient space likely exists to provide for this facility. Due to the rain, this was not a well vetted discussion. One personal observation that I will offer, if water for acclimation would come only from these two tributaries, and these tributaries contribute <2% (estimated) flow to the Lewis, are we really acclimating the fish to this site?? Don't we really want to use Lewis River water to acclimate to the Lewis River??

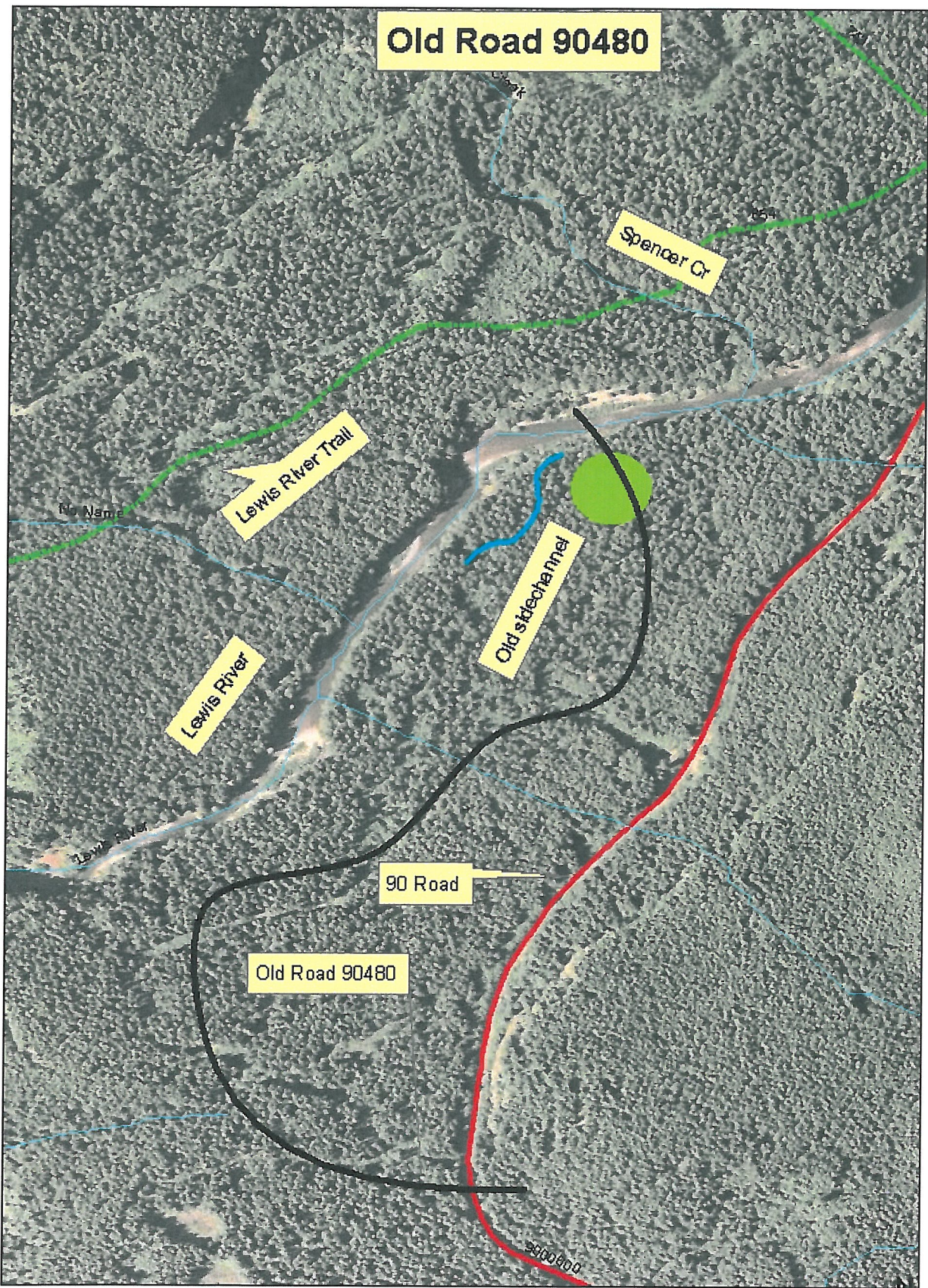
(3) But it was interesting to look at the Crab Creek site under these higher flow conditions. It is difficult to envision a "net structure" in the channel that would survive this condition, unless significant infrastructure is put in place. Regardless, there remains an interest by some of the group members to keep the Crab Creek site on the table, but additional definition of just how this site would be developed is needed.

(4) Our last stop was the Lower River Falls Campground. This site has existing access to the river, and available space for a "facility" to be established above the falls (approximately 100 yards above the falls). The common vision is to set up a temporary structure (tank) at the river edge at the campground, and gravity feed water from the mainstem Lewis. It is estimated that a pipe running approximately 200 feet upstream could provide sufficient water since there is a natural step in the river bed. When fish are ready, they would be released above the falls (not volitional), or they could be trucked below the falls and released. Due to the relatively swift water at the release site, it is not likely they would be inclined to move upstream. All members recognize the potential for disease transmission. But this risk is likely minimized due to the high propensity of downstream movement upon release and that the next impassable falls is only one mile upstream, thus blocking access to the upper watershed. In addition, the smolts would be disease-certified by WDFW before placement in the pond structure. Some members of the group do not believe that the falls would inflict significant mortality on the juveniles, especially when you compare the falls with spillways at the Columbia River dams where survival is greater than 98 percent. The facility would be removed from the recreation area each year prior to Memorial Day weekend. For these reasons (and probably others), there seems to be general agreement that this site warrants continued evaluation by the ACC.

In summary, no sites were identified as a preferred option. Each of the sites have pros and cons: Adam has started to outline these and I will recommend we flesh these out a bit more within the ACC forum. The group benefited from the field visits, although the rain did dampen some of the discussion that needs to occur. There seems to be strong consensus to move forward with a site selection and begin the necessary

processes. Adam will brief the appropriate USFS staffs about the results of these discussions and report back to the ACC as soon as possible.





Old Road 90480

Spencer Cr

Lewis River Trail

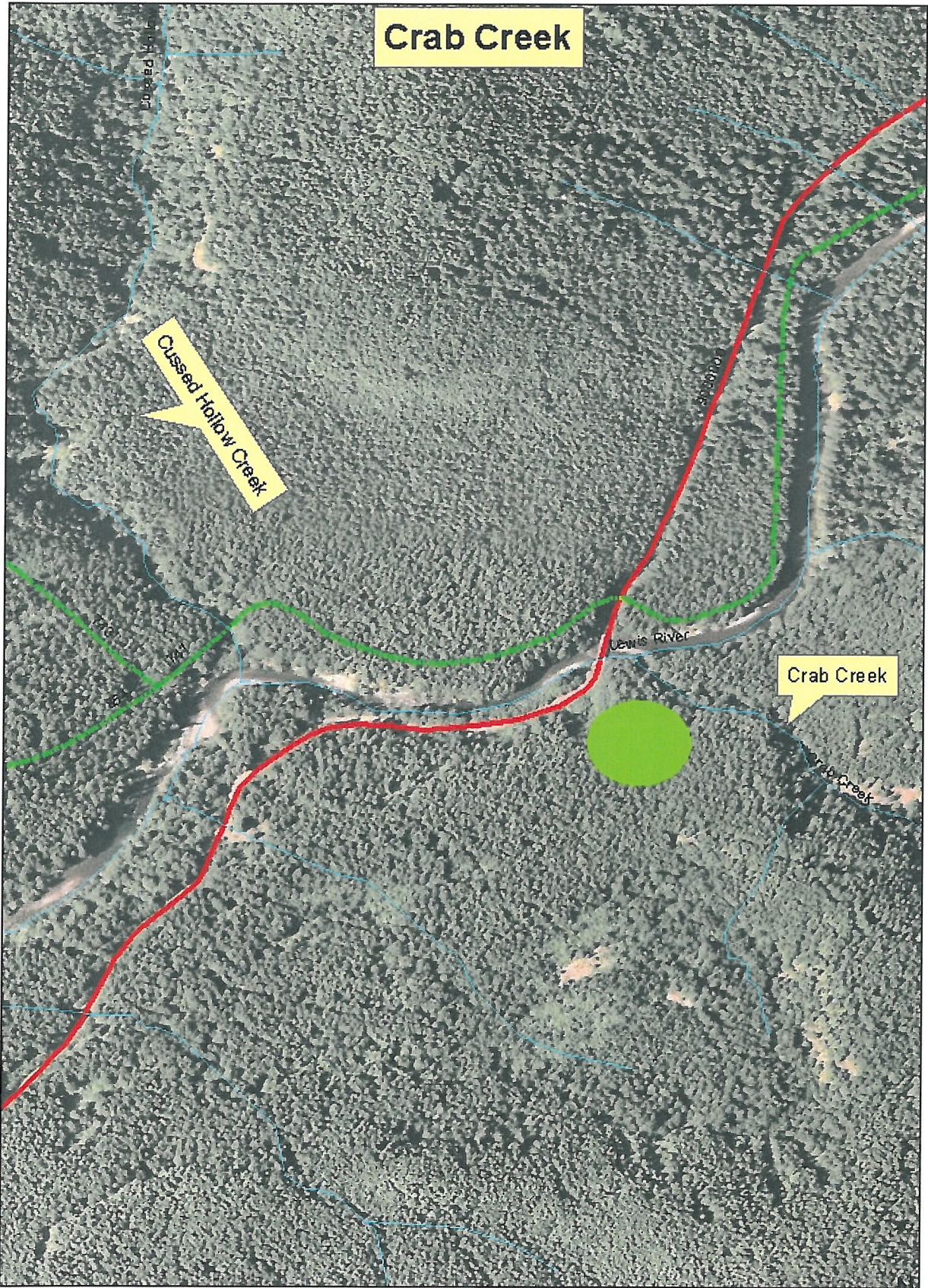
Old sidechannel

Lewis River

90 Road

Old Road 90480





Crab Creek

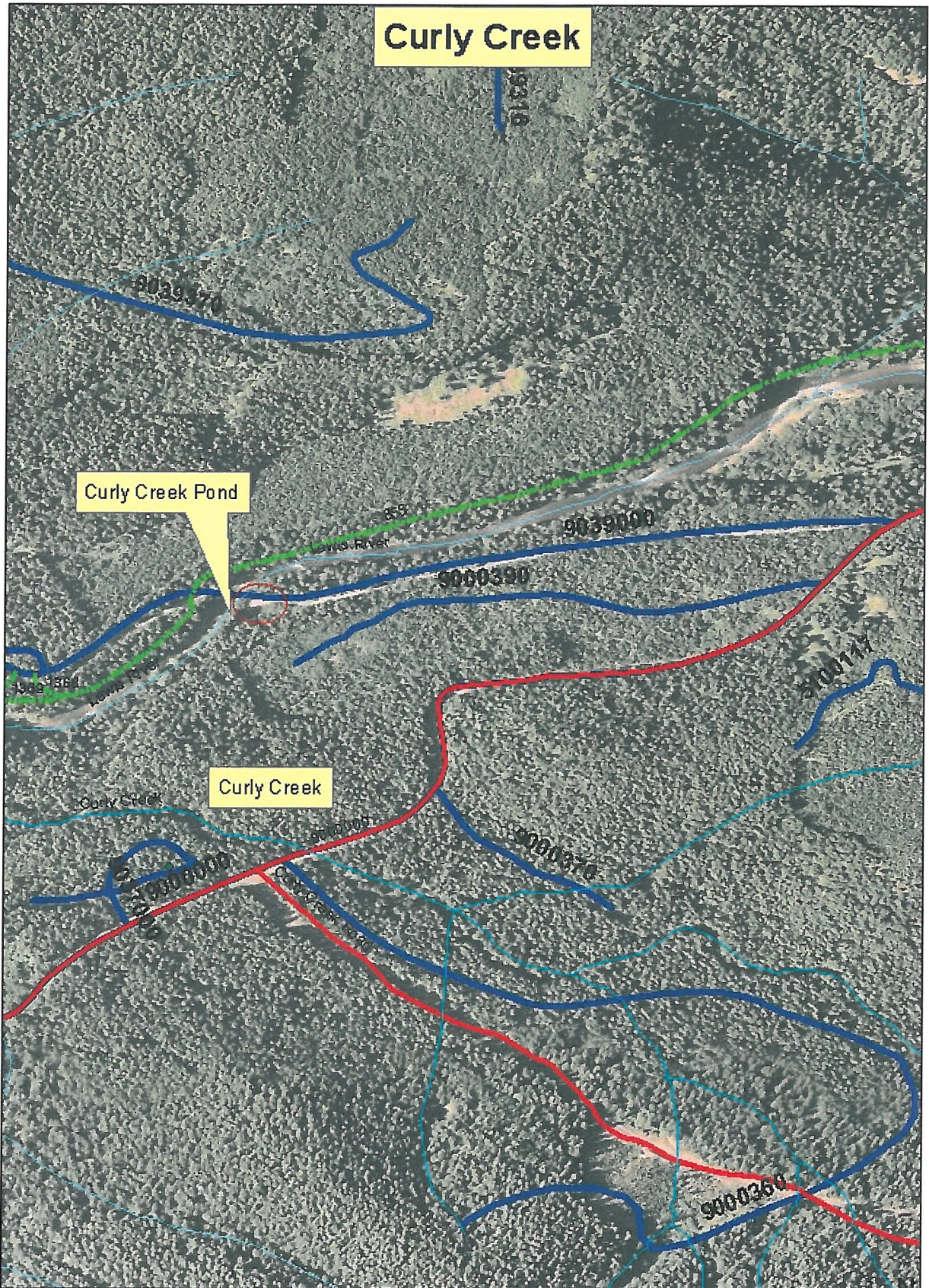
Cussed Hollow Creek

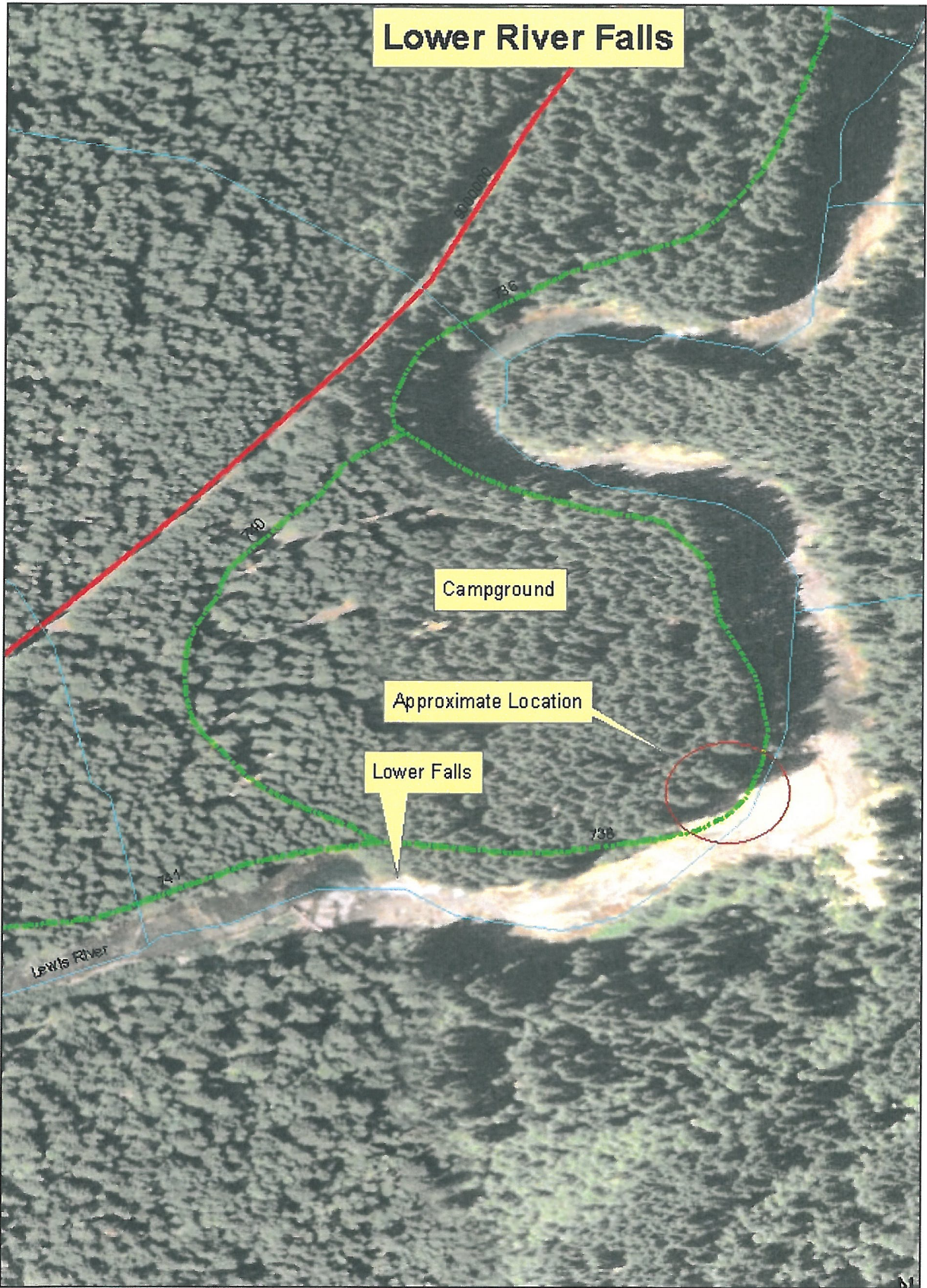
Lewis River

Crab Creek

0 250 500 1,000 1,500 2,000 Feet







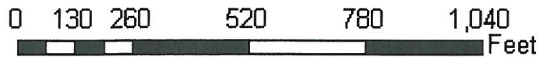
Lower River Falls

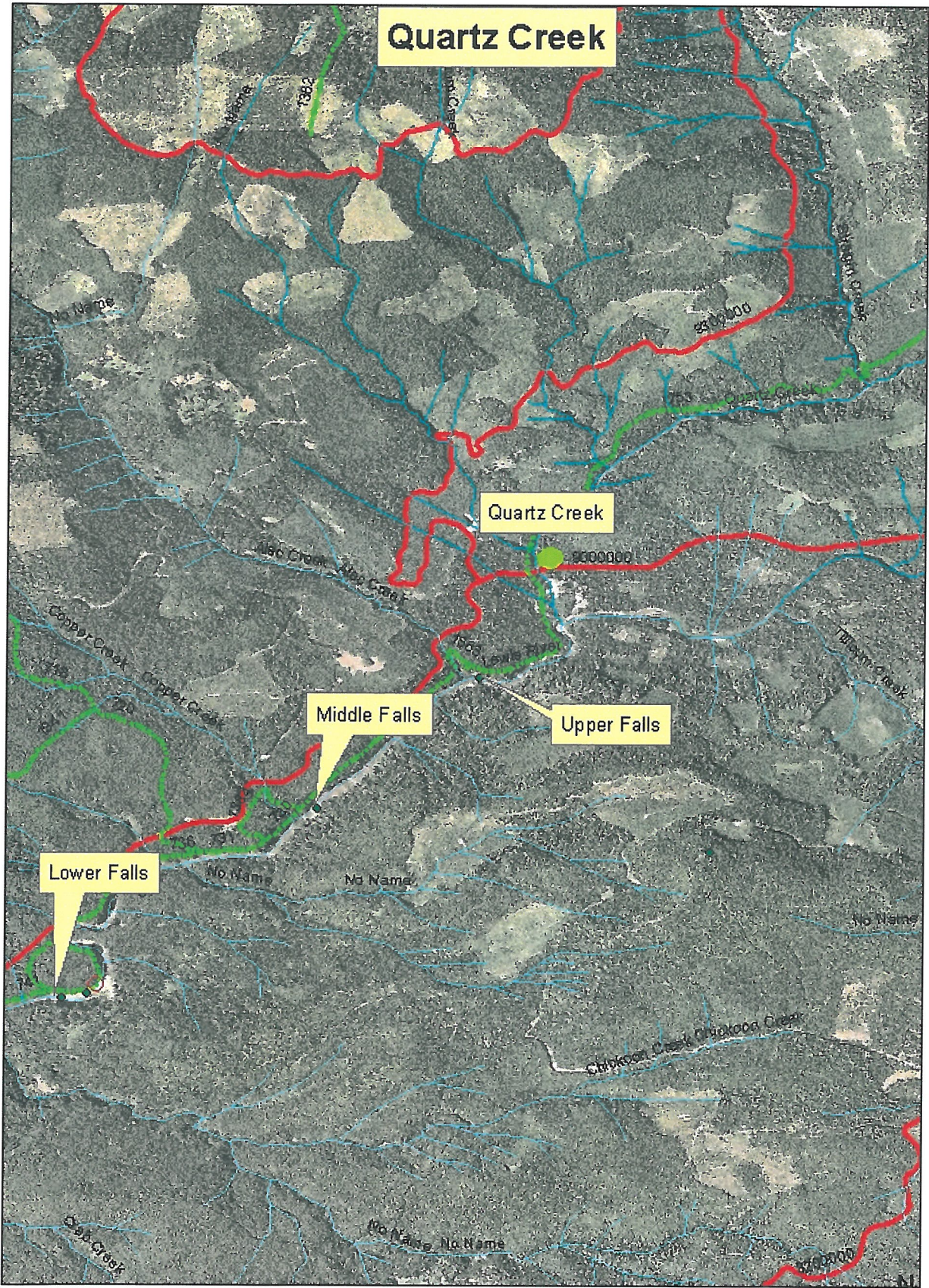
Campground

Approximate Location

Lower Falls

Lewis River





0 1,100 2,200 4,400 6,600 8,800 Feet

