Initial Study Report
Meeting Summary

Wells Hydroelectric Project Relicensing
Douglas County PUD
October 30, 2008

Meeting Coordinator:	**Shane Bickford (509) 881-2208**
Meeting Location:	**East Wenatchee, Washington**
Attendees:	Relicensing Stakeholders and General Public – See Exhibit A: ISR Meeting Sign In Sheet

I. Introduction (09:00)

Shane Bickford, Douglas PUD's Supervisor of Relicensing, provided those attending the meeting with an overview of the agenda for the ISR Meeting, including the goals of the meeting, the list of presenters and presentations. The agenda for the meeting is attached to these notes (See Exhibit B: Agenda, Initial Study Report Meeting – October 30, 2008).

Mr. Bickford provided the group with an update on the status of the 12 relicensing studies proposed by Douglas PUD in the Revised Study Plan Document. Mr. Bickford indicated that results from all 12 of the relicensing studies were included into the Initial Study Report Document (ISR Document) filed with FERC on October 15, 2008. This includes results from the 10 studies required by FERC, as part of their Study Plan Determination and results from the two studies being voluntarily conducted by Douglas PUD following agreement within the Resource Work Groups (DO, pH and Turbidity Study and Lamprey Spawning Assessment).

Nine of the 12 relicensing studies are final with final reports included in the ISR Document. Data is still being collected and analyzed for three of the 12 studies (Total Dissolved Gas Investigation, DO, pH and Turbidity Study, and Transmission Line Wildlife and Botanical Study). Final reports for these three studies will be filed with FERC in early 2009.

II. Meeting Goals

1. To provide stakeholders with an overview of the Initial Study Report Document including the results from all 12 relicensing studies.

2. To answer stakeholder questions about study results.

III. Relicensing Calendar

Recent Milestones- Wells Integrated Licensing Process
FERC's Study Plan Determination Issued (October 11, 2007)
Studies Conducted (October 2007 to October 2008)
Initial Study Report Filed (October 15, 2008)
Initial Study Report Meeting (October 30, 2008)

Future Relicensing Dates
ISR Meeting Summary Filing (no later than November 14, 2008)
Final Updated Studies Filing (March 2009)
Draft License Application Filing (December 31, 2009)

The group watched the Wells Relicensing Study Video (20 minutes) which included an introduction to the Wells Project, Wells Relicensing Process, Integrated Licensing Process (ILP) and provided an overview of the 12 relicensing studies conducted by Douglas PUD.

IV. Presentations (09:40)

(1) An Investigation into the Total Dissolved Gas Dynamics of the Wells Project

Notes:
Duncan Hay (Oakwood Consulting) presented the results of the Total Dissolved Gas Investigation Study. Mr. Bickford noted that this study was required by FERC but that additional modeling is still being conducted. Final results will be available in early 2009.

Questions & Comments:
Question: Pat Irle (Ecology) asked which of the three total dissolved gas monitoring transects was used to calibrate the model.

Response: Dr. Hay indicated that all three transects from the 2006 study were used to calibrate and validate the model and that transect three was still considered the most representative total dissolved gas compliance point downstream of Wells Dam.

Question: Steve Lewis (USFWS) asked if Douglas has identified an operational "sweet spot" toward the minimization of TDG in the Wells Tailrace.

Response: Dr. Hay indicated that the preferred operation depends upon river flow and powerhouse loading. He also indicated that the model will be used to identify the best operation for Wells throughout various levels of spill, discharge and powerhouse loading.

Question: Rolf Wielick (Jacobs Engineering) asked about the effects of the turbines on TDG production.

Response: Mr. Bickford indicated that turbine operation has been included into all of the model runs including the effects of units being loaded or unloaded underneath spill. Model results are expected to be available by early 2009.

Question: Ms. Irle requested a CD containing the model run videos.

Response: Mr. Bickford indicated that Douglas PUD would send her a CD containing all of the TDG modeling videos shown at today's meeting.

Question: Mr. Lewis asked whether the operation of the HCP juvenile bypass system would have to be modified in order to accommodate spill operation to minimize total dissolved gas.

Response: Mr. Bickford indicated that the modelers were working within the existing operational constrains of the juvenile fish bypass system governed by the HCP. The last thing Douglas PUD wants to do is disrupt the HCP Coordinating Committee's preferred operation for the juvenile fish bypass system.

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(2) Wells Hydroelectric Project Water Temperature Modeling

Notes:
Ray Walton (West Consulting) was the next presenter for the Water Temperature Study. Mr. Bickford noted that this study was required by FERC and that the report was final.

Questions & Comments:
Question: Mr. Lewis asked about the residence time of the water through the reservoir.

Response: Dr. Walton indicated that resident time through the Wells Project was very short (days rather than weeks) and that thermal stratification does not take place within the Wells Reservoir.

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(3) Cultural Resources Investigation

Notes:
Scott Kreiter (Douglas PUD) presented the objectives of the study, as well as a brief overview of results. Due to the sensitivity associated with archaeological resources, detailed results were not discussed.

Questions & Comments:
Question: Bob Easton (FERC) asked what percentages of the cultural sites were along the transmission line.

Responses: Mr. Kreiter responded that the number was very low. Mr. Bickford added that a large proportion of the transmission line corridor was cultivated wheat land thereby reducing the likelihood of discovering undisturbed cultural material.

Question: Tony Eldred (WDFW) asked if shoreline protection would be needed at sites in areas of erosion.

Response: Mr. Kreiter responded that there was erosion at some sites, but the significance of the site, as well as the rate of erosion would need to be evaluated prior to implementing shoreline protection measures.

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(4) Evaluation of Public Access to and Use of the Wells Reservoir as it Relates to Reservoir Fluctuations, Aquatic Plants, and Substrate Buildup

Notes:
Mr. Wielick (Jacobs Engineering) presented the objectives and results of the study. The study evaluated the effects of reservoir fluctuations, aquatic plants, and sediment deposition on recreation access to and from the reservoir.

Questions & Comments:
Question: Mr. Eldred asked if Eurasian watermilfoil (EW) dominated any recreation sites.

Response: Mr. Kreiter (Douglas PUD) responded that there were very few sites that EW affected, and that most of the aquatic plant growth observed during this study was native. Mr. Bickford added that during the aquatic plant study conducted in 2005 that roughly 90% of the aquatic plants found in the Wells Reservoir were native. The results from the 2008 access study appear to closely match the results from the 2005 study.

Question: Karen Kelleher (BLM) asked whether occurrences of low water events were seasonal.

Response: Mr. Wielick responded that seasons do affect water fluctuations and that most fluctuations are related to power operations at Wells Dam or from upstream dams.

Question: Gail Howe (City of Pateros) asked about the timeframe for starting work on the Recreation Management Plan.

Response: Mr. Bickford responded that it will likely be late 2008 to early 2009. Mr. Kreiter added that discussions related to the Recreation Management Plan will begin after the studies are complete, and all comments related to studies have been resolved.

Question: Lee Webster (City of Brewster) mentioned that the Chicken Creek boat launch has a significant evaporation loss in July that can affect the ability to launch into Washburn Pond.

Response: Mr. Kreiter responded that although the Chicken Creek launch was not surveyed for aquatic plant growth, the access study did survey that location and the report does discuss options for improving access at that location.

(5) Wells Hydroelectric Project Recreation Needs Assessment

Notes:
Kelly Bricker (Devine Tarbell and Associates) presented the methods and results of the study. The main objectives of the study were to assess recreation demand, regional uniqueness, and to assess the condition of existing recreation facilities including Americans with Disabilities Act access.

Questions & Comments:
Question: Mr. Eldred asked what percentage of fishermen coming to the area fished at the Okanogan River confluence area.

Response: Dr. Bricker indicated that that level of detail can be found within the tables of the 2005 Recreation Visitor Use Assessment report. Mr. Eldred requested a copy of the 2005 report. Mr. Bickford indicated that Douglas PUD will provide Mr. Eldred with a copy of the 2005 report.

Question: Ms. Kelleher asked about the 12 percent projected growth in motorboating and whether that rate of growth took into account population growth over the next 50 years.

Response: Dr. Bricker said that the estimates were based on multiple factors including population growth projections. However, growth and use will need to be monitored over time, and that at this time the Wells Project continues to have ample facilities and available capacity to more than meet the current demand.

Question: Gail Howe (City of Pateros) commented about several errors in the Recreation Needs Analysis report. Specifically, she noted that two of the recreation facilities (two recreation access sites on the Methow River), were labeled as being in the City of Pateros. These sites are actually near Pateros, but not in the city limits.

Response: Dr. Bricker responded that these issues would be looked into. Dr. Bricker indicated that the labels on the photos were not intended to indicate who was responsible for the operation and maintenance of the sites depicted within Appendix C of the report. Mr. Bickford added that the labels on the photographs were only intended to indicate the general location of those sites within the larger context of the Wells Project. Mr. Kreiter indicated that in hind sight the confusion could have been avoided if the photos would have been labeled “adjacent to Pateros” rather than simply “City of Pateros”.

Question: Mr. Eldred asked whether Dr. Bricker felt that recreation overflow from downstream projects would eventually occur in the Wells Project.

Response: Dr. Bricker responded that most visitors are coming to this area from about a 100 mile radius. The increase of visitor usage depends on housing trends within that 100 mile radius. One of the issues in the SCORP is that people are getting frustrated with overcrowding and more people may want to come to an area of solitude and the Wells Project provides that at current

recreational use levels. Dr. Bricker stressed the need for future monitoring of recreation use within the Wells Project.

LUNCH – Provided by Douglas PUD

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(6) An Evaluation of Effects of and Alternatives to the Existing Bird and Mammal Control Programs

Notes:
Jim McGee (Douglas PUD) presented the methods and results of the study. The study focused on the potential effects of bird and mammal predation at Wells Project hatcheries, as well as the effectiveness of control measures.

Questions & Comments:
Question: David Turner (FERC) asked about why cost estimates were not calculated for potential measures.

Response: Mr. Bickford said that Douglas PUD did not develop cost estimates for two reasons. First, most of the substantive recommendations from the report could be implemented with little to no increase in cost. In fact, most of the recommended actions have already been implemented at the hatcheries. Second, when these results were presented to the Terrestrial RWG, members were impressed with the relatively low level of overall predation compared to the levels of predation theorized going into the study. Members of the Terrestrial RWG did not see an immediate need to make substantial and costly modifications to the existing hatchery hazing program. Mr. Turner indicated that it still may be useful to have those costs estimated so that they can be used during the development of the Environmental Analysis (EA).

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(7) Wells Hydroelectric Project 230 kV Transmission Line Biological Studies

Notes:
Mike Hall (Parametrix) presented the methods and results of the study. The focus of the study was to identify rare, threatened, and endangered plant and animal species along the 41 mile 230kV transmission corridor, as well as to assess the potential for avian collisions.

Questions & Comments:
Mr. Bickford noted that field work for this study was still being conducted and that the final report will be available in early 2009. There were no other questions or comments related to this study.

(8) Survival and Rates of Predation for Juvenile Pacific Lamprey Migrating through the Wells Hydroelectric Project

Notes:
Josh Murauskas (Douglas PUD) presented the results from the Juvenile Lamprey Study. The goal of the study was to collect up-to-date information on the survival and the rates of predation of juvenile Pacific lamprey migrating through Columbia River hydroelectric projects and to collect site-specific information on rates of predation on juvenile lamprey in the waters immediately upstream and downstream of Wells Dam. Mr. Murauskas indicated that this report was final.

Questions & Comments:
There were no questions or comments.

(9) Adult Pacific Lamprey Passage and Behavior Study

Notes:
Mr. Murauskas then presented the results from the 2007 Adult Lamprey Passage Study. The study objectives were to conduct a literature review, identify methods for capturing adult lamprey, document migratory timing and abundance, determine whether adult lamprey are bypassing count windows, and to estimate passage metrics. Mr. Murauskas indicated that the 2007 report is final. One additional year of study was already underway in an effort to increase sample size. The final report for the 2008 study will be available in early 2009.

Question and Comments:
Question: Mr. Turner asked how lamprey are bypassing the counting windows at Wells.

Response: Mr. Murauskas indicated that there is an area at the count window that allows surplus water, which is not funneled by the video station, to bypass the counting station. The area is separated by a picketed lead, preventing larger fish, such as salmon, from bypassing the video station. Lamprey are small enough to pass between the pickets, negatively biasing the total video count for adult lamprey.

Question: Mr. Eldred asked if there are any indications that the lamprey population levels are cyclic.

Responses: Mr. Murauskas indicated that since lamprey have only been counted at Wells Dam back to 1998 and that the lamprey life cycle can be 7 or 8 years in length. There currently is not enough information on lamprey at Wells Dam to determine whether the populations in the Columbia River are cyclical. There simply is not enough information available to draw any conclusions about lamprey population cycles.

Additional comments were added by Mr. Murauskas, Mr. Bickford, and Mr. Le. In addition to the lack of data series to identify population trends, the literature suggests that lamprey do not display homing tendencies to natal streams. Research of a similar species (sea lamprey) suggests that lamprey are able to detect pheromones released by juveniles and that those pheromones are

used by adults to locate suitable spawning habitat. In tributary streams of the lower Columbia River, adult lamprey populations vary greatly from year to year and from tributary to tributary. Reasons include water levels, annual changes in habitat condition, overall abundance of adults, and abundance of juveniles discharging pheromones. These confounding factors add to the difficulty of identifying population and migratory trends.

Question: Mr. Easton asked how many adult lamprey passed the dam this year (2008).

Response: Mr. Murauskas indicated that so far this year 8 adult lamprey have passed over Wells Dam. However, it should be noted that 16 lamprey were captured and removed from the ladder below the count station for use in the telemetry study. Mr. Murauskas also indicated that it is important to point out that in 2008 improvements in trapping facility design have in effect blocked lamprey passage through the upper fishway. In order to trap sufficient lamprey for the study, an exclusion device has been placed on the fishway orifices that greatly hinders lamprey passage and thereby force the adult lamprey to pass into the traps. It is also important to keep in mind that most adult lamprey sneak by the counting window through the picketed leads.

Question: Mr. Easton asked if there was a theory why so many lamprey were counted in 2003.

Response: Mr. Murauskas stated that no one has proposed a reason for the strong return basin-wide in 2003. We have no information on the adult run that spawned the return from 2003 because lamprey counts did not start until 1998. Mr. Murauskas continued the discussion, pointing out the high variation in counts at Wells Dam since enumeration began, along with the potential for inaccurate counts due to the number of fish that bypassed the count station in 2007.

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(10) Assessment of DDT and PCBs in Fish Tissue and Sediment in the Lower Okanogan River

Notes:
Bao Le (Longview Associates) was the next presenter for the Okanogan Toxins Study. The goal was to determine the concentrations of DDT and PCBs in recreational fish species and at recreation sites of the lower Okanogan River.

Questions & Comments:
Question: Mr. Eldred asked if toxin levels in the sediment seemed to decline going downstream except for Monse and was interested in determining if there were any point sources identified at Monse.

Responses: Mr. Bickford said that we looked at the shoreline uses and that at Monse there are orchards adjacent to the reservoir that could have historically contributed to the levels of DDT found at the site. Regarding the toxin gradient from upstream to downstream, most of the loading of DDT occurs in Lake Osoyoos through disturbance of sediments. According to the Okanogan River TMDL, the levels of DDT found in sediments consistently decrease as the distance from Lake Osoyoos increases. Beau Patterson (Douglas PUD) indicated that the sediment grab samples became progressively finer and more organic from upstream to downstream sites.

Question: Mr. Eldred asked if the study tested for arsenic. Arsenic has been used in orchards to poison rodents.

Responses: Mr. Le indicated that they were only testing for DDT and PCBs per the recommendations found in the TMDL for the Okanogan River. Ms. Irle indicated that Ecology has sampled for arsenic in the Okanogan River and that at this time she was not aware of any listings for arsenic. Ms. Irle also indicated that the TMDL for the Similkameen River identified arsenic in that watershed (the Similkameen is a tributary to the Okanogan River over 50 miles upstream from the Wells Project).

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(11) Continued Monitoring of DO, pH, and Turbidity in the Wells Forebay and Lower Okanogan River (Study not required by FERC)

Notes:
Mr. Le provided results from the DO, pH and turbidity study. He indicated additional field work was expected to continue through the end of October 2008. As such, the interim report in the ISR Document would be updated to include the new information collected in the fall of 2008. The final report, including all of the results is expected to be available in early 2009. Mr. Le also indicated that the DO, pH and Turbidity study was not required by FERC but instead was voluntarily conducted by Douglas PUD based upon agreement among the participants involved in the resource work group process.

Questions & Comments:
Response: Ms. Irle wanted to know if Bao was going to continue to work on this report through the end of the year. Mr. Le deferred to Mr. Bickford who indicated that Mr. Le would assist with finalizing this report.

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(12) An Assessment of Adult Pacific Lamprey Spawning within the Wells Project (Study not required by FERC)

Notes:
Mr. Le provided results for the Lamprey Spawning Assessment. Mr. Le indicated that the Lamprey Spawning Assessment is a final report and that the study was not required by FERC. Douglas PUD conducted this study voluntarily based upon agreement among the participants involved in the Aquatic RWG process.

Questions & Comments:
Question: Mr. Eldred asked if the photo shown in the slide of an adult pacific lamprey was a typical size for that species.

Response: Mr. Le indicated that it was a large specimen and that this size of fish is not typically found in the Upper Columbia River. By the time they reach the Upper Columbia and Wells Dam, they have lost a significant amount of weight and girth. The picture was of a lamprey from the Lewis River located on the lower Columbia River.

V. Concluding Remarks (16:00)

Mr. Bickford asked if there were any further questions or comments.

Notes:
No remarks were made. Mr. Bickford thanked everyone for attending the meeting and reminded everyone that Douglas PUD would be filing the Initial Study Report Meeting Notes by November 14, 2008. Stakeholder comments are due by December 15, 2008 per the Process Plan and Schedule for the Wells ILP.

Question and Comments:
Question: Mr. Eldred asked when the ISR timeline started.

Response: Mr. Bickford indicated that the time clock started when Douglas PUD filed the ISR Document with FERC on October 15, 2008.

The meeting was adjourned.

Exhibit A: ISR Meeting Sign-In Sheet

Wells Project Relicensing
Initial Study Report Meeting

DATE: October 30, 2008

LOCATION: Douglas PUD

Name	Organization	Phone	Email
Gail A. Howe	City of Pateros	509-923-2571	pateros@swift-stream.com
Andrew Lampe	Okanogan County	509-422-7100	Alampe@CO.Okanogan.WA.US
Bob Easton	FERC	202-502-6045	robert.easton@ferc.gov
David Turner	FERC	202-502-6091	david.turner@ferc.gov
Tony Eldred	WDFW	(509) 684-0452	eldredte@dfw.wa.gov
Bob Clubb	Douglas PUD	(509) 881-2285	rclubb@dcpud.org
Jim McGee	Douglas PUD	509-881-2248	JMcGee@dcpud.org
Mike Hall	Parametrix	425-458-6244	mhall@parametrix.com
Karen Kelleher	BLM	509-665-2100	Karen_Kelleher@blm.gov
Brad Hawkins	Douglas PUD	509-881-2225	bhawkins@dcpud.org
Jean Hardie	City of B-port	509-686-4041	bportcity@nwi.net
Mary Mayo	Douglas PUD	509-881-2488	mmayo@dcpud.org
Gordon Brett	Douglas PUD	509 881 2242	GordonB@dcpud.org
Steve Lewis	USFWS	509/665-3508	Stephen_Lewis@fws.gov
JOSH MURALISKAS	DCPUD	509-881-2323	JOSHM@DCPUD.ORG
Bob Jateff	WDFW	509-997-0316	JATEFRJJ@dfw.wa.gov
DUNCAN HAY	OAKWOOD	604.936.5161	DUNCANHAY@SHAW.CA.
Lee Webster	City of Brewster	(509) 689-3464	brewstermayor@verizon.net.
Kelly Bricker	DTA	916 206 3189	Kelly.bricker@devinatarkell.com

Wells Project Relicensing
Initial Study Report Meeting

DATE: October 30, 2008

LOCATION: Douglas PUD

Name	Organization	Phone	Email
John Devine	DTA	207-775-4495	john.devine@devinetarbell.com
Ray Walton	WEST Consultants	425.646.8806	RWalton@WESTConsultants.com
Scott Kreiter	Douglas PUD	509 8812327	scottk@dcpud.org
Meaghan Vibbert	DCPUD	509 881-2221	mvibbert@dcpud.org
Patrick Verhey	WDFW	509 754-4624 ext 13	verhepmv@dfw.wa.gov
Pat Irle	Ecology	509 454-7864	pirl461@ecy.wa.gov
Gar Jeffers	DCPUD	509 663-8605	Gar@jdsa.com
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Shane Bickford	Douglas PUD	509.881.2208	sbickford@dcpud.org
David Volsen	WDFW	509-663-9764	volsedpv@dfw.wa.gov
Bao Le	Longview Assoc	503-309-9423	ble@longviewassociates.com
Beau Patterson	DCPUD	509 881 2338	beaup@dcpud.org

Exhibit B: Initial Study Report - Meeting Agenda

Agenda
Initial Study Report Meeting

Wells Hydroelectric Project Relicensing
Douglas County PUD
October 30, 2008
9:00 am – 4:00 pm

Meeting Location: **Douglas PUD**
1151 Valley Mall Pkwy.
East Wenatchee, WA 98802

Meeting Coordinator: **Shane Bickford (509) 881-2208**

Meeting Objective: **Review and discuss stakeholder comments on the studies contained within the Initial Study Report.**

Time	**Topic**	**Lead**
9:00	Welcome and Introductions	Shane Bickford
9:10	Meeting Goals and Relicensing Status	Shane Bickford
9:15	Relicensing Study Video	Shane Bickford
9:40	Total Dissolved Gas Investigation	Duncan Hay
10:10	Water Temperature Study	Ray Walton
10:40	Break (10 minute) -	
10:50	Cultural Resources Investigation	Scott Kreiter
11:00	Public Access Study	Rolf Wielick
11:20	Recreational Needs Analysis	Kelly Bricker
Noon	**Lunch – Provided by Douglas PUD**	
1:00	Piscivorous Wildlife Control Study	Jim McGee
1:20	Transmission Line Wildlife and Botanical Study	Mike Hall
1:50	Juvenile Lamprey Study	Josh Murauskas

2:10	Adult Lamprey Passage Study	Josh Murauskas
2:30	Okanogan Toxins Study	Bao Le
2:50	DO, pH and Turbidity Study	Bao Le
3:10	Lamprey Spawning Assessment	Bao Le
3:30	Wrap Up (Questions and Answers Session)	Shane Bickford
3:40	Next Steps	Shane Bickford
4:00	Adjourn	

Document Content(s)