

## OFFICIAL COORDINATION REQUEST FOR NON-ROUTINE OPERATIONS AND MAINTENANCE

**COORDINATION TITLE-** *14TDA13 back up AWS survey updated*

**COORDINATION DATE-** 18 December 2014 updated on 10 March

**PROJECT-** TDA

**RESPONSE DATE-** 8 January 2015 (FPOM). For updates - 12 March 2015 (FPOM)

**Description of the problem-** P&S for The Dalles AWS auxiliary system are being prepared. Construction is anticipated to take place over two in-water-work windows. There is some construction work (tremie concrete and placement of the cofferdam/trashrack) that could be sensitive to flow conditions. Data was collected early in FY15 and showed little to no change in the flow conditions at the construction site with powerhouse operations. The total river was quite low but still no noticeable change. By collecting data on April 9 (no spill) and April 10 (spill) we should see how impactful changing project operations are on the flow conditions at the construction site. In addition it is anticipated that the flow will be significantly larger on April 9th/10th.

Additional measurements needed include a hydroacoustic survey of the forebay wall at the construction location for the intake structure. Dates that the additional wall measurements would occur – Half a day on April 8th with standard powerhouse operation and no spill, or on April 11th with standard powerhouse operation and 40% spill. Operations and forebay hydraulics shouldn't make much difference (spill vs no spill) for the data collection on the wall.

*14TDA13 attachment 1 velocity* shows unit operation requests during the survey. *14TDA13 attachment 2 transects* shows a 100' radius fish haven around the 3 ladder exit slots, see Attached Figure. 7 transects and 2 stationary measurement locations encroach on the fish haven site. On each of the transects, the boat will be idling through the fish haven for no longer than 5 minutes, for a total of no more than about 35 minutes per day. Each stationary point involves the boat idling with its bow pressed against the face of the dam for 10 minutes. Grand total of 45 minutes within a 100 feet of the fish ladder. Ideally all of the stationary points would be collected but S-03 could be dropped.

Data Collection has to be during daylight hours and we would be better after power peaking hours in the morning. Start around 9 or 10 AM. Work within the 100' buffer will occur between 1200 – 1500.

**Type of outage required-** Requested unit operation will not differ from FPP criteria. Adult fish facilities will not be impacted other than the survey boat being within 100' of the exit.

**Impact on facility operation** – Please see 14TDA13 attachment 1 velocity. This shows how the operations will change between the 9<sup>th</sup> (no Spill) and the 10<sup>th</sup> (spill). The goal is to have the total river on the 9<sup>th</sup> and 10<sup>th</sup> approximately the same.

**Dates of impacts/repairs-** 9 and 10 April 2015.

**Length of time for repairs-** Data Collection will take approximately 6 to 7 hours per day with data collection within 100 feet of the fish ladder for approximately 45 minutes each day.

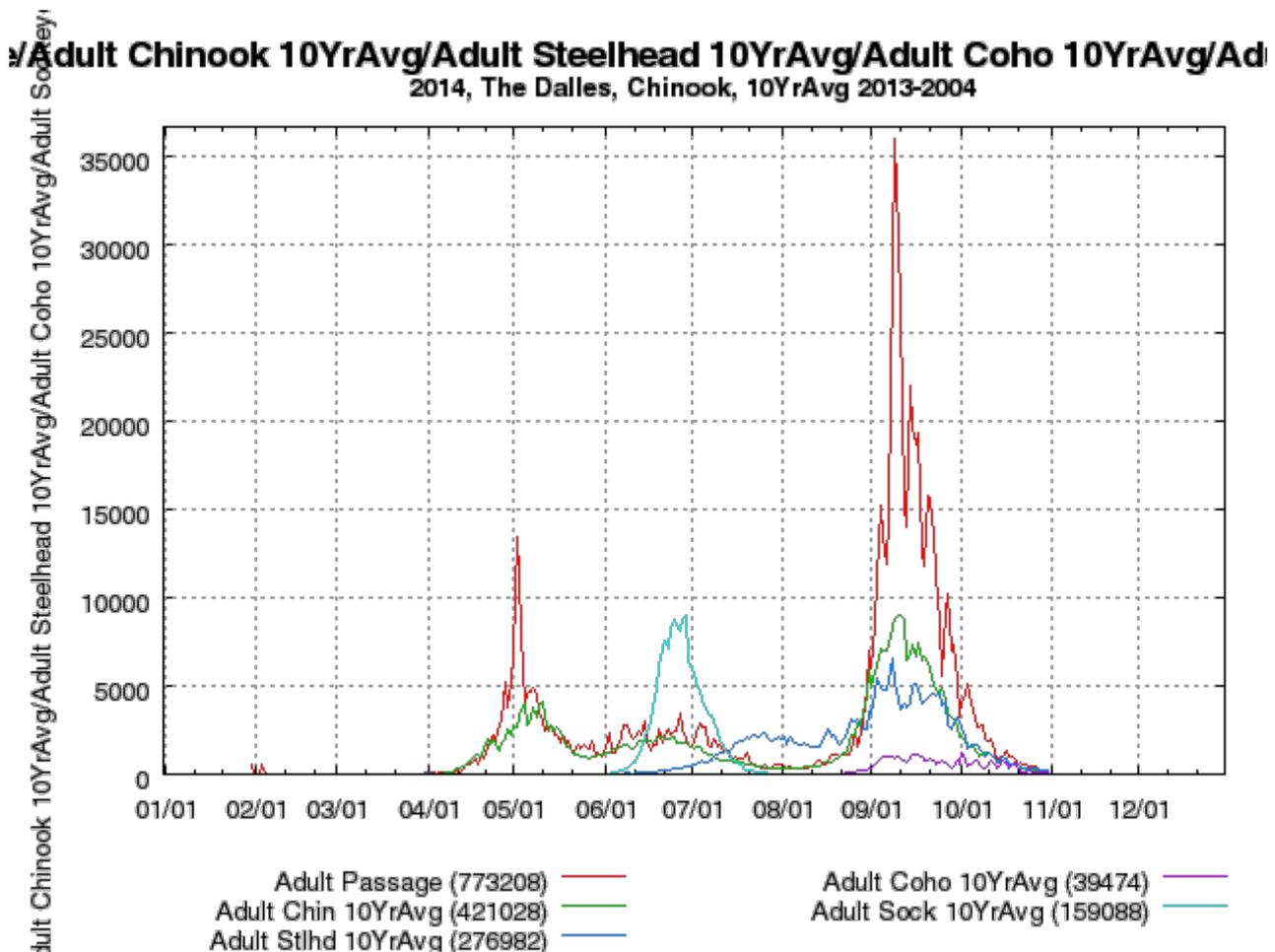
**Expected impacts on fish passage-** Impacts for both downstream and upstream migrants are expected to be minimal.

**Upstream Migrants** – Based on TDA 10 year average fish passage information from DART in **Figure 1**, fish counts are very low in early April when compared to May or summer months. The survey work will be completed before the fish runs pick up.

Based on the diel passage data in **Figure 2**, work within the 100' buffer will be restricted to 1200– 1500. This should avoid the morning and afternoon passage peaks.

**Lamprey** – This work will occur outside the normal adult lamprey migration season. Juvenile lamprey will likely not be affected by the work since the ITS will remain in FPP criteria.

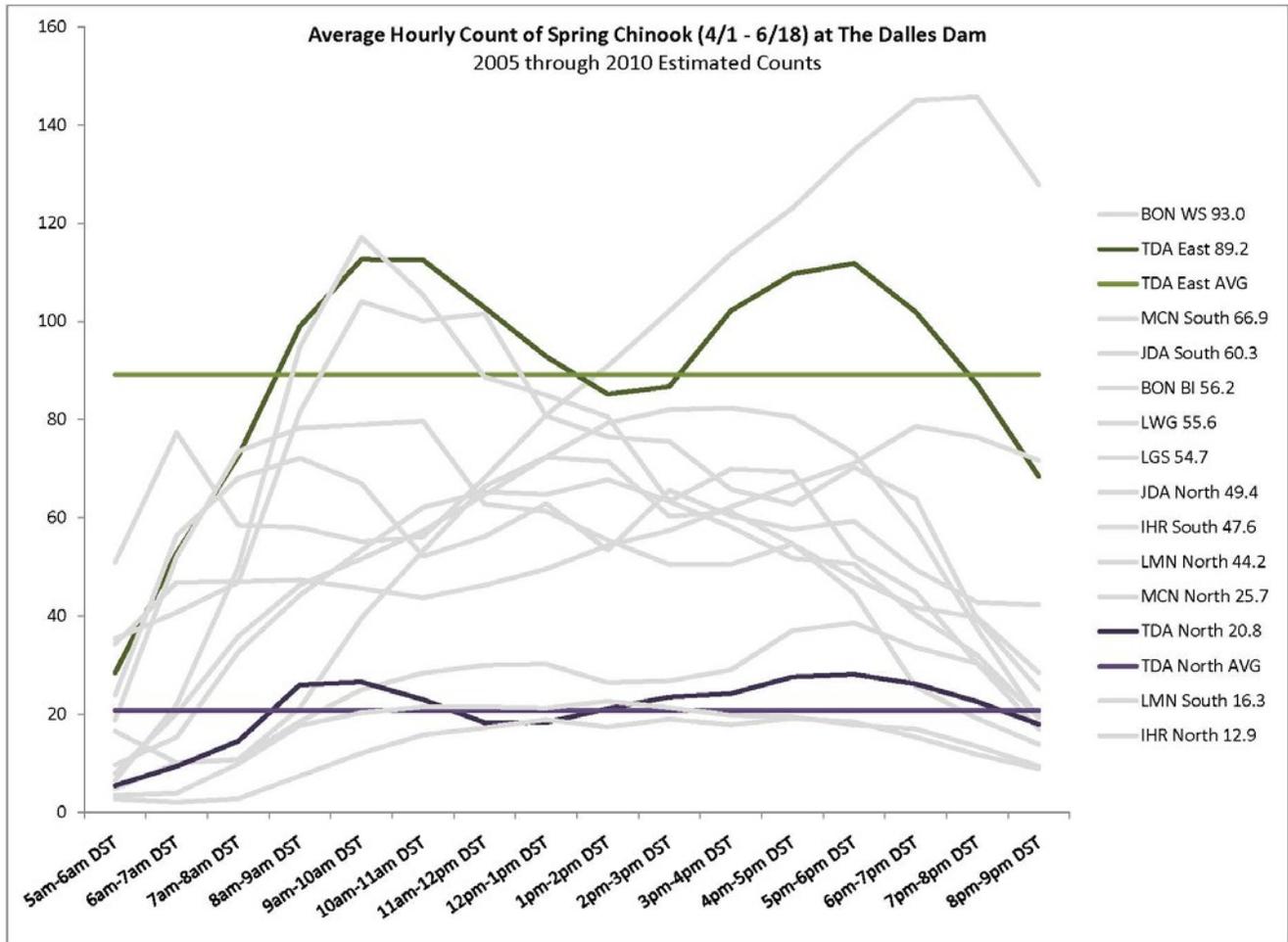
**Downstream Migrants** – In **Figure 3**, JDA smolt index figures for 11 years show relatively low smolt passage in early April. Looking at **Table 1** it would appear that a maximum of 2.5% of the migrating juveniles in April have the potential to be impacted by the work proposed on 9 – 10 April as well as the wall survey that would occur on 8 or 11 April. JDA SMP personnel estimated travel time between JDA and TDA to be a day or two depending on flow. With this work taking 14 hours over a couple of days, impacts to the juveniles passing TDA should be minimal, especially once spill starts on 10 April. The ITS will remain in FPP criteria for the duration of the survey.



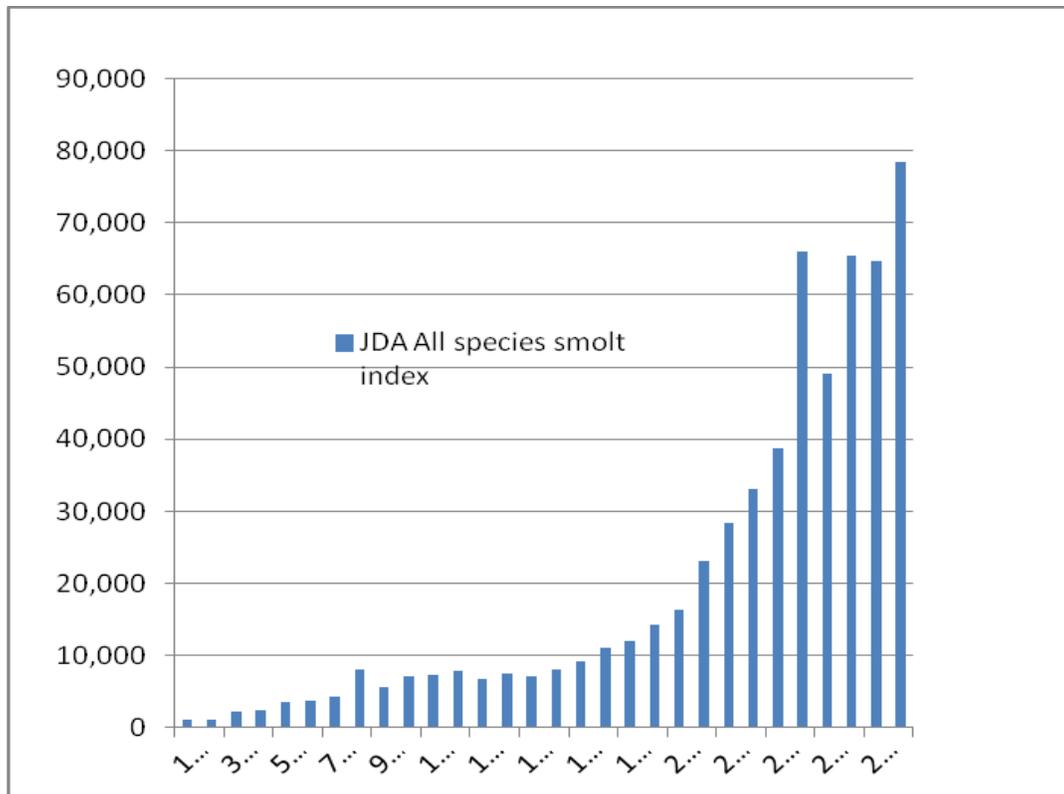
**Figure 1. 10 year adult salmon passage at The Dalles Dam.**

**DART Data Citation** Columbia River DART, Columbia Basin Research, University of Washington. (2014). Available from [http://www.cbr.washington.edu/dart/query/adult\\_graph\\_text](http://www.cbr.washington.edu/dart/query/adult_graph_text)

**Generated** 17 Dec 2014 16:14:33 PST. Columbia River DART (Data Access in Real Time) [www.cbr.washington.edu/dart](http://www.cbr.washington.edu/dart).



**Figure 2. Diel Passage for spring Chinook at The Dalles Dam.**



**Figure 3. John Day Dam 11 year smolt index for April 2004 – 2014.**

**Table 1. JDA 2004 – 2014 Smolt Index for 9 – 10 April.**

**Smolt Index Estimates**

**JDA 2004 - 2014, all species combined.**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Daily avg.	Average Daily % of season total	Avg Daily % of Monthly total
9-Apr	1,930	3,486	1,984	2,113	2,815	530	52	18,291	25,319	4,006	1,395	5,629	0.1%	0.9%
10-Apr	3,180	4,442	3,377	1,890	5,461	633	84	39,637	12,850	4,523	1,704	7,071	0.1%	1.2%
11-Apr	5,190	4,835	4,354	2,932	3,018	774	190	44,983	7,059	4,117	2,013	7,224	0.1%	1.2%
12-Apr	4,972	2,736	6,190	4,350	2,574	1,418	196	50,802	3,998	7,383	1,940	7,869	0.1%	1.3%

### Comments from agencies

CRITFC - -----Original Message-----

From: Tom Lorz [mailto:lorz@critfc.org]

Sent: Wednesday, December 24, 2014 9:36 AM To: Mackey, Tammy M NWP

Subject: [EXTERNAL] Re: FPOM: Official Coordination - 14TDA13 back up AWS survey

Why oh why are they not doing this work in say, January early Feb???????? In water work done in water work window would make sense. If they have to do the work then I would suggest do any work near the fish entrance last if at all. Not happy about the time of year, yes not likely to be too many fish but come on we have an in water work window for a reason.

NWP-HD -----Original Message----- From: Ebner, Laurie L NWP

Sent: Wednesday, December 24, 2014 11:28 AM

To: Mackey, Tammy M NWP; Rerecich, Jonathan G NWP

Subject: RE: [EXTERNAL] Re: FPOM: Official Coordination - 14TDA13 back up AWS survey (UNCLASSIFIED)

Classification: UNCLASSIFIED Caveats: NONE

The reason we are doing it then is because we want to initiate as much of a change in the velocity signature at the fish ladder exit and doing that when we shift from non spill to spill is our best opportunity.

If the counts are high on the day we choose to do this we can avoid the circle drawn on the map. What would a high count be? By doing this we don't get the actual data at the fish ladder and would be inferring the impact.

The optimum goal is to be able to construct the AWS in the in water work window given whatever river conditions we are provided. If we do the test in January or February it is a crap shoot how much flow we will have and if we can modify the powerhouse operations sufficiently enough to do see a change at the fish ladder exit. If we don't elicit an impact at the fish ladder with the shift from non spill to spill nothing we do at the powerhouse will elicit a change.

Laurie Ebner CENWP-EC-HD Phone: 503-808-4880

Fax: 503-808-4875

-----Original Message-----

From: Ralph Lampman [mailto:lamr@yakamafish-nsn.gov] Sent: Tuesday, January 13, 2015 1:49 PM

To: Mackey, Tammy M NWP

Cc: Bob Rose; Aaron Jackson; Statler, Dave; Tom Skiles; Brian McIlraith

Subject: [EXTERNAL] Fwd: FPOM: Official Coordination MOC 14TDA13 AWS back up survey

Hi Tammy,

I didn't want to reply to all, but since larval and juvenile lamprey migrate in April, seem like it should warrant a little more discussion on lamprey for this non-routine operation (it just said this work will occur outside the normal lamprey migration season - which is true for adults, but not for juveniles). Just wanted to make sure the juvenile lamprey migration is not forgotten.

Thanks,

Ralph Lampman

Yakama Nation FRMP, Pacific Lamprey Project [lamr@yakamafish-nsn.gov](mailto:lamr@yakamafish-nsn.gov)

**Final results:** Approved at the 8 January 2015 FPOM meeting.

Updated MOC approved at the 12 March 2015 FPOM meeting.

14TDA13 Back up AWS survey. Rerecich reported there is a request to update the MOC and include a survey of the wall and footing. It will require a half day extra work. **FPOM recommended 8 April but is fine with either the 8<sup>th</sup> or the 11<sup>th</sup>.**

Please email or call with questions or concerns. Thank you,

Jon Rerecich  
NWP PM-E Columbia River Bio  
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