OFFICIAL COORDINATION REQUEST FOR
NON-ROUTINE OPERATIONS AND MAINTENANCE

COORDINATION TITLE: 13MCN12 – RAS Testing

COORDINATION DATE: June 25, 2013 / July 2, 2013 / July 9, 2013

PROJECT: McNary Dam

RESPONSE DATE: July 3, 2013

Description of the problem: BPA is in the process of replacing the 1980's era equipment at McNary associated with the Remedial Action Schemes (RAS), to bring them up to the latest standard. RAS are sets of high-speed, automatic controls that sense some change in the operating condition of the power system (typically, the opening of one or more transmission lines or transformers) which then initiate an action (such as generator dropping or runback, load shedding, or switching of reactive devices). The purpose of the RAS is to maintain system stability and/or to relieve overloads on one or more system elements. At McNary, the RAS trip individual turbine unit breakers.

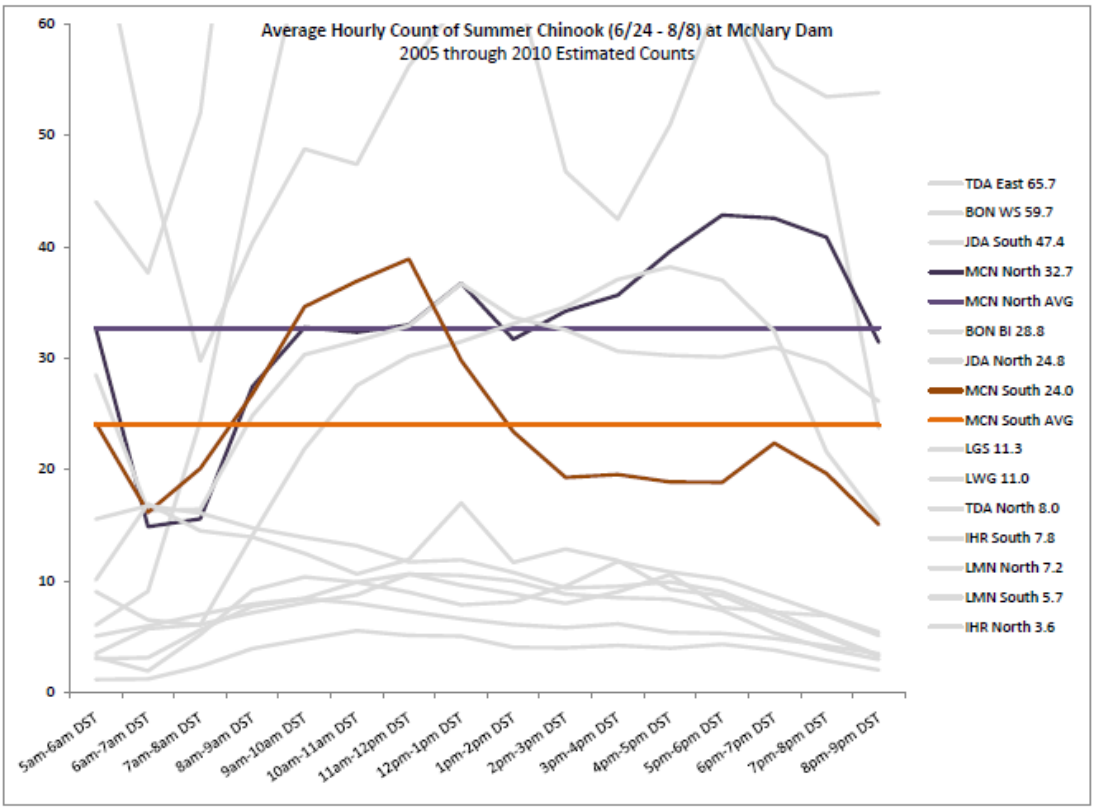
Type of outage required: As the new equipment is brought on-line, the BPA crew will test-trip the individual turbine units to insure continuity of the trip path. One unit at a time will be taken out of service (OOS) for the RAS testing. The testing will be conducted from 0700 hours to 1800 hours on July 8 to July 11 and July 15 to July 17, 2013. July 18th has been made available as insurance for unforeseen issues during testing. Units 1 and 14 will be taken OOS after 1200 hours when there are typically less adult fish entering the Oregon ladder.

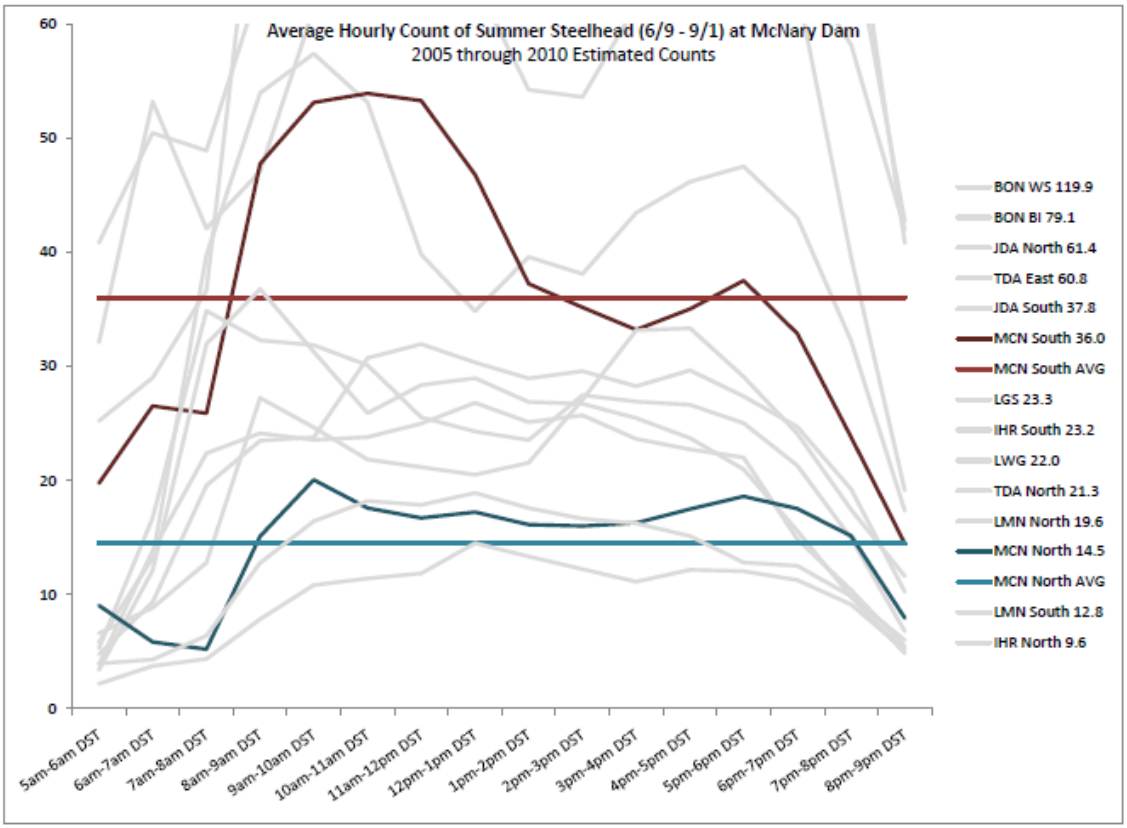
Impact on facility operation: Turbine units will be taken OOS one unit at a time, for approximately 2-3 hours for each unit. During the RAS testing outage period, the units that are available for service will be operated according to Fish Passage Plan operating priority.

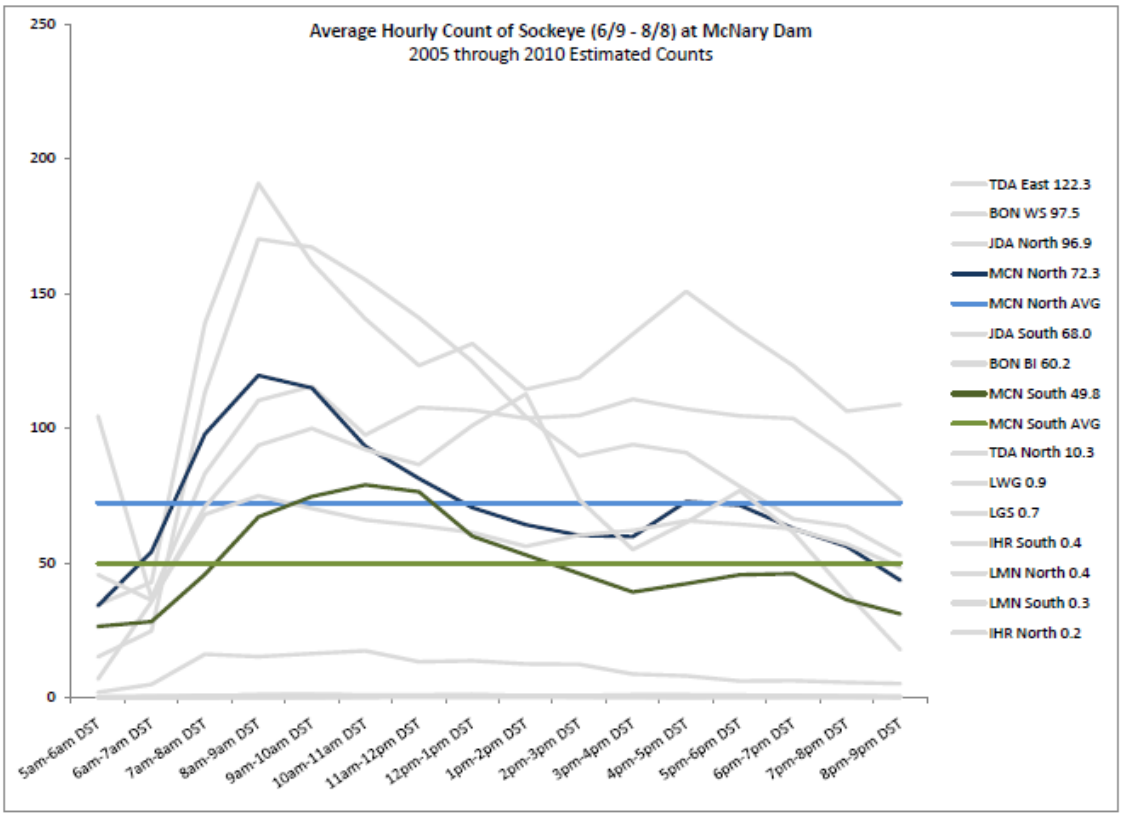
Dates of impacts/repairs: July 8-11, July 15-17, 2013, with July 18 also available if needed.

Length of time for repairs: 2 – 3 hours per unit within the 0700-1800 hours time frame each time, except for Units 1 and 14, which will only be affected within the 1200-1800 hours time frame.

Expected impacts on fish passage: Minimal. Per the attached diel charts, fewer fish are entering the Oregon fish ladder entrances, which are adjacent to Units 1 and 14, during the 1200 to 1800 hours time frame.


Average Hourly Count of Summer Chinook (6/24 - 8/8) at McNary Dam
2005 through 2010 Estimated Counts
60
50
40
30
20
10
0
5am-6am DST
6am-7am DST
7am-8am DST
8am-9am DST
9am-10am DST
10am-11am DST
11am-12pm DST
12pm-1pm DST
1pm-2pm DST
2pm-3pm DST
3pm-4pm DST
4pm-5pm DST
5pm-6pm DST
6pm-7pm DST
7pm-8pm DST
8pm-9pm DST
TDA East 65.7
BON WS 59.7
JDA South 47.4
MCN North 32.7
MCN North AVG
BON BI 28.8
JDA North 24.8
MCN South 24.0
MCN South AVG
LGS 11.3
LWG 11.0
TDA North 8.0
IHR South 7.8
LMN North 7.2
LMN South 5.7
IHR North 3.6


Average Hourly Count of Summer Steelhead (6/9 - 9/1) at McNary Dam
2005 through 2010 Estimated Counts
60
50
40
30
20
10
0
5am-6am DST
6am-7am DST
7am-8am DST
8am-9am DST
9am-10am DST
10am-11am DST
11am-12pm DST
12pm-1pm DST
1pm-2pm DST
2pm-3pm DST
3pm-4pm DST
4pm-5pm DST
5pm-6pm DST
6pm-7pm DST
7pm-8pm DST
8pm-9pm DST
BON WS 119.9
BON BI 79.1
JDA North 61.4
TDA East 60.8
JDA South 37.8
MCN South 36.0
MCN South AVG
LGS 23.3
IHR South 23.2
LWG 22.0
TDA North 21.3
LMN North 19.6
MCN North 14.5
MCN North AVG
LMN South 12.8
IHR North 9.6


Average Hourly Count of Sockeye (6/9 - 8/8) at McNary Dam
2005 through 2010 Estimated Counts
250
200
150
100
50
0
5am-6am DST
6am-7am DST
7am-8am DST
8am-9am DST
9am-10am DST
10am-11am DST
11am-12pm DST
12pm-1pm DST
1pm-2pm DST
2pm-3pm DST
3pm-4pm DST
4pm-5pm DST
5pm-6pm DST
6pm-7pm DST
7pm-8pm DST
8pm-9pm DST
TDA East 122.3
BON WS 97.5
JDA North 96.9
MCN North 72.3
MCN North AVG
JDA South 68.0
BON BI 60.2
MCN South 49.8
MCN South AVG
TDA North 10.3
LWG 0.9
LGS 0.7
IHR South 0.4
LMN North 0.4
LMN South 0.3
IHR North 0.2

Some of the comments initially received (see comments section below) were concerning the affect of the unit outages for RAS testing on water temperatures on juvenile fish, especially when other units will be OOS for Doble testing and for repairs during the same period.

Doble testing at McNary was previously coordinated through inclusion in Appendix A of the 2013 Fish Passage Plan (FPP), and is scheduled to occur on July 8-11 and July 15-18. Doble testing will require a 4-day continous outage of transformer banks T4 (and associated units) and another 4-day continuous outage of T5 (and associated units), one at a time. As a result of this, units 7 and 8 will be OOS on Monday through Thursday of one week, and units 9 and 10 will be OOS on Monday through Thursday of the other week.

RAS testing and Doble testing cannot occur on the same unit at the same time. Units 3, 4, and 11 will all be OOS for annual maintenance/repairs during the RAS and Doble testing period. RAS testing on these units will occur while they are OOS.

If warm water temperatures are a concern during this period, the FPP (MCN Section 4.1) calls for operating every-other unit ("staggered" pattern) instead of adjacent units. However, as many as five units in a row will be off at any one time with the staggered pattern and the units OOS for the Doble testing and unit maintenance/repairs:

-Units 8, 9, 10, 11, 12. Units 8 and 12 will be off in the staggered pattern that has the odd-numbered units operating. Use the staggered pattern that has the even-numbered units operating for as much as possible when units 9, 10, and 11 are off so that there will be three units off in a row instead of five. .

-Units 3, 4, and one adjacent unit. Unit 2 will be off in the staggered pattern that has the odd-numbered units operating. Unit 5 will be off in the off in the opposite staggered pattern.

-Units 7, 8, and one adjacent unit. Unit 6 will be off in the staggered pattern that has the odd-numbered units operating. Unit 9 will be off in the opposite staggered pattern.

- RAS testing on units 7 and 8, and 9 and 10 will need to occur on the weeks when Doble testing is not occurring on each set of units. Units 9 and 10 will be RAS-tested the first week, and units 7 and 8 will be RAS-tested the second week.

-RAS testing will be performed first on the even-numbered units, including unit 10, and other units that are not running in the staggered pattern to reduce the number of times units need to be stopped and started.

-Towards the end of the first week, the staggered pattern will be switched (during the cooler early morning hours) to the odd-numbered units not running so RAS testing can be done on the odd-numbered units, including unit 9). However,

since unit 1 is the priority unit for fish, it will be kept on except for when it is RAS-tested in the afternoon hours. During the beginning of the second week, RAS testing will be done on unit 7.

-Towards the end of the second week, the staggered pattern will be switched (during the cooler early morning hours) back to the even-numbered units not running, so RAS testing can be performed on unit 8 and any other units that need to be completed.

- RAS testing should not exacerbate warm water temperature problems when performed as outlined above.

-When possible, the project will avoid shutting down and turning on units during the hottest part of the day, from 1500 to 2100 hours.

-The Project Fishery Biologist may coordinate a different unit operating pattern if needed , to better reduce warm water problems and accommodate RAS testing completion.

After talking with project folks on July 3, more information on current operations was obtained. All of the units that are available for service are currently operating. If river flow levels continue to require 9 units operating next week, these units will need to be taken OOS one at a time for the RAS testing, in addition to the units that are already offline for maintenance/repairs, as indicated by the gray and blue "unit out" blocks in the following table. Units should not be turned back on if there is a risk of thermo-shocking fish by drawing warm water from the forebay into the juvenile passage system.

	MU1	MU2	MU3	MU4	MU5	MU6	MU7	MU8	MU9	MU10	MU11	MU12	MU13	MU14
8-Jul		8 Jul - PM										8 Jul AM		
9-Jul						9 Jul -AM								9 Jul PM
10-Jul							10 Jul - AM	10 Jul PM						
11-Jul			11 Jul - AM	11 Jul PM										
15-Jul	15 Jul -PM										15 Jul AM			
16-Jul									16 Jul PM					
17-Jul					17 Jul - AM					17 Jul -AM			17 Jul -PM	
18-Jul					18 Jul - AM									

Unit Offline
Unit Out
Unit Out
Doble 8-11 Jul
Doble 15-18 Jul

On July 9, the protocol for when to restart a unit after completion of RAS (or Doble) testing was finalized. The water temperature data monitoring at McNary is not real-time, as there is generally a lag time of one day to collect the data. Therefore the decision on when to turn a unit back on after RAS testing is not based on real-time data. The protocol will be to not restart units between 1500 hours and 2300 hours following RAS testing, because the associated water temperatures may be above 68 degrees F and/or temperature gradients may be over 5 degrees F during this period. The one unit's worth of water for power generation will be pooled in the forebay until the unit is turned back on at night when the water is cooler. If water temperature trends consistently show safe water temperature conditions for fish and the weather forecast is for cooler temperatures and/or windy conditions, the Project Fishery Biologist may remove the 1500 hour to 2300 hour constraint.

Comments from agencies:

-----Original Message-----
From: Morrill, Charles (DFW) [mailto:Charles.Morrill@dfw.wa.gov]
Sent: Tuesday, July 09, 2013 1:48 PM

To: Gary Fredricks - NOAA Federal; Fone, Kenneth R NWW
Cc: Rosanna L. Mensik; Wills, Dave; Lorz, Tom; Setter, Ann L NWW; Trevor Conder - NOAA Federal; Dugger, Carl R NWW; Moody, Gregory P NWW; Johnson, Bobby NWW; Bailey, John C NWW
Subject: RE: FPOM: updated 13MCN12 - RAS Testing (UNCLASSIFIED)
Importance: High

Folks,

Yes, there is a time lag on temp data collected on site ...

I agree with Gary's assessment ...

Charlie

-----Original Message-----
From: Gary Fredricks - NOAA Federal [mailto:gary.fredricks@noaa.gov]
Sent: Tuesday, July 09, 2013 1:22 PM
To: Fone, Kenneth R NWW
Cc: Rosanna L. Mensik; Wills, Dave; Lorz, Tom; Setter, Ann L NWW; Trevor Conder - NOAA Federal; Charles Morrill; Dugger, Carl R NWW; Moody, Gregory P NWW; Johnson, Bobby NWW; Bailey, John C NWW
Subject: Re: FPOM: updated 13MCN12 - RAS Testing (UNCLASSIFIED)

Ken, Ok, that sounds like a good approach. Based on the Northwest River Forecast Center's 10-day forecast, I see that the basin temperatures will likely drop a bit this week but then head back by mid-next week. Also, the wind forecast looks good through Friday but then calms down into the weekend and early next week. Keep careful notes of your actions and reasoning in case a temperature related mortality event does occur. Thanks, Gary

On Tue, Jul 9, 2013 at 12:05 PM, Fone, Kenneth R NWW <Kenneth.R.Fone@usace.army.mil> wrote:

> Classification: UNCLASSIFIED
> Caveats: NONE
>
> Gary,
>
> I spoke with Carl about this. The limitations we have is that the temperature data monitoring at McNary is not real-time. PSMFC has to physically go out to each temperature probe and connect with a laptop to download the data. Temperatures are collected once per day and PSMFC employees are not typically working the late afternoon and evening hours at McNary. The data is collected through the contract the Corps has with PSMFC.
>
> So we generally have a lag time of one day when looking at the water temperatures from the warmest period of the day. The decision on when to turn a unit back on after RAS testing is not based on real-time data. Carl and Bobby have looked at the temperature data collected during this current warm spell and have identified the 3 p.m to 11 p.m. period as possibly having certain locations with water temperatures

above 68 degrees F and/or temperature gradients over 5 degrees F. Outside of this time period, water temperatures and gradients have been safe for fish.

The protocol they will follow is not to restart units between 3 and 11 p.m following RAS testing. If water temperature trends consistently show safe water temperature conditions for fish and the weather forecast is for cooler temperatures and/or windy conditions, the Project Fishery Biologist may remove the 3 to 11 constraint.

Ken

-----Original Message-----
From: Gary Fredricks - NOAA Federal [mailto:gary.fredricks@noaa.gov]
Sent: Monday, July 08, 2013 3:57 PM
To: Fone, Kenneth R NWW
Cc: Rosanna L. Mensik; Wills, Dave; Lorz, Tom; Setter, Ann L NWW; Trevor Conder - NOAA Federal; Charles Morrill; Dugger, Carl R NWW; Moody, Gregory P NWW; Johnson, Bobby NWW
Subject: Re: FPOM: updated 13MCN12 - RAS Testing (UNCLASSIFIED)

Ken, I'll leave it up to Carl and Bobby to work out the monitoring protocol for restarting units since they know best how to do this. I would appreciate someone writing down the protocol since I didn't see anything specific in the FPP (other than JFF temperature monitoring). I expect it's little more than measuring temps in the forebay outside the unit and inside the gatewells (and collection channel?), if differences are less than X degrees, crank 'er up - but I'd like to see some specifics. Doing so would certainly help me understand more about temperature issues at McNary. Thanks, Gary

On Mon, Jul 8, 2013 at 3:19 PM, Fone, Kenneth R NWW <Kenneth.R.Fone@usace.army.mil> wrote:

Classification: UNCLASSIFIED
Caveats: NONE

Gary (and others),

I appreciate you taking the time to modify the format of the spreadsheet to convey the information more clearly.

We had the weekly RCC fish call this afternoon and discussed not turning the RAS-tested units back on in the mid-afternoon if there is warm water in the forebay near the unit. The plan is to pool the one unit's worth of water in the forebay until the unit is turned back on at night when the water is cooler. Temperatures will be monitored throughout the RAS testing period in order to prevent subjecting fish to thermal shock.

Ken

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

From: Gary Fredricks - NOAA Federal [mailto:gary.fredricks@noaa.gov]
Sent: Friday, July 05, 2013 4:49 PM
To: Fone, Kenneth R NWW
Cc: Rosanna L. Mensik; Wills, Dave; Lorz, Tom; Setter, Ann L NWW; Trevor Conder - NOAA Federal; Charles Morrill
Subject: Re: FPOM: updated 13MCN12 - RAS Testing (UNCLASSIFIED)

Ken, I just realized that I hadn't updated the outage spreadsheet with some corrections. Please disregard the first one and use this one. Thanks, Gary

On Fri, Jul 5, 2013 at 4:44 PM, Gary Fredricks - NOAA Federal <gary.fredricks@noaa.gov> wrote:

Ken, I took the liberty of taking the spreadsheet you sent and modifying it to show outages (for any reason) by AM or PM blocked in red with the RAS testing indicated by the blocks with dates and times. I see that the individual RAS outages are now 4 hours rather than the 2-3 hours first mentioned. This means that a half day breakdown of the schedule is likely appropriate (as opposed to the hourly that I was originally thinking). This breakdown more clearly shows the time periods when consecutive units are out of service. From this, it looks like the RAS testing will increase four two unit outage blocks to three unit outage blocks, mostly during the morning hours. I don't really expect this to be an issue and I don't see any adult concerns since you have unit one off only during one afternoon period. The biggest concern is probably the one Rosanna raises regarding the restarting of units after several hours of no operation during the afternoon. It appears that this will occur four times (MU1, 2, 13, and 14) if I am reading this correctly. It seems that those four tests will have to be done very carefully with adequate temperature monitoring as you suggested. If necessary, keeping these units off unit the morning also sounds like a good idea, regardless of the river flow levels. Thanks, Gary

On Wed, Jul 3, 2013 at 5:03 PM, Fone, Kenneth R NWW <Kenneth.R.Fone@usace.army.mil> wrote:

Classification: UNCLASSIFIED
Caveats: NONE

FPOM members,

Here is a table showing the proposed schedule for RAS testing each unit at McNary. The table was developed after discussion among project and district folks, including Mike Schneider who has developed McNary temperature models, to help address concerns of warm water concerns for fish. All of the units that are available for service are currently operating. If river flow levels continue to require 9 units operating next week, these units will need to be taken OOS one at a time for the RAS testing, as indicated by the

gray and blue "unit out" blocks in the table. "AM" is morning and "PM" is afternoon. On a typical day of RAS testing, a unit will be taken OOS at about 0700 hours and returned to service at about 1100 hours. The next unit to test will be taken OOS at about 1100 hours. If there are concerns for drawing in warm water into the gatewells when this unit is returned to service, the unit will be kept OOS until the cooler morning hours. However, river flow conditions may require that the unit be returned to service earlier, such as at the completion of testing in the afternoon.

Project personnel will monitor forebay and gatewell water temperatures at each unit as testing is occurring. The particular units that are scheduled to be tested each day may be switched around to take advantage of cooler water at certain units.

Please respond if you still have concerns about the RAS testing. I will not be at work this Friday July 5, but will be checking e-mail.

Ken

-----Original Message-----
From: Fone, Kenneth R NWW
Sent: Wednesday, July 03, 2013 12:08 AM
To: Fone, Kenneth R NWW; Bailey, John C NWW; Baus, Douglas M NWD; BPA Scott Bettin; Dave Benner; 'Ed Meyer (ed.meyer@noaa.gov)'; 'Fredricks, Gary'; Haeseker, Steve; 'Hevlin, Bill'; 'Jason Sweet'; 'Kiefer,Russell'; Klatte, Bernard A NWP; 'Kruger, Rick'; Langeslay, Mike J NWP; 'Lorz, Tom'; Mackey, Tammy M NWP; Moody, Gregory P NWW; 'Richards, Steven P (DFW)'; Setter, Ann L NWW; Shutters, Marvin K NWW; Stansell, Robert J NWP; 'Swenson, Larry'; 'trevor.conder@noaa.gov'; Wills, Dave; Cordie, Robert P NWP; Dykstra, Timothy A NWD; Eppard, Matthew B NWP; Faulkner, Donald L NWD; Feil, Dan H NWD; Hausmann, Ben J NWP; 'Hurd, Terry W NWP'; Keller, Paul S NWP; Lear, Gayle HQ @ NWD; Medina, George J NWP; Ocker, Paul A NWD; Peters, Rock D NWD; Rerecich, Jonathan G NWP; Richards, Natalie A NWP; Schneider, Carolyn B NWP; Schwartz, Dennis E NWP; Tackley, Sean C NWP; Traylor, Andrew NWP; Van-der-leeuw, Bjorn NWP; Walker, Christopher NWP; Wright, Lisa NWD; Zorich, Nathan A NWP; Zyndol, Miroslaw A NWP; Brooks, Francis C NWW; Dugger, Carl R NWW; Eskildsen, Robert D NWW; FCRPS NWW; Fryer, Derek S NWW; Halter, Mike J NWW; Juul, Steve T NWW; Kirts, Linda R NWW; Melanson, George W NWW; Plummer, Mark F NWW; Spurgeon, William F NWW; Weston, Dwayne M NWW; 'Aaron Jackson'; 'Agnes Lute (axlut@bpa.gov)'; 'Ballinger, Dean'; 'Bob Rose'; 'Brian McIlraith'; 'Charles Morrill (charles.morrill@dfw.wa.gov)'; 'Chris Caudill (caudill@uidaho.edu)'; 'Chris_Peery@fws.gov'; Statler, Dave; 'elmerc@nezperce.org'; 'Erick VanDyke'; ''Fred Mensik' (lgrsmolt@gmail.com)'; 'Fryer, Jeff'; 'Jerry McCann'; 'Kathryn Kostow'; 'Kovalchuk, Greg'; 'Martinson, Rick'; 'Patrick Luke'; 'Roger Dick Jr.'; 'Rosanna Mensik'; Rapp, Shawn; 'Shane Scott'; 'Skidmore,John T - KEWR-4'; 'Tucker Jones'; 'Warf, Don'; 'Whiteaker, John'; Sears, Sheri
Cc: Mettler, Lonnie E NWW (Lonnie.E.Mettler@usace.army.mil); Gersbach, William J NWW; Johnson, Bobby NWW; Roberts, Timothy J NWW
Subject: RE: FPOM: updated 13MCN12 - RAS Testing (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

FPOM folks,

In response to concerns from several FPOM members about the affect of the unit outages for RAS testing on warm water unit operations at McNary, the attached coordination request has been updated to address these concerns, including how RAS testing will be accomplished in conjunction with Doble testing and annual maintenance/repairs that are occurring. Also, one more day has been added to the end of the original RAS testing schedule.

The updates are shown as "track changes" in the document, mainly in the "Expected Impacts on Fish Passage" section. Because of the upcoming long holiday weekend and scheduled July 8 (this Monday) start to RAS testing, please send me your comments/concerns by the close of business on Wednesday July 3.

Thanks,
Ken Fone
Fishery Biologist
Walla Walla District
U.S. Army Corps of Engineers
509-527-7140

-----Original Message-----
From: Fone, Kenneth R NWW
Sent: Tuesday, June 25, 2013 3:37 PM
To: Bailey, John C NWW; Baus, Douglas M NWD; BPA Scott Bettin; Dave Benner; 'Ed Meyer (ed.meyer@noaa.gov)'; 'Fredricks, Gary'; Haeseker, Steve; 'Hevlin, Bill'; 'Jason Sweet'; 'Kiefer,Russell'; Klatte, Bernard A NWP; 'Kruger, Rick'; Langeslay, Mike J NWP; 'Lorz, Tom'; Mackey, Tammy M NWP; Moody, Gregory P NWW; 'Richards, Steven P (DFW)'; Setter, Ann L NWW; Shutters, Marvin K NWW; Stansell, Robert J NWP; 'Swenson, Larry'; 'trevor.conder@noaa.gov'; Wills, Dave; Cordie, Robert P NWP; Dykstra, Timothy A NWD; Eppard, Matthew B NWP; Faulkner, Donald L NWD; Feil, Dan H NWD; Hausmann, Ben J NWP; 'Hurd, Terry W NWP'; Keller, Paul S NWP; Lear, Gayle HQ @ NWD; Medina, George J NWP; Ocker, Paul A NWD; Peters, Rock D NWD; Rerecich, Jonathan G NWP; Richards, Natalie A NWP; Schneider, Carolyn B NWP; Schwartz, Dennis E NWP; Tackley, Sean C NWP; Traylor, Andrew NWP; Van-der-leeuw, Bjorn NWP; Walker, Christopher NWP; Wright, Lisa NWD; Zorich, Nathan A NWP; Zyndol, Miroslaw A NWP; Brooks, Francis C NWW; Dugger, Carl R NWW; Eskildsen, Robert D NWW; FCRPS NWW; Fone, Kenneth R NWW; Fryer, Derek S NWW; Halter, Mike J NWW; Juul, Steve T NWW; Kirts, Linda R NWW; Melanson, George W NWW; Plummer, Mark F NWW; Spurgeon, William F NWW; Weston, Dwayne M NWW; 'Aaron Jackson'; 'Agnes Lute (axlut@bpa.gov)'; 'Ballinger, Dean'; 'Bob Rose'; 'Brian McIlraith'; 'Charles Morrill (charles.morrill@dfw.wa.gov)'; 'Chris Caudill (caudill@uidaho.edu)'; 'Chris_Peery@fws.gov'; Statler, Dave; 'elmerc@nezperce.org'; 'Erick VanDyke'; ''Fred Mensik' (lgrsmolt@gmail.com)'; 'Fryer, Jeff'; 'Jerry McCann'; 'Kathryn Kostow'; 'Kovalchuk, Greg'; 'Martinson, Rick'; 'Patrick Luke'; 'Roger Dick Jr.'; 'Rosanna Mensik'; Rapp, Shawn; 'Shane Scott'; 'Skidmore,John T - KEWR-4'; 'Tucker Jones'; 'Warf, Don'; 'Whiteaker, John'; Sears, Sheri

Cc: Mettler, Lonnie E NWW (Lonnie.E.Mettler@usace.army.mil); Gersbach, William J NWW; Johnson, Bobby NWW; Roberts, Timothy J NWW
Subject: FPOM: 13MCN12 - RAS Testing (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

FPOM folks,

See the attached coordination request for RAS testing at McNary scheduled for July 8-11 and July 15-17, 2013. Please respond with any comments/concerns by July 3.

Thanks,

Ken Fone
Fishery Biologist
Operations Division
Walla Walla District
U.S. Army Corps of Engineers
509-527-7140

-----Original Message-----
From: Morrill, Charles (DFW) [mailto:Charles.Morrill@dfw.wa.gov]
Sent: Wednesday, July 03, 2013 3:52 PM
To: Fone, Kenneth R NWW; Bailey, John C NWW; Baus, Douglas M NWD; BPA Scott Bettin; Dave Benner; Ed Meyer (ed.meyer@noaa.gov); Fredricks, Gary; Haeseker, Steve; Hevlin, Bill; Jason Sweet; Kiefer,Russell; Klatte, Bernard A NWP; 'Kruger, Rick'; Langeslay, Mike J NWP; Lorz, Tom; Mackey, Tammy M NWP; Moody, Gregory P NWW; Richards, Steven P (DFW); Setter, Ann L NWW; Shutters, Marvin K NWW; Stansell, Robert J NWP; 'Swenson, Larry'; trevor.conder@noaa.gov; Wills, Dave; Cordie, Robert P NWP; Dykstra, Timothy A NWD; Eppard, Matthew B NWP; Faulkner, Donald L NWD; Feil, Dan H NWD; Hausmann, Ben J NWP; Hurd, Terry W NWP; Keller, Paul S NWP; Lear, Gayle HQ @ NWD; Medina, George J NWP; Ocker, Paul A NWD; Peters, Rock D NWD; Rerecich, Jonathan G NWP; Richards, Natalie A NWP; Schneider, Carolyn B NWP; Schwartz, Dennis E NWP; Tackley, Sean C NWP; Traylor, Andrew NWP; Van-der-leeuw, Bjorn NWP; Walker, Christopher NWP; Wright, Lisa NWD; Zorich, Nathan A NWP; Zyndol, Miroslaw A NWP; Brooks, Francis C NWW; Dugger, Carl R NWW; Eskildsen, Robert D NWW; FCRPS NWW; Fryer, Derek S NWW; Halter, Mike J NWW; Juul, Steve T NWW; Kirts, Linda R NWW; Melanson, George W NWW; Plummer, Mark F NWW; Spurgeon, William F NWW; Weston, Dwayne M NWW; Aaron Jackson; Agnes Lute (axlut@bpa.gov); Ballinger, Dean; Bob Rose; Brian McIlraith; Chris Caudill (caudill@uidaho.edu); Chris_Peery@fws.gov; Statler, Dave; 'elmerc@nezperce.org'; Erick VanDyke; 'Fred Mensik' (lgrsmolt@gmail.com); Fryer, Jeff; Jerry McCann; Kathryn Kostow; Kovalchuk, Greg; Martinson, Rick; Patrick Luke; Roger Dick Jr.; Rosanna Mensik; Rapp, Shawn; 'Shane Scott'; Skidmore,John T - KEWR-4; Tucker Jones; Warf, Don; Whiteaker, John; Sears, Sheri

Cc: Mettler, Lonnie E NWW; Gersbach, William J NWW; Johnson, Bobby NWW; Roberts, Timothy J NWW
Subject: RE: FPOM: updated 13MCN12 - RAS Testing (UNCLASSIFIED)
Importance: High

Hi Ken, et al.

As we discussed on the phone today, the potential for thermal impacts to subyearling Chinook, the dominant species passing the project during this scheduled test, is, in my opinion very high and of course dependent upon weather .. primarily air temperatures and wind ...

Your latest update does identify steps the COE propose's to take to help minimize potential temperature differentials and issues. Rosanna's experience and her comments I believe are well founded. Even with these steps, the likelihood of thermal stress is very real and may not be expressed in direct mortality.

A combination of high air temperatures, little or no wind, and little cooling at night ... could result in severe adverse conditions for juvenile salmonids. It's been years since we've had a thermally induced fish mortality event at McNary and hopefully conditions will not result in one during the scheduled operation.

However, in the event conditions do result in a mortality event, what steps will the COE take until conditions improve to allow work to continue without imposing additional mortality?

Thanks Ken !

Have a good 4th of July weekend !

Charlie

Charles Morrill
Fish Management
WA Dept Fish & Wildlife
600 Capitol Way N
Olympia, WA 98501-1091
360 902-2747
Charles.Morrill@dfw.wa.gov

-----Original Message-----
From: Fone, Kenneth R NWW [mailto:Kenneth.R.Fone@usace.army.mil]
Sent: Wednesday, July 03, 2013 12:08 AM
To: Fone, Kenneth R NWW; Bailey, John C NWW; Baus, Douglas M NWD; BPA Scott Bettin; Dave Benner; Ed Meyer (ed.meyer@noaa.gov); Fredricks, Gary; Haeseker, Steve; Hevlin, Bill; Jason Sweet; Kiefer,Russell; Klatte, Bernard A NWP; 'Kruger, Rick'; Langeslay, Mike J NWP; Lorz, Tom; Mackey, Tammy M NWP; Moody, Gregory P NWW; Richards, Steven P (DFW); Setter, Ann L NWW; Shutters, Marvin K NWW; Stansell, Robert J NWP; 'Swenson, Larry'; trevor.conder@noaa.gov; Wills, Dave; Cordie, Robert P NWP; Dykstra, Timothy A NWD; Eppard, Matthew B NWP; Faulkner, Donald L NWD; Feil, Dan H NWD; Hausmann, Ben J NWP; Hurd, Terry W NWP; Keller, Paul S NWP; Lear, Gayle HQ @ NWD; Medina, George J NWP; Ocker, Paul A NWD; Peters, Rock D NWD; Rerecich, Jonathan G NWP; Richards, Natalie A NWP; Schneider, Carolyn B NWP; Schwartz, Dennis E NWP;

Tackley, Sean C NWP; Traylor, Andrew NWP; Van-der-leeuw, Bjorn NWP; Walker, Christopher NWP; Wright, Lisa NWD; Zorich, Nathan A NWP; Zyndol, Miroslaw A NWP; Brooks, Francis C NWW; Dugger, Carl R NWW; Eskildsen, Robert D NWW; FCRPS NWW; Fryer, Derek S NWW; Halter, Mike J NWW; Juul, Steve T NWW; Kirts, Linda R NWW; Melanson, George W NWW; Plummer, Mark F NWW; Spurgeon, William F NWW; Weston, Dwayne M NWW; Aaron Jackson; Agnes Lute (axlut@bpa.gov); Ballinger, Dean; Bob Rose; Brian McIlraith; Morrill, Charles (DFW); Chris Caudill (caudill@uidaho.edu); Chris_Peery@fws.gov; Statler, Dave; 'elmerc@nezperce.org'; Erick VanDyke; 'Fred Mensik' (lgrsmolt@gmail.com); Fryer, Jeff; Jerry McCann; Kathryn Kostow; Kovalchuk, Greg; Martinson, Rick; Patrick Luke; Roger Dick Jr.; Rosanna Mensik; Rapp, Shawn; 'Shane Scott'; Skidmore,John T - KEWR-4; Tucker Jones; Warf, Don; Whiteaker, John; Sears, Sheri
Cc: Mettler, Lonnie E NWW; Gersbach, William J NWW; Johnson, Bobby NWW; Roberts, Timothy J NWW
Subject: RE: FPOM: updated 13MCN12 - RAS Testing (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

FPOM folks,

In response to concerns from several FPOM members about the affect of the unit outages for RAS testing on warm water unit operations at McNary, the attached coordination request has been updated to address these concerns, including how RAS testing will be accomplished in conjunction with Doble testing and annual maintenance/repairs that are occurring. Also, one more day has been added to the end of the original RAS testing schedule.

The updates are shown as "track changes" in the document, mainly in the "Expected Impacts on Fish Passage" section. Because of the upcoming long holiday weekend and scheduled July 8 (this Monday) start to RAS testing, please send me your comments/concerns by the close of business on Wednesday July 3.

Thanks,
Ken Fone
Fishery Biologist
Walla Walla District
U.S. Army Corps of Engineers
509-527-7140

-----Original Message-----
From: Wills, David [mailto:david_wills@fws.gov]
Sent: Wednesday, June 26, 2013 7:43 AM
To: Fone, Kenneth R NWW
Cc: Bailey, John C NWW; Baus, Douglas M NWD; BPA Scott Bettin; Dave Benner; Ed Meyer (ed.meyer@noaa.gov); Fredricks, Gary; Haeseker, Steve; Hevlin, Bill; Jason Sweet; Kiefer,Russell; Klatte, Bernard A NWP; Kruger, Rick; Langeslay, Mike J NWP; Lorz, Tom; Mackey, Tammy M NWP; Moody, Gregory P NWW; Richards, Steven P (DFW); Setter, Ann L NWW; Shutters, Marvin K NWW; Stansell, Robert J NWP; Swenson, Larry;

trevor.conder@noaa.gov; Cordie, Robert P NWP; Dykstra, Timothy A NWD; Eppard, Matthew B NWP; Faulkner, Donald L NWD; Feil, Dan H NWD; Hausmann, Ben J NWP; Hurd, Terry W NWP; Keller, Paul S NWP; Lear, Gayle HQ @ NWD; Medina, George J NWP; Ocker, Paul A NWD; Peters, Rock D NWD; Rerecich, Jonathan G NWP; Richards, Natalie A NWP; Schneider, Carolyn B NWP; Schwartz, Dennis E NWP; Tackley, Sean C NWP; Traylor, Andrew NWP; Van-der-leeuw, Bjorn NWP; Walker, Christopher NWP; Wright, Lisa NWD; Zorich, Nathan A NWP; Zyndol, Miroslaw A NWP; Brooks, Francis C NWW; Dugger, Carl R NWW; Eskildsen, Robert D NWW; FCRPS NWW; Fryer, Derek S NWW; Halter, Mike J NWW; Juul, Steve T NWW; Kirts, Linda R NWW; Melanson, George W NWW; Plummer, Mark F NWW; Spurgeon, William F NWW; Weston, Dwayne M NWW; Aaron Jackson; Agnes Lute (axlut@bpa.gov); Ballinger, Dean; Bob Rose; Brian McIlraith; Charles Morrill (charles.morrill@dfw.wa.gov); Chris Caudill (caudill@uidaho.edu); Chris_Peery@fws.gov; Statler, Dave; elmerc@nezperce.org; Erick VanDyke; 'Fred Mensik' (lgrsmolt@gmail.com); Fryer, Jeff; Jerry McCann; Kathryn Kostow; Kovalchuk, Greg; Martinson, Rick; Patrick Luke; Roger Dick Jr.; Rosanna Mensik; Rapp, Shawn; Shane Scott; Skidmore,John T - KEWR-4; Tucker Jones; Warf, Don; Whiteaker, John; Sears, Sheri; Mettler, Lonnie E NWW; Gersbach, William J NWW; Johnson, Bobby NWW; Roberts, Timothy J NWW
Subject: Re: FPOM: 13MCN12 - RAS Testing (UNCLASSIFIED)

Ken,
According to the FPP, doble testing of transformer banks is scheduled for McNary from July 8-19. Is this still going forward? Banks of turbine units would be out for days. Warming forebay temperatures may be a factor for the bypass system with various turbines offline. Should we assume that the doble testing and RAS testing will be performed concurrently and not sequentially? Whatever the case, the impacts of the RAS testing is not accurately portrayed if the doble testing is going forward as scheduled. Some more clarification is needed to help me understand all the potential impacts of the testing.

David Wills
U.S. Fish & Wildlife Service
Columbia River Fisheries Program Office
1211 S.E. Cardinal Court, Suite 100
Vancouver, Washington 98683-9684
phone: (360) 604-2500
fax: (360 604-2505
e-mail: david_wills@fws.gov
http://www.fws.gov/columbiariver

On Tue, Jun 25, 2013 at 3:36 PM, Fone, Kenneth R NWW <Kenneth.R.Fone@usace.army.mil> wrote:

> Classification: UNCLASSIFIED
> Caveats: NONE
>
> FPOM folks,

See the attached coordination request for RAS testing at McNary scheduled for July 8-11 and July 15-17, 2013. Please respond with any comments/concerns by July 3.

Thanks,

Ken Fone
Fishery Biologist
Operations Division
Walla Walla District
U.S. Army Corps of Engineers
509-527-7140

-----Original Message-----
From: Gary Fredricks - NOAA Federal [mailto:gary.fredricks@noaa.gov]
Sent: Wednesday, June 26, 2013 7:17 AM
To: Fone, Kenneth R NWW
Cc: Lorz, Tom; Trevor Conder - NOAA Federal
Subject: Re: FPOM: 13MCN12 - RAS Testing (UNCLASSIFIED)

Ken, Thanks for the clarification. I thought these were probably the new entrance graphs that we discussed at the last FPOM, which would probably be the best data to use for determining unit outage times. However, given that the graphs you showed were based on window counts, I would agree with your proposed timing. Looking at in that light, I also see why the north and south entrances have different timing since it would take fish entering the north side longer to get to the count window. Starting around noon is probably best. Thanks, Gary

On Tue, Jun 25, 2013 at 4:29 PM, Fone, Kenneth R NWW <Kenneth.R.Fone@usace.army.mil> wrote:

Classification: UNCLASSIFIED
Caveats: NONE

Gary,

Thanks for the quick reply. For clarification, these graphs are from the counts at the window. So these fish entered the ladder a little bit earlier than the times shown on the graphs (I don't know what the mean passage time is from the entrances to the window). The different colors on the graphs represent the Oregon and Washington ladders, not the south and north fishway entrances of the Oregon ladder.

If your recommendation is not to take unit 1 OOS until after 1400, that should not be a problem to accommodate.

Thanks,
Ken

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

From: Gary Fredricks - NOAA Federal [mailto:gary.fredricks@noaa.gov]
Sent: Tuesday, June 25, 2013 4:00 PM
To: Fone, Kenneth R NWW
Cc: Lorz, Tom; Trevor Conder - NOAA Federal
Subject: Re: FPOM: 13MCN12 - RAS Testing (UNCLASSIFIED)

Ken, I agree that the dates are ok, but I would say that noon was a bit soon to start an outage of the end units. It looks like, from the graphs that you included, lower passage for each speciesis different for each entrance. I looks like noon might be a good starting time for the north entrance (unit 14) but somenting more like 1400 would be better for the south (unit 1). This should still give time for the 2-3 hour test before the 1800 quitting time. Thanks, Gary

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-----Original Message-----
From: Rosanna Mensik [mailto:rmensik@psmfc.org]
Sent: Wednesday, June 26, 2013 6:24 AM
To: Fone, Kenneth R NWW; Bailey, John C NWW; Baus, Douglas M NWD; BPA Scott Bettin; Dave Benner; Ed Meyer (ed.meyer@noaa.gov); Fredricks, Gary; Haeseker, Steve; Hevlin, Bill; Jason Sweet; Kiefer,Russell; Klatte, Bernard A NWP; 'Kruger, Rick'; Langeslay, Mike J NWP; Lorz, Tom; Mackey, Tammy M NWP; Moody, Gregory P NWW; Richards, Steven P (DFW); Setter, Ann L NWW; Shutters, Marvin K NWW; Stansell, Robert J NWP; 'Swenson, Larry'; trevor.conder@noaa.gov; Wills, Dave; Cordie, Robert P NWP; Dykstra, Timothy A NWD; Eppard, Matthew B NWP; Faulkner, Donald L NWD; Feil, Dan H NWD; Hausmann, Ben J NWP; Hurd, Terry W NWP; Keller, Paul S NWP; Lear, Gayle HQ @ NWD; Medina, George J NWP; Ocker, Paul A NWD; Peters, Rock D NWD; Rerecich, Jonathan G NWP; Richards, Natalie A NWP; Schneider, Carolyn B NWP; Schwartz, Dennis E NWP; Tackley, Sean C NWP; Traylor, Andrew NWP; Van-der-leeuw, Bjorn NWP; Walker, Christopher NWP; Wright, Lisa NWD; Zorich, Nathan A NWP; Zyndol, Miroslaw A NWP; Brooks, Francis C NWW; Dugger, Carl R NWW; Eskildsen, Robert D NWW; FCRPS NWW; Fryer, Derek S NWW; Halter, Mike J NWW; Juul, Steve T NWW; Kirts, Linda R NWW; Melanson, George W NWW; Plummer, Mark F NWW; Spurgeon, William F NWW; Weston, Dwayne M NWW; Aaron Jackson; Agnes Lute (axlut@bpa.gov); Ballinger, Dean; Bob Rose; Brian McIlraith; Charles Morrill; Chris Caudill (caudill@uidaho.edu); Chris_Peery@fws.gov; Statler, Dave; 'elmerc@nezperce.org'; Erick VanDyke; 'Fred Mensik' (lgrsmolt@gmail.com); Jeff Fryer; Jerry McCann; Kathryn Kostow; Greg Kovalchuk; Martinson, Rick; Patrick Luke; Roger Dick Jr.; Rapp, Shawn; 'Shane Scott'; Skidmore,John T - KEWR-4; Tucker Jones; Don Warf; Whiteaker, John; Sears, Sheri
Cc: Mettler, Lonnie E NWW; Gersbach, William J NWW; Johnson, Bobby NWW; Roberts, Timothy J NWW
Subject: RE: FPOM: 13MCN12 - RAS Testing (UNCLASSIFIED)

I see in your graphs that you have done the home work on adults. Have you considered the impact on juveniles? McNary forebay can heat up starting in the afternoon around 2 pm until 2 hours after sundown. If we are turning units off and on during that time, we will impact fish.

Rosanna L. Mensik
McNary Dam JFF

541.922.3630 office
541.561.6158 cell

Final results: Supported by FPOM members, with the constraints contained in this form about the time of day for restarting units and taking units 1 and 14 OOS.

RAS testing took place within the stated calendar period and was completed early in the second week. There were no trends of increasing water temperatures/temperature differentials in the juvenile passage system noted during the RAS testing period. The condition of fish in the smolt monitoring sample was monitored as usual, with no trend of worsening fish condition observed during the testing.

Thank you,

Ken Fone
Fishery Biologist
Operations Division
Walla Walla District Office
509-527-7140

Carl R. Dugger
Supervisory Fisheries Biologist
McNary Lock and Dam
541-922-2263