**OFFICIAL MEMO of COORDINATION (MOC) FOR**

**NON-ROUTINE OPERATIONS & MAINTENANCE**

**COORDINATION TITLE-** 20 IHR 08 Floating Guidewall Cable Replacement

**COORDINATION DATE-** November 16, 2020, Updated November 19, 2020

**PROJECT-** Ice Harbor Lock and Dam

**RESPONSE DATE-** December 3, 2020

**Description of problem.** The Corps needs to complete replacement of the cables at Ice Harborfloating navigation lock guidewall that began last fiscal year. Work was interrupted by the contractor due to growing concerns over the COVID-19 pandemic. Dredging would need to be conducted to locate two anchor blocks and all four of the anchor cables will be replaced. The Corps plans to replace these cables February 1, through March 2, 2021. Divers would attach the new cables to the anchors.

The cables are attached to two anchor blocks in the forebay of the dam. One of the anchor blocks is buried under approximately 20 feet of accumulated sediment. The Corps proposes to remove the accumulated sediment by hydraulically dredging the material using a 6-inch intake suction valve and disposing the material in an in-water contained area located in the north side of the forebay. Approximately 2,000 cubic yards of sediment would be moved. Dredging is scheduled to occur while the north shore fishway is be out of operation for winter maintenance in February. Movement of sediments within the forebay could potentially affect fish present in the area near the dam. Dive work to replace cables will occur immediately following the dredge work in late February.

1. **Type of outage required** (relate to deviation from FPP). No spill during March 1-2, 2021.
2. **Dates of impacts/repairs.** Dredging: February 1-20, 2021 during the in-water work window. Attachment of cables immediately following dredging in February 21, through March 2 , 2021. No spill can occur during dive work and while the dive barge is anchored in the forebay.
3. **Length of time for repairs.** Dredging will take place over three weeks between February 1-20 , 2021 and attachment of cables immediately following dredging. Dredging could occur both day and night. Contractor is targeting February for dredging when the fish ladder is anticipated to be closed.
4. **Impact on fish facility operation** *(fishway, JFF, etc.)***.** None. North shore fishway will be open as usual December, January, and March.
5. **Impact on project operations** (*unit priority, forebay/tailwater operation and/or spill*). Spillway would be closed February 1 through March 2 to allow for cable replacement. A barge would be staged in the forebay during cable replacement activities. No spill can occur during dive work.
6. **Analysis of potential impacts to fish. Include:**
	1. 10-year average passage of adults and juveniles of each affected listed species during dates of impact.

No fish counts are available for December through March at Ice Harbor Dam. Steelhead counted January of 2014 totaled 222 adults. March steelhead counts collected 2013 and 2018 averaged 1,098 for the month, representing 0.73% of the migration for steelhead that passed Ice Harbor Dam.

Smolt index: There is no smolt data for Ice Harbor Dam for December through March except for PIT-tag detections. Numbers of smolts during this timeframe is anticipated to be low.

* 1. Statement about the current year’s run (e.g., higher or lower than 10-year average).

As of October 2020, a total of 56,210 steelhead have passed Ice Harbor Dam. This is approximately 48% lower than the 10 -year average (117,069).

* 1. Estimated exposure to impact of adults and/or juveniles, as appropriate, by species (number or percentage of 10-year average that occurs during dates of impact).

Both bulltrout and steelhead utilize Ice Harbor Dam fish passages and can rest/migrate through the forebay, located on the upstream side of the dam. The north shore fishway will be closed during the dredging work therefore few migrants should be exposed to disturbed sediments.

* 1. Type of impact to adults and/or juveniles, as appropriate, by species (e.g., increased delay, exposure to predation, exposure to a route of higher injury/mortality rate, exposure to higher TDG, etc.).

Fish in the forebay may be disturbed by the increased turbidity and noise caused by the dredging activities.

* 1. Final judgment on scale of expected impacts (negligible, minor, significant) on:
		1. Downstream migrants. Negligible.
		2. Upstream migrants (including Bull Trout). Negligible.
		3. Lamprey. Negligible impact to adults. Ammocetes may be located within the forebay sediment and if there, would be moved with the sediment. However, the numbers are expected to be low because of the anoxic environment within the forebay. No survey has been conducted to locate the presence or absence of ammocetes at Ice Harbor Dam. Sediment sampling was conducted for this effort and no ammocetes were observed in the sample. The closest known ammocetes are located within the deltas of the major tributaries such as the Palouse River and Tucannon River, approximately 50 miles and 52 miles upstream respectively.
1. **Comments**

**From:** Tom Lorz <lort@critfc.org>
**Sent:** Monday, November 16, 2020 12:02 PM
**To:** Peery, Christopher A CIV USARMY CENWW (USA) <Christopher.A.Peery@usace.army.mil>
**Subject:** [Non-DoD Source] Re: 20 IHR 08 Floating Guidewall Cable Replacement

Looks like most of the dredging should be done by end of Feb.  That would be fine with us.  Early is better, not sure the dredging should impact too many fish but doing as soon as possible would be preferred.

thanks

Tom Lorz

CRITFC

**From:** Josie Thompson - NOAA Federal <josie.thompson@noaa.gov>
**Sent:** Tuesday, November 17, 2020 12:40 PM
**To:** Peery, Christopher A CIV USARMY CENWW (USA) **Subject:** [Non-DoD Source] Re: 20 IHR 08 Floating Guidewall Cable Replacement

Hello Chris,

I would like to request a deadline extension for comments on this one, preferably after the December FPOM meeting. The proposal makes it sound like all spill would be shut down for 2 weeks in March, and this would interfere with the spill that is required by the new Bi-Op from March 1st to 31st for steelhead overshoots at all of the Snake River dams and at McNary Dam.  This is how the requirements are laid out on page 1399 of the CRS Bi-Op:

i. Surface oriented spill will be provided from October 1 until November 15 in the fall and from March 1 to March 30 in the spring at each of the five dams.
ii. Surface oriented spill will be provided at least three times each week on non-consecutive days, at each of the five dams.
iii. On the selected days, surface oriented spill will be provided for 4 hours each morning (generally between 5 a.m. and 11 a.m.) through a spillway weir at each of the five dams.

It seems possible that the dive work could be coordinated around this spill requirement schedule, but I am not sure if that is the only reason why they are asking to shut off spill for two weeks during the cable reattachment.  If my understanding of the MOC is correct, and a decision is necessary prior to the December FPOM meeting, please let us know and we will go from there.

Regards,

Josie

**Josie Thompson**

Columbia Hydropower Branch

Interior Columbia Basin Office

NOAA Fisheries, West Coast Region

Teleworking cell: 503-983-3439

Josie.Thompson@noaa.gov

**From:** Tom Lorz <lort@critfc.org>
**Sent:** Tuesday, November 17, 2020 2:37 PM
**To:** Peery, Christopher A CIV USARMY CENWW (USA) <Christopher.A.Peery@usace.army.mil>
**Subject:** [Non-DoD Source] Re: 20 IHR 08 Floating Guidewall Cable Replacement

Josie is right, and I forgot about the new spill operations in March and would need to think about this.  Can the dive work around the spill and if so do we just need to schedule when the spill would occur so the divers can work around that?  If so then I am still ok with this just might need more coordination or meetings which I hope are more productive than the ones I have had recently.

thanks

Tom lorz

**From:** Peery, Christopher A CIV USARMY CENWW (USA)
**Sent:** Tuesday, November 17, 2020 3:25 PM
**To:** Tom Lorz <lort@critfc.org>; Josie Thompson <josie.thompson@noaa.gov>
**Subject:** RE: 20 IHR 08 Floating Guidewall Cable Replacement

Tom and Josie,

There are discussions with the contractor now to see if they can shift their schedule earlier to avoid most of March.  I will keep you posted.

Chris

**From:** Morrill, Charles (DFW) <Charles.Morrill@dfw.wa.gov>
**Sent:** Tuesday, November 17, 2020 5:00 PM
**To:** Josie Thompson - NOAA Federal <josie.thompson@noaa.gov>; Peery, Christopher **Subject:** [Non-DoD Source] RE: 20 IHR 08 Floating Guidewall Cable Replacement

Hi Chris,

WDFW share in the concerns identified by Josie about the potential shut down of spill for two weeks and support her request.

Charlie



**From:** Peery, Christopher A CIV USARMY CENWW (USA)
**Sent:** Wednesday, November 18, 2020 7:01 AM
**To:** Morrill, Charles (DFW) <Charles.Morrill@dfw.wa.gov>; Josie Thompson - NOAA
**Subject:** RE: 20 IHR 08 Floating Guidewall Cable Replacement

Thank you Charlie.  The concerns from FPOM have been conveyed to the project manager.  We will keep the MOC open until we can coordinate a solution.

Chris

**From:** Peery, Christopher A CIV USARMY CENWW (USA) <Christopher.A.Peery@usace.army.mil>
**Sent:** Thursday, November 19, 2020 10:10 AM
**To:** Morrill, Charles (DFW) <Charles.Morrill@dfw.wa.gov>; Josie
**Subject:** RE: 20 IHR 08 Floating Guidewall Cable Replacement - Update

FPOM,

The contractor for this work has requested that they start dredging 1 February and conduct the dive work, replacing the four guidewall anchor cables, right after the dredge work is completed.  Total time estimated to dredge and connect cables is four weeks barring any complications.  This would be ideal since it would complete the work by 1 March.   Starting the spill on Wednesday, as was the pattern in the fall, would provide a couple of days in March to work with as well.  This is what we are requesting in the attached modified MOC.  Scheduling for this work has been a complicated because we are dealing with resumption of interrupted work from a contract awarded in 2019.

I have extended the comment period to 3 December but we can keep it open for discussion at the December FPOM call if folks think it necessary.

Chris

**From:** Josie Thompson - NOAA Federal <josie.thompson@noaa.gov>
**Sent:** Thursday, November 19, 2020 1:53 PM
**To:** Peery, Christopher A CIV USARMY CENWW (USA)
**Subject:** [Non-DoD Source] Re: 20 IHR 08 Floating Guidewall Cable Replacement - Update

Thank you (and any other Corps staff involved) for working with the contractor on making this adjustment to the plan and communicating the Bi-Op agreement needs.  I will take a look at this and hope to be able to respond with comments by December 3rd.

**Josie Thompson**

Columbia Hydropower Branch

Interior Columbia Basin Office

NOAA Fisheries, West Coast Region

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Josie.Thompson@noaa.gov

**From:** Erick VanDyke <Erick.S.VanDyke@state.or.us>
**Sent:** Thursday, November 19, 2020 12:49 PM
**To:** Peery, Christopher A CIV USARMY CENWW (USA)
**Subject:** [Non-DoD Source] RE: 20 IHR 08 Floating Guidewall Cable Replacement - Update

Chris,

Appreciate the coordination effort to fit with other outages. Can you provide some more specificity about 1) what factors may create complications and 2) what contracting issues may be involved in creating complications or delay. Appreciate the extra information.

Erick Van Dyke

**From:** Peery, Christopher A CIV USARMY CENWW (USA) <Christopher.A.Peery@usace.army.mil>
**Sent:** Thursday, November 19, 2020 1:16 PM
**To:** Erick VanDyke <Erick.S.VanDyke@state.or.us>; Morrill, Charles (DFW)
**Subject:** RE: 20 IHR 08 Floating Guidewall Cable Replacement - Update

Erick,

At the time the origin contract was awarded there was not a requirement for spill in March so there was more flexibility in scheduling the work.  I think we have a good plan now.  But with a tighter work window we have to be more aware of potential impacts from bad weather, higher than expected flows, powerhouse outages and COVID conditions.

Chris

**From:** Erick VanDyke <Erick.S.VanDyke@state.or.us>
**Sent:** Thursday, November 19, 2020 1:54 PM
**To:** Peery, Christopher A CIV USARMY CENWW (USA)
**Subject:** [Non-DoD Source] RE: 20 IHR 08 Floating Guidewall Cable Replacement - Update

Thanks Chris,

I see the point of more constraint and see the plan as it currently sits as doing what can to pre-plan a preferred course of action. As has been the case appreciate the nuances, but recognize the types of event that might delay or explode the plan are less informed in the decision process. I specifically was hoping for more transparent sharing of the actual reality of constraints that might occur associated with dredging in February and the constant and repeat contracting constraints. In reality these are the things that make the plan less likely to occur as advertised. Any additional sharing that could be offered by contractor or contracting would be appreciated.

Erick

**From:** Peery, Christopher A CIV USARMY CENWW (USA) <Christopher.A.Peery@usace.army.mil>
**Sent:** Thursday, November 19, 2020 2:24 PM
**To:** Erick VanDyke <Erick.S.VanDyke@state.or.us>; Morrill, Charles (DFW)
**Subject:** RE: 20 IHR 08 Floating Guidewall Cable Replacement - Update

Erick,

I am not familiar with the specifics of the contract other than the original work window was from 15 December to 31 March, and now that has been considerably narrowed.  This work has already been delayed once because the contractor had safety concerns with COVID.  Any of the uncontrollable factors I listed before could cause a delay and affect the ability to complete the work in the allotted schedule.  I am not aware of any other constraints that would delay the work in February.  All the pertinent environmental permits and approvals are in place, for example, from the previous work.  Dive work is always a challenge.  The divers will be working down to 100 ft deep, which requires a compression chamber be available.  The amount of material to be removed is an estimate.  If there is more than expected the dredging will take longer to complete.  Having one month to complete the work just does not allow much room for error.

Does that make sense?

Chris

**From:** Erick VanDyke <Erick.S.VanDyke@state.or.us>
**Sent:** Thursday, November 19, 2020 3:26 PM
**To:** Peery, Christopher A CIV USARMY CENWW (USA) **Subject:** [Non-DoD Source] RE: 20 IHR 08 Floating Guidewall Cable Replacement - Update

Chris,

Yah, this is helpful information. I suspect other things like icing in February could further constrain the work and funding constraints could appear without much warning, so I’m just trying to put the reality piece in the loop for consideration when endorsing a proposed plan. I appreciate the extra information and your effort to provide it in the broader discussion. Hope that can make some sense.

Erick

**From:** Morrill, Charles (DFW) <Charles.Morrill@dfw.wa.gov>
**Sent:** Thursday, November 19, 2020 4:32 PM
**To:** Erick VanDyke <Erick.S.VanDyke@state.or.us>; Peery, Christopher A CIV
**Subject:** [Non-DoD Source] RE: 20 IHR 08 Floating Guidewall Cable Replacement - Update
**Importance:** High

Thank you Chris for the additional clarifying information !

Does the contract allow/enable the contractor to work 6 or 7 days per week to meet a March 1 completion date pending any unexpected issues ?  Is an extended work week even an option with safety and any other constraints ?

Thanks Chris !

Charlie

**From:** Peery, Christopher A CIV USARMY CENWW (USA)
**Sent:** Thursday, November 19, 2020 6:11 PM
**To:** Morrill, Charles (DFW) <Charles.Morrill@dfw.wa.gov>; Erick VanDyke
**Subject:** RE: [Non-DoD Source] RE: 20 IHR 08 Floating Guidewall Cable Replacement - Update

I will check with the PM Charlie

**From:** Peery, Christopher A CIV USARMY CENWW (USA)
**Sent:** Friday, November 20, 2020 9:22 AM
**To:** Morrill, Charles (DFW) <Charles.Morrill@dfw.wa.gov>; Erick VanDyke **Subject:** RE: 20 IHR 08 Floating Guidewall Cable Replacement - Update

Charlie,

The contract allows working 7 days per week and that has been factored into the estimated one month time frame needed to complete the work.

Chris

**From:** Morrill, Charles (DFW) <Charles.Morrill@dfw.wa.gov>
**Sent:** Friday, November 20, 2020 9:37 AM
**To:** Peery, Christopher A CIV USARMY CENWW (USA)
**Subject:** [Non-DoD Source] RE: 20 IHR 08 Floating Guidewall Cable Replacement - Update

Thanks Chris,

“The contract allows working 7 days per week and that has been factored into the estimated one month time frame needed to complete the work.”

As we well know ;-) , assumption is the mother of all errors .. lol ..

I presume that means the contractor can and is expected to work up to 7 days per week as needed to meet the March 1 date ?

Happy Friday and yay ;-)

Charlie

**From:** Peery, Christopher A CIV USARMY CENWW (USA)
**Sent:** Friday, November 20, 2020 9:57 AM
**To:** Morrill, Charles (DFW) <Charles.Morrill@dfw.wa.gov>; Erick VanDyke
**Subject:** RE: 20 IHR 08 Floating Guidewall Cable Replacement - Update

Charlie,

Correct.  The plan is the contractor will work 7 days/week as possible to complete the work within the one month.

Chris

**From:** Josie Thompson - NOAA Federal <josie.thompson@noaa.gov>
**Sent:** Thursday, December 03, 2020 11:00 AM
**To:** Peery, Christopher A CIV USARMY CENWW (USA) **Subject:** [Non-DoD Source] Re: 20 IHR 08 Floating Guidewall Cable Replacement - Update

Hello Chris and FPOM,

I am writing in support of the revised plan and MOC to (ideally and hopefully) complete the floating guidewall cable work as close to February 28th as possible, if not earlier.

Thank you for your work with the Corps staff and the contractor on the revised plan, Chris,

Josie

**Josie Thompson**

Columbia Hydropower Branch

Interior Columbia Basin Office

NOAA Fisheries, West Coast Region

Teleworking cell: 503-983-3439

Josie.Thompson@noaa.gov

**Previous Comments from agencies (2019).**

-----Original Message-----
From: Josie Thompson - NOAA Federal Subject: [Non-DoD Source] Re: 19 IHR 21 MOC Guidewall Anchor Cables

Hello Chris and Kristen,

Can we get a map or two before the FPOM meeting on Thursday which includes the location of the suction dredging site(s), how that equipment will be deployed, and also one including the location of the cables that are being replaced in reference to the fish ladder entrances before the FPOM meeting on Thursday? I have a map of the dredging disposal locations already, but I am not finding anything in addition to this.

Thank you!

Josie

-----Original Message-----
From: Shacochis-Brown, Kristen M CIV CENWW CENWD (US)
Sent: Tuesday, December 10, 2019 2:38 PM
To: Josie Thompson - NOAA Federal
Subject: FW: [Non-DoD Source] Re: 19 IHR 21 MOC Guidewall Anchor Cables

Per your request, here is the diagram you requested.

Let me know if you have any questions.

Kristen Shacochis-Brown P.W.S., V.C.W.D.

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-----Original Message-----
From: Laurie Porter [mailto:porl@critfc.org]
Sent: Tuesday, December 10, 2019 2:22 PM
To: Peery, Christopher A CIV USARMY CENWW (USA)
Subject: [Non-DoD Source] RE: 19 IHR 21 MOC Guidewall Anchor Cables

Chris,

Is there an opportunity to samples the sediments for lamprey during this operation?

Laurie Porter

-----Original Message-----
From: Peery, Christopher A CIV USARMY CENWW (USA)
Sent: Tuesday, December 10, 2019 2:52 PM
To: Laurie Porter <porl@critfc.org>
Cc: Shacochis-Brown, Kristen M CIV CENWW CENWD (US) <Kristen.M.Shacochis-Brown@usace.army.mil>
Subject: RE: 19 IHR 21 MOC Guidewall Anchor Cables

Laurie,

As noted in the MOC, the sediments have been sampled and no lamprey were observed so likely little benefit from re-sampling during the operation.

Chris

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

From: Peery, Christopher A CIV USARMY CENWW (USA) <Christopher.A.Peery@usace.army.mil>

Sent: Wednesday, December 11, 2019 9:45 AM

To: Laurie Porter <porl@critfc.org>

Cc: Shacochis-Brown, Kristen M CIV CENWW CENWD (US) <Kristen.M.Shacochis-Brown@usace.army.mil>

Subject: RE: 19 IHR 21 MOC Guidewall Anchor Cables

Laurie,

Just to expand on your question, the plan for this work is to pump the sediments directly from the cable anchor to the in-water deposit area without raising them to the surface. To conduct sampling would require a significant change in operation to bring sediments to the surface where they could be handled. The logistics of this would likely be fatal to any larval lamprey if there were any present. Sampling of dredge material has been discussed multiple times in the past, primarily with the lamprey technical work group and it has been considered to be infeasible in general because of this. Also, larval lamprey have, to my knowledge, not been observed in sediments as deep as 100 ft as involved in this situation. The chance that this work will impact lamprey seem small. The FPOM MOC is intended to address any potential effect of the work for fish passage. Please let me know if you have any more questions.

Thanks,

Chris

-----Original Message-----
From: Laurie Porter [mailto:porl@critfc.org]
Sent: Wednesday, December 11, 2019 10:59 AM
To: Peery, Christopher A CIV USARMY CENWW (USA) <Christopher.A.Peery@usace.army.mil>
Cc: Shacochis-Brown, Kristen M CIV CENWW CENWD (US) <Kristen.M.Shacochis-Brown@usace.army.mil>
Subject: [Non-DoD Source] RE: 19 IHR 21 MOC Guidewall Anchor Cables

Hi Chris,

Thanks for the clarification, I did not realize the sediments were not being brought to the surface. I agree with the conclusions below.

Laurie

1. **Final coordination results.** Approved
2. **After Action update.**

Please email or call with questions or concerns.

Thank you,

Kristen Shacochis-Brown

kristen.m.shacochis-brown@usace.army.mil